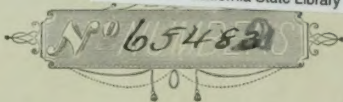


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Extract from the Political Code.

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California Raisins.

The good time coming seems to be right at hand in the matter of California raisins, and in view of the rapid increase of the product it is a matter for congratulation. We have been contending for years for two things: first, to make our product both as good and as stylish as the European article, and, second, to convince Eastern consumers of the fact. It seems both these things are, in a measure at least, accomplished. One of the largest firms of dealers in New York, in a circular dated June 1st, says:

The larger receipts of California raisins the past year has resulted in so scattering them that acquaintance with them has been multiplied in all directions. So greatly improved have been most of the lots sent that comparatively little remains to suggest, while the uniformity of quality in the box and general uniformity of entire invoices exceeds that of similar foreign raisins. In a word, we find them received with general favor, and in many cases preferred to foreign.

Though this indicates great accomplishment on the part of our producers, it should not suggest the slightest relaxation of the effort for uniformity and excellence which has secured it. The experience of our canners a few years ago in canning trash because the California product was selling upon its name, should be a warning to all producers that a good name may be lost as well as gained, and generally lost in a fraction of the time required to gain it. There is still room for great improvement in our raisins. If all were as good as the best, what a vast increase of money our State would gain from its raisin product. This state of affairs will never be attained in the very nature of things, but if the effort for excellence continues as it has for the last 10 years, our best will be the fancy article of the world, and our average will stand far in advance of the imported product. Let the effort then still be for the most careful selection of fruit, for the most excellent curing and packing, and for honest uniformity throughout the package, and full weight above all things. Our product can be hurt now only by carelessness or cupidity. These two things have wrought such sorry results in the history of productive enterprises, that California, having all this experience to profit by, should learn a lesson for her lasting good.

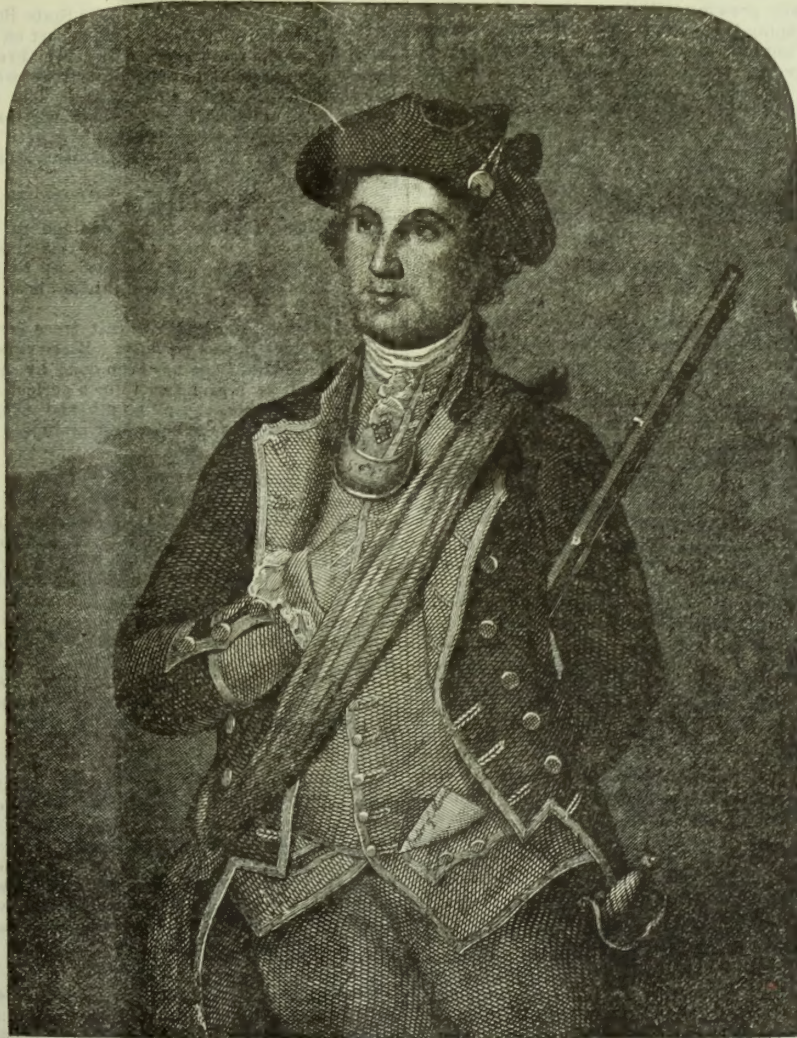
WHEAT CROP OF THE WORLD.—In a country like England, where so much attention is given to manufacturing and where the produce of the soil does not support the inhabitants, a close watch is kept upon the food supply to be obtained from other nations. Accordingly the supply is forecasted by economists and grain-brokers with a great deal of precision. So far the impression on the British mind is that the world's supply of grain this year will be short. Naturally the first attention would be given to home prospects, and next to India. In England the harvest this year will be late, and its product will depend on favorable weather, not to be relied on. At best, it will be far short of the needs of the population. The crop in India is short. The American crop is set down below the average, although the lands sown to spring wheat promise well. The Russian crop looks fair. Australia will yield a small surplus, and the wheat regions of South America will yield well. The chances for good rates for cereals are better than usual, and farmers who have grain may reasonably expect good prices.

George Washington.

For a century or more the average patriot's idea of Washington has been that of a petrified soldier standing erect or sitting upon a perpetual horse, clad in continental regimentals, with the winter at Valley Forge, the march across Jersey, Trenton, Princeton, Monmouth Court-house and Yorktown stamped in durable rigidity upon his face. That grave, sedate countenance has become rooted in the mental photograph of every man, woman and child. To draw any other picture of the "Father of his

Washington certainly ate and chewed victuals like the rest of us; slept, perhaps snored, and had the toothache. And to tell the truth, we have always liked Washington better ever since we read how he gave Gen. Lee, at Monmouth, a little cursing for his cowardice or villainy in disobeying orders; not that we approve of swearing; for we do not, but we catch at everything that makes Washington a real man. The age of demi-gods has passed.

THE WEATHER AND CROP BULLETIN of the Signal Service reports the weather during the



WASHINGTON IN 1772.

Country" may seem to some, even in this iconoclastic age, as downright blasphemy.

But now comes the Rev. Ed. Everett Hale of Boston, and says that our Washington was human, that he traded horses sharply, liked pretty girls, would sometimes use a cuss-word, get angry and throw a pitchfork at a negro. These Boston preachers have no reverence. The next thing we know some of them will be asserting of their own knowledge that our George cheated at marbles when a boy, stole water-melons, ran after dog-fights, and several times got into the watch-house. That he whistled negro melodies, danced hoe-downs on the corner of the street while some one patted juba. Pour it all out at once while you are at it. When you commence to tar and smut a sacred name, smear it on thick, and don't do it half-way.

But when we come to think of it, why not?

week ending June 25th as generally favorable for the principal crops. The rains in the South Atlantic States have doubtless improved the condition of the staple crop in that region. More rain is needed in the cotton districts. The weather has been favorable for harvesting in the wheat region, there having been an excess of sunshine and very little rain. In the corn region, the weather has been generally favorable, although in some localities more rain is needed, and the cool weather of the past week must have slightly retarded the growth of the corn crop.

DR. ALFRED R. WALLACE, the eminent English scientist, returned a few days ago from a trip through Sonoma county, and honored our sanctum with a call.

LOS ANGELES is to make a fruit show at St. Louis during the Grand Army Encampment.

The Land of Booms.

"And they sailed away to the land of booms."

The above might be made the refrain of many a melody at this time, for we are having booms all along the line. In the East we have oil booms and railroad booms and booms of almost every kind and character. There has been no period in the world's history when there was such a marked activity in large industrial operations as just now—when there were such wonderful developments in every essential of the world's progress. Never before was the opportunity presented for the rapid amassing of large fortunes. Millionaires and multiple millionaires are as plenty now as were those 30 years ago who counted their wealth only by a few hundred thousand. Monopolies, corners and speculations of every kind are of daily occurrence at every important commercial center. Great works of engineering in the damming of streams, building of bridges, digging canals, building railroads to far-off and what were formerly considered unapproachable places, are now events of every-day undertaking. Huge leviathan ships of several thousand tons burden have taken the place of those of 500 or 600, which were considered large ships a few years ago. Tiny cockleshell yachts of a few tons burden are now built to move through the water at what was formerly considered an unattainable speed.

Gold, silver, copper and lead are now raised in quantities which would have been regarded as fabulous 40 and 50 years ago. Large sections of country are lighted up with furnace fires fed by the products of our iron and coal mines, which are now yielding their output in such immense quantities as to tax the skill and capital of both railroad and steamer to move them from pits to furnaces. There is a veritable boom in every class of mining. "A New South" is just being opened up to the industry and capital of the country. That genial portion of the Union was never so alive to the sound of the ax, the hammer, the saw and the mill-wheel as now; the boom there is genuine and unprecedented. A great empire has grown up within the life of a generation in the great Northwest, and another has made almost equal progress on the Pacific Slope.

Pig Iron Bessemer said two years ago that 1887 was to witness the beginning of the biggest boom the world ever saw—his prediction is being more than verified.

California was never so active as now in all the essentials of real progress. The whole State is alive and stirring as if of one accord. The boom which first made its appearance in Southern California about one year ago is spreading throughout the State—from Mexico to the Oregon line. The only question is: Will it last? We believe it will. The boom has not yet struck the middlemen and laboring community with its full force. But it is surely coming to them also, and in time will reach all, if the great mass of the people are only true to themselves; for this is emphatically a producing nation, and the people, as a whole, can be depended upon to do their duty to both themselves and the public by each one doing something, creating something, producing something, to swell the grand aggregate of labor and effort out from which genuine booms always come.

ABOUT 76,000 sheep are being driven from various points in Oregon to Nebraska this year.

FLORICULTURE.

The Care of Tender Plants.

[Written for the Rural Press by GARDENER.]

By tender I do not mean those which are difficult to grow, but such plants as roses, pelargoniums, heliotropes, fuchsias, carnations and the like, which, in order to give fine blooms, need cultivation and care, in opposition to those which bloom well without it. Indeed, I think no one who expects to have a garden raised on the principle by which Topay "just grew" ought to plant any of these I have named.

It is true that, even when miserably neglected, such plants will sprawl through an unsightly existence, and one or more of them are oftentimes seen doing nicely in an otherwise utterly neglected garden; but, as a general rule, it will be found either that extra care was given them while young, securing a vigorous start and a constitution able to withstand after neglect, or else that they receive semi-occasionally a little extra attention in the shape of water or digging.

It is difficult to believe, till you have seen, the difference between the blooms from a sickly, stunted plant and those from one under good cultivation and doing its best. I know of no rosebush which, if sickly, gives more unsatisfactory or poorer blooms than the Marechal Niel or the Arch Duke Charles, yet the first is the finest yellow tea-rose grown, and the second, when perfect, one of the most lovely imaginable.

Frequently, flowers which ordinarily you would pass by without a second glance will, when carefully attended, be the most exquisite; therefore a few hints on the care of such may not be amiss.

Attention to Cultivation and Pruning.

The first thing to be attended to, then, is the soil. Try to keep it at least reasonably soft around them, although it is not necessary to have it like meal, merely digging it deeply and loose enough so that their little rootlets may find a way.

Next to digging—almost, I was going to say, here in California, more necessary—is frequent trimming and pruning.

In parts of the country where the ground freezes solid all winter and the heat burns them all summer, so that they have but a short time for growing each year, this rule will, of course, not hold good; but in California, where, with reasonable care, a plant will grow steadily, increasing in size the year round, it is a different matter.

A great many here still follow the old Eastern plan of doing all their pruning of plants in the fall; but it seems to me that where plants grow and act so differently there may be difference in treatment also, and in a climate so mild that we may gather carnations and heliotropes to deck our Christmas-trees, we need scarcely be governed by the same rules which apply in a climate where all plants must be taken up and carefully prepared to withstand the winter's cold, and force them for blooming in the spring.

Not only with roses, but with any of the plants I have named, frequent and severe clipping is a great aid to their health and subsequent growth, not to mention size and beauty of the blooms.

Carnations.

I was once advised by a friend, himself very skillful with flowers and extremely fond of them, never to bother with carnations. Said he: "They always grow straggling and sprawling, and never look well unless you are forever tying them up, and you will get no satisfaction from them." I mentally resolved that I would have carnations, and moreover that I would not have them either straggling or sprawling. I reasoned that the same general treatment ought to hold good with all plants to some extent, and therefore, instead of allowing mine to grow from year to year at the tips, as is usually done, presenting a lot of dry, unsightly stalks with a patch of green at the end, dragged down by the weight of the flower-buds, I proceeded to take my shears and cut them back to "bedrock," which meant that nothing but the bare brown stalks were left, standing about six inches high.

It was a doubtful experiment, for I knew nothing practically about their needs, and several flower-wise neighbors told me they were ruined. I protested stoutly that what was a good rule should be sauce for the goose as well as the gander, but was gravely informed that carnations were not like anything else, and couldn't be treated like roses. As a consequence, when, some three or four months after, my carnations (having been carefully dug around and watered in the meantime) put on a new green top of young shoots and stood literally loaded with buds, I was in no small degree elated.

But a short time ago on inquiring of a florist, who formerly grew large quantities of them, the reason of their scarcity, I was told that he "used to keep lots of 'em, but somehow they don't amount to anything; they grow a year or two and just die out."

At the same time, as I write, I can see three carnation plants—two of them five years old, the third being one of the originals on which I first experimented eight years ago. How old it was at that time I do not know, though it

was probably two years old at least; but at present it has on it, by actual count (I have counted as a matter of curiosity), 646 buds and blossoms, the whole plant looking like a newly rooted one.

The fact is that wherever cutting is done it forces new shoots, and these new shoots produce the flowers; therefore the more new shoots you can force the more flowers you will have, and vice versa.

Fuchsias.

A great many object to cutting fuchsias, as they think their natural drooping habit more graceful, and I even once heard an expostulation from a lady on the "barbarity" of "cutting the graceful fuchsia into a stiff shrub." However, I think that lady will find that her "graceful" fuchsia will in a short time be flowerless, and, although I do not agree with her that a fuchsia properly trimmed is anything approaching the ungraceful, still if the choice lies between grace and blooms, I prefer the blooms.

Just as soon as my plants (of any kind except annuals) give signs of being nearly out of bloom, and the foliage looks dry and no longer fresh, I cut them back with no gentle hand and rest them for new efforts. This not only does not prevent them from attaining size but rather seems to force rapid growing and vigorous shoots.

Heliotropes

Are greatly benefited by this trimming, and more particularly by a liberal application of soap-suds. I know of no plant which responds so readily to this stimulant, and I have had a dark-purple heliotrope, the tenderest and poorest bloomer of the whole family, give me great sprays of deepest purple blooms eight inches across, for two or three months after receiving a few bucketsful of suds.

Pelargoniums

Are benefited by cutting for two reasons; one, of course, the production of flower shoots, but also because they are brittle and easily broken, naturally growing with long, slender branches. By keeping them cut back to a round stocky bush, not only do they give a mass of bloom, but are prevented from being broken by the wind, etc. It takes very little frost to affect these and heliotropes, and even around Oakland they will often be killed if left uncovered during the winter nights. To cover them do not use anything heavy enough to break them; a newspaper does as well as anything, and is generally sufficient if properly secured over the top.

Other Plants.

Bulbous plants, lilies, gladiolus and the like require rich soil (it can hardly be made too rich) and moisture.

Dahlias, too, are plants which require the richest possible soil, and when supplied it gives most magnificent flowers for distant effects. Unless one is troubled with moles or gophers I think there is no necessity of taking up the bulbs or tubers here in California during the winter months, though I know many do so.

Roses, especially the red varieties, need the sun and all the richness of soil you can give them. Wood ashes or powdered charcoal are also excellent for them.

Deep cultivation (for any plants) takes the place of water to a great extent, though they do still better if they have a plenty.

All plants of whatever sort should have the blooms cut as soon as they begin to fade. Not only do the old blooms disfigure the appearance of the plant but the forming of seeds is a very exhausting one, and should be prevented as much as possible.

Watering.

When you water, do so at night, and thoroughly. You may think when you use a rose nozzle that you are putting on an immense quantity of water, when, in reality, you are giving them but little. Take a bucket and fill it from the sprinkler, and see how long it takes, and you will be able to judge about how much you are putting on. A well-grown plant, to get a good soaking, needs the equal of three or four wooden buckets of water, and to put them on with a sprinkler takes time and patience.

Do not allow the water to run with the full force of the stream, as it hardens the ground; moreover, if your soil is of the sort which packs, do not wet the whole bed, but only the individual plants, if possible covering afterward with dry soil. Of course, in a large garden, the labor of this renders it impracticable, but where there are few plants it may be done, and acts as the stitch in time which saves nine. Another way to hoard the moisture is to use a mulch of some kind around their roots. Good strawy manure is the best, but half-rotted straw, leaves, or even weeds pulled from the garden, do very well in lieu of better.

Give your roses, carnations, pelargoniums and such the sunny spots; the fuchsias, heliotropes, lilies, etc., the partial shade. Fuchsias do well anywhere if watered and cultivated, but their blooms are finer in the shade. Give your plants plenty of room and do not crowd them, setting them far enough apart so that they may all get the sun.

The difference in the size and beauty of the blooms seen at the florist's and those taken from private gardens is not by any means to be attributed always to their being grown under glass, for many of the cut flowers sold are grown in the open air. The great difference is in the constant, daily, intelligent care each variety receives, and when we give them the same care we shall receive the same results.

North Temescal.

HORTICULTURE.

State Horticultural Society Meeting.

The regular meeting was held in this city June 24th and was well attended. President Hilgard being unavoidably absent, Mr. Shinn was chosen as chairman of the meeting. After the reading of the minutes of the preceding meeting, Messrs. H. W. Rice of Haywards and I. Allegretti of West Berkeley were elected members of the society. The names of S. L. Goldman of San Francisco and W. A. Fisher of Napa were proposed for membership.

Fruit Exhibits.

There was exhibited a specimen of cherimoyor or custard apple grown by Joseph Sexton of Goleta, Santa Barbara county. The fruit was pear-shaped, about 4½ inches in diameter, the surface having something like pineapple markings, the color greenish, turning to yellow as ripening progresses. The fruit was unripe, but excited much interest for its novelty. The specimen will be kept for ripening by the secretary.

R. J. Trumbull showed a fine sized apricot ripening at San Rafael, nearly with the Pringle and considerably ahead of the Royal. He did not know the variety or whether it was a seedling or not. No one present could give the information.

James Shinn showed St. Ambrose apricots, quite large and handsome but still long from ripening.

The secretary showed Centennial cherries sent him by Leonard Coates of Napa, June 12th, being picked the day before. They were placed on a pantry shelf to see how long they would keep. At the meeting June 25th, they were still sound and handsome.

Fruit Reports.

B. M. Lelong, secretary of the State Board of Horticulture, submitted a long report on the condition of the fruit crop, with special reference to the excessive hot spells and frosts which have visited the State since April. The correspondence upon which the report was based covered nearly the whole State. We give below an outline of the report in condensed form, grouping the replies by counties:

Shasta County.

C. C. Bush, Redding: No damage in this vicinity from hot weather or frost this season. Fruit crop is exceptionally good up to this time. No insects or blights have been reported.

J. M. Lowe, Anderson: Fruit trees are all loaded to their fullest capacity. Bartlett pears very full. No damage has been done by heat, and the fruit crop promises to be a perfect success in all respects, except plums and prunes, which will not be more than half a crop.

Butte County.

John Bidwell, by G. M. Gray, Chico: Hot weather burned the China pears but did not hurt Bartlett; they stick tight and are a splendid crop. Peaches were not injured, but apples were burned on west side of the tree, and white cherries were burned and bruised somewhat. The codlin moth is our worst pest, but it is not as bad as last year. We have been over the bands twice this year, and one time found 1200 larvae. Two years ago we caught 17,500 worms the first time over. I think the reduction is because of close attention to the bands and spraying with sulphur and soap when the fruit was small.

Sutter County.

S. J. Stabler, Yuba City: The hot weather did not affect pears or peaches. Peach crop best we ever had, especially late varieties. Hot winds in May injured small fruit seriously. Estimate of the fruit crop of this county: Peaches, 1500 tons; apricots, 500 tons; pears, 200 tons; apples and nectarines, nominal; very few cherries in the county. No perceptible injury from frost.

Colusa County.

(Report unsigned.) Have not been able to detect any damage by heat. Fruit crop in this immediate vicinity I should estimate about 80 tons of raisin and table grapes, 1600 boxes of peaches. Other fruits are not yet in bearing. Frost did some injury to vines, but not to pears.

Yolo County.

Geo. W. Hinclay: The heavy norther blew off the pears. Bartlett crop light. So far as I know, no damage from codlin moth, yet attribute this to neighbor Thissell's bug trap, which has caught up all the codlins in this section of county.

J. R. Wolfskill, Winters: The hot weather caused the Bartlett pears to drop badly; also lost a few peaches and many apricots; Royals dropped one-fifth of the crop. Of the fruit crop I would say: Apricot yield, large; peaches, good; prunes, none; pears, fair; very few codlin moth larvae so far.

Webster Treat, Davisville: Hot weather of May 27th and 28th caused all kinds of pears to drop to some extent, but did no damage to peaches. Have not seen any codlin moth larvae this season. No injury by peach moth, no blight, no fungus.

Solano County.

A. T. Hatch, Suisun: Bartlett pears dropped from whipping of the wind, not by heat; peach-

es also suffered in the same way but not to any extent; yellow egg plums badly burned; gooseberries badly damaged; cherries, considerably. The crop of apricots, peaches, pears, nectarines, and almonds is large. Very few codlin and peach moth larvae this season. No blight on pears this year.

Napa County.

Leonard Coates, Napa: Bartlett pears have not dropped more than usual. We count a north wind good for pears, as likely to check fungoid diseases. Peaches are dropping somewhat. Small fruits and cherries were most injured by the hot spell. The fruit crop generally is a very fair average; peaches and apricots being above the average, though some are still falling off. Codlin moth larvae is hardly to be seen. I think the cold weather killed off the first moths. Last year at this time there were plenty of the larvae. The peach moth was very troublesome early in the season; also twig-boring beetles. We have about as much pear blight as usual. Washes do not seem to have done any good, but the north wind reduced it.

Sonoma County.

Robt. Hall, Sonoma: Pears were not injured by the hot weather, nor have they thinned themselves enough. Where trees were pruned heavily, there is a good crop free from blight. Where there is too much wood and a mass of foliage, they are more subject to fungus. Will be a fine peach and apricot crop. Hot weather caused plums to drop, but enough remain to make a good crop. Fruit outlook better than for several years. There is, however, great danger of high winds; if it blows as strong later as it did a few weeks ago, much of the fruit will undoubtedly be knocked off.

Luther Burbank, Santa Rosa: No injury to Bartlett's, and the trees are loaded. Winter Nellis is a failure this year, peach trees are overloaded; some apricots and apples dropped, but the apricot was never so fruitful as this year. French prune crop is short; Bartlett pears as usual; apples short. Codlin moth has done great damage in three years past; have not seen it yet this year. I see no apple and pear blight this season.

W. H. Pepper, Petaluma: The hot weather burned but few peaches, but at least half my plum crop was cooked by it. Some apples were burned; Newtown pippins and many other kinds set very light. Young trees in some parts of nursery were badly damaged by the frost in April. No apple worms so far, but I think it is not time for them to show yet, as the spring is so late.

Alameda County.

E. Munyan, Newark: Pears and peaches not injured by the heat, but blight is appearing on the Bartlett pears within the past week. Apples burned badly; cherries somewhat injured; gooseberries and currants almost ruined; plums are falling off fast. In this vicinity apples and pears will be about an average; peaches, apricots and quinces very heavy; plums fair; black cherries a good crop; Royal Ann almost a failure, the latter being injured seriously by the frost. Codlin moth does great injury. Pears slightly blighted, but helped by washing with wood ashes and lime.

Jas. Shinn, Niles: Pears and peaches uninjured by the heat; apples burned to some extent on the south side of the tree. No injuries from frost. Codlin moth very destructive last year, but not noticeable so far this year, probably because the season is so late. My pears of all kinds are unusually clean of all fungus.

W. C. Blackwood, Haywards: No injury to tree fruits, except plums, by the hot spell, and no dropping, to any extent, of fruit. Currants and gooseberry crops about one half destroyed; yellow and egg, Jefferson and Coe's Golden Drop badly damaged. No codlin moth has appeared yet. Paris green and London purple have been widely used, but it is too early to know the results. Have not heard of any damage by peach moth nor any blight on pears or apples.

C. C. Chase, Irvington: No damage to pears or peaches by the hot weather. Apple trees affected with blight, but cannot state amount of damage.

J. L. Beard, Centerville: No injury to pears; peaches are dropping somewhat, but not more than usual. Hot weather cooked two-thirds of my gooseberries and currants. Think I lost \$3000 worth of them. Plums were considerably injured, especially Jefferson. Codlin moth is very bad; last year lost one-quarter of my pear crop.

H. W. Meek, San Lorenzo: Hot weather did no injury to pears or peaches, but small fruits were badly burned; currants were injured at least 40 per cent; gooseberries 25 per cent, plums are not more than half a crop. Codlin moth larvae appeared to slight extent on June 15th, but not as numerous as last season.

Santa Clara.

John Britton, San Jose: Pears and peaches are dropping badly from blight and cold nights. In some localities the damage by frost was serious. Codlin moth has appeared, but cannot state to what extent yet. Last year it took three-quarters of the pear and apple crops.

A. Block, Santa Clara: The hot weather caused considerable injury by dropping of pears, peaches—late Crawfords worst—egg plums and Moorpark apricots. I have not data for a close estimate of the crop of the county, but I think there will be 5000 tons of apricots. Codlin worms have appeared, but in small

numbers, owing, I think, to lateness of the season.

San Benito County.

H. Donnelly, Hollister: Hot weather did but little damage. Codlin moth injurious in past years, but has not appeared so far this year. No peach moth; some blight, but not to any great extent. Fruit crop generally good.

John W. Green, Hollister: No damage to fruit crops. Estimate crop of the county at 450 tons.

Sacramento County.

Sol. Runyon, Courtland: Hot spell did no damage in this section unless it was to grapes which were just setting. We promise to have a full crop of peaches, apricots and apples; pears and plums are somewhat short. There has been no damage by frosts this season except to grapes in some parts of the county. I have not seen much of the codlin moth larvæ yet, and the peach moth is not as bad as last year.

C. W. Reed, Sacramento: No damage by heat in my orchard. Fruit crop is good except plums. Grapes injured here and there by the frost. Codlin moth larva has made its appearance. I have picked all the infested fruit, but do not think I have more than ten per cent as much as last year. No peach moth this year. No blight of pear or apple trees.

Sperry Dye, Walnut Grove: North wind dropped Bartlett pears, but the main injury was done, I think, by the striped beetle (*Diabrotica vittata*), which destroys the petals of the flowers, and the small pears fall. No other variety than the Bartlett is affected. Hot spell did no damage to peaches, nor has there been any injury by frost. Codlin moth larva has appeared, but not to any extent so far. Peach moth not abundant. I have not heard of blights or fungus diseases here this season. Have used B. M. Lelong's winter and summer washes with excellent results.

C. T. Davis, Richland: Heat caused too many Bartletts to drop. No effect noticed on the peach crop. Fruit crop of the county will exceed that of 1885. No damage by frost. Codlin moth has appeared as bad as ever. Apples are dropping off badly.

Placer County.

N. R. Peck, Penryn: Hot weather did no harm to pears and peaches, but burned apples on north side of tree. Injured some kinds of plums a little; caused oranges to drop. Fruit crop will be large, excepting plums. Frost hurt nothing but grapevines, and the damage was slight. Codlin moth has appeared, but not as bad as heretofore. No blight or fungus diseases reported.

P. W. Butler, Penryn: All varieties of pears promise full crop. No injury by hot weather. Peaches will be abundant, though some injury was done to the young trees by the cold weather of May 10th. The heat caused oranges to drop, and greatly reduced the raspberry crop. Peach and pear crop will doubtless be double that of any previous year.

C. M. Silva, Newcastle: Pears dropped badly before the hot weather came on, but there are still enough on the trees for a fair crop. No damage to peaches and the crop is large. Plum crop is light; full crop of nearly all other kinds of fruits. Vines on low ground somewhat injured by frost, but on high ground not at all.

El Dorado County.

E. G. M. Mortensen, Pilot Hill: No damage by heat to pears or other fruit, but some injury by frost and codlin moth. Fruit crop for Coloma section will be about one-third, being attributed to frost of May 11th. Peaches suffered most and pears the least. Codlin moth is our most injurious pest. Early varieties of apples are all dropping.

Nevada County.

Felix Gillet, Nevada City: All sorts of pears and apples have been dropping because of the black frosts of April 10th and May 11th, which were severe enough to weaken the stems. Still our trees are very full. Hot weather did no damage whatever. Cannot estimate fruit crop of the county, but if it were not for the codlin moth, our pear and apple crops would be more than a good average. The main sufferers from frost were the plums, cherries, peaches, apricots and small fruits. Outside of the codlin moth our mountains are entirely free from insect pests. Winter Nelis pear is the only kind attacked by blight or fungus.

Amador County.

G. L. Lebbs, Ione: Peaches not injured by hot weather, but slightly touched by frost of May 10th, from which some varieties dropped heavily. Peaches dropping within the last two weeks attributed to the cold weather which has prevailed. Cannot estimate fruit crop, but complaint is that it will be much less than was expected. Grapes are damaged about one-half by the frost. Pears and apples have been attacked by fungus, but cannot estimate amount of damage.

San Mateo County.

J. T. Doyle, Menlo Park: My apples, peaches and apricots were thinned before the hot spell, and do not see any injury from heat. Our crop is enormous, but the fruit small. Pears and plums give small crop; peaches and apricots very large; apples about average crop.

Santa Cruz County.

H. C. Morrell, Wrights: Hot weather did no damage. Bartletts are a full crop; Winter Nelis a failure, as usual, from black mildew. Cold north wind caused some Salway peaches to drop,

but other varieties are a full crop. I hear it estimated that the crop of this region will run thus: Plums, one-quarter of a crop; peaches and apricots, full crop; French prunes, full crop; German prunes, a failure; Hungarian prunes, full crop. The codlin moth had appeared in full force. The amount of damage last year was 75 per cent. Peach moth not here yet. Have had the gum blight for last three years, but it is passing off.

A. N. Onymous, Santa Cruz: Hot weather dropped Bartletts in some places, but not in all. No complaint of other fruit dropping. The peach crop is good; plums poor; Petite prunes light for us; pears rather poor; cherries good; olives very promising; codlin moth and black blight on pears and apples are very bad.

T. V. Mathews, Santa Cruz: Fruit crop is very good; 25 per cent better than ever before. We have some codlin moth, but it does little damage. We think it is prevented by night fogs.

San Joaquin County.

W. H. Robinson, Stockton: Hot weather caused too many pears to drop, but did not hurt the peaches. Late cherries were injured. Apples were scorched where the sun struck them, but the injury on the whole is not great. Vineyards somewhat damaged by the frost. Codlin moth larva have appeared, but not as bad as formerly. Peach moth has done slight damage. Blight has attacked Winter Nelis.

W. B. West, Stockton: Hot weather did not injure peach crop here; were not hurt by the frost, but on the Mokelumne river and slightly on the Calaveras, they were injured. Apples are not grown to any extent. Pear trees mostly free from blight.

Fresno County.

W. M. Williams: Heat did not cause pears or peaches to drop; in fact, they are too full now. Fruit crop of the county very heavy, but cannot give estimate.

Tulare County.

Isaac H. Thomas, Visalia: No injury by hot weather to either pears or peaches; in fact, more warm weather would be desirable; fruit 50 per cent better than last year, plums and prunes only being short. Codlin moth very bad last year, and probably the same this year; we are experimenting with numerous remedies. No blight known here.

Kern County.

C. Brower, Bakersfield: No injury either by hot weather or north wind, but small acreage in fruit here as yet. Plums and nectarines on low, wet land, very little crop. Few codlin moth last year, none so far this season.

Santa Barbara County.

J. Sexton, Goleta: The hot weather did not visit this section. Fruit all has to be thinned by hand. Winter Nelis has no fruit, from what cause I do not know. I do not think any fruit will go to waste except apricots; there is a larger crop of them than can be handled. Very little codlin moth here, not enough to do us much damage. We have no peach moth, nor have we heard of any blight or fungus on apple or pear trees.

Ellwood Cooper, Santa Barbara: Hot spell did not reach Santa Barbara. Bartletts in the Goleta district are fruiting abundantly; in fact, all our fruit trees are loaded. We have in some places the black scale and the Icerya. Fruit cannot be grown at a profit anywhere unless the insects are kept at bay.

Geo. W. Coffin, Santa Barbara: Taking 100 as an average standard, I would estimate the fruit crop as follows: Peaches 100, pears 100, apples 90, cherries 80, apricots 125, grapes 100, almonds 25, walnuts 125, figs 100, olives blooming full. I have seen codlin moth in former years, but none so far this year; in fact, it seems to be a bad year for insects generally.

O. N. Cadwell, Carpinteria: Bartlett pears promise very well; Winter Nelis very thin; plums falling off early; peaches looking well, and expect good crop; nectarines full crop; apricot crop very large. No codlin moth in this vicinity; no peach moth.

H. C. Ford, Carpinteria: All fruits are doing well. Apples are above the average; apricots and walnuts one-quarter above the average; peaches, plums and prunes a full crop. Pears in most localities, fair crop.

Ventura County.

N. W. Blanchard: No hot wave in this county. Fruit crop is good all around, and as large as two years ago. There was no frost except in the Ojai valley, and that injured nothing but plums. We have none of the popular pests, and no blights or fungoid diseases.

Los Angeles County.

Milton H. Thomas, Los Angeles: Have had no hot weather to do any damage to the fruit crop, which will be a good average.

S. McKenley, Los Angeles: Fruit crop of county very large and good. Have never seen better prospects for apricots. No damage from heat or frost. Are now marketing tomatoes.

Note by Mr. Lelong.

Samples of apples attacked by codlin moth larvæ were sent to this office by Mr. Gillet of Nevada City. They were small—the largest of the samples was only one inch in diameter and the smallest about one-half inch. Upon being cut, the larvæ that were found in them were nearly full grown, about ready to leave the apple. These samples were laid upon the mantel, and two days afterward it was found that two larvæ had bored out of the side and left the apple.

Several samples of burned fruit were also re-

ceived from various sections, but none to equal those sent by Mr. Robinson of Stockton, the upper side of the apple being badly burned.

From all reports received, I find that where Paris green and arsenites were used the ravages of the codlin moth larvæ are less than any previous season; also where sulphides were used against blights and fungoid diseases, they were less noticed than at any previous time.

Notwithstanding the many obstructions the fruit-growers of this State have had to overcome, they have shown that they can grow the best of fruits and grow them profitably. The healthy condition in which the large majority of the orchards of this State are found, in comparison with former years, is sufficient proof that progress has been made.

The Apricot Discussion.

The report of Mr. Lelong was heard with much interest, and afterward there was a discussion on the apricot, led by Judge Blackwood, of which we will give a report next week.

THE VETERINARIAN.

Colic in Horses.

EDITORS PRESS:—I have read a very interesting communication by Robert J. Dawson, V. S., in the RURAL on "Colic in Horses." It is apparently written with a view to prevent frequent attacks, but I wish to ask if Dr. Dawson will tell us, through your paper, what simple remedy or remedies he would recommend when a horse has an attack. Last year and this, each of my horses had a slight attack I think of colic, when fed freely on the new hay. I gave them about four or five ounces of brandy, diluted one-half, with about a tablespoonful of soda added, and it seemed to give them relief. What would Dr. Dawson prescribe? I think information on the subject would be appreciated by many of your readers.—A SUBSCRIBER, Los Gatos.

EDITORS PRESS:—In answer to "A Subscriber" I will endeavor to give the best treatment for horses suffering from colic or gripes. He is right when he says that my notes upon that subject treated mostly with preventive measures, and I maintain this is the most important matter in all diseases. In the first place, I guess that it is hardly necessary to point out to this gentleman that having clearly proved to his satisfaction that the cause of colic in his horse was due to the consumption of hay in a particular condition, he must discontinue to feed upon this kind of food, and the effect will cease. But in the case of those animals really suffering from pain, there must be two objects borne in mind, viz., to abate or altogether remove the pain by sedatives, and, secondly, to remove the offending material from the intestines by purgatives. As an extremely useful and efficient remedy for the first, I have used for many years the ordinary gum opium (powdered) in one-dram doses, mixed in a pint of warm water.

The dose may be repeated in two hours if relief has not been obtained. If it is a case of ordinary colic, this may be relied upon as a most effectual remedy. This one-dram dose is that for an ordinary sized horse, an animal of the kind and size of those usually worked upon the farm in buggies, etc. Of course, in the case of a small pony, such as a Shetland or Exmoor, half a dram is sufficient. And, on the other hand, a horse as large as some of our city firms employ, I have frequently given, in the course of one day, as much as four drams of opium. Some veterinary authorities say that the objection to opium is that it has a tendency to produce constipation of the bowels. This I will admit, but there is no medical agent which is so good a sedative in the practice of veterinary medicine; and the subsequent administration of a purgative counteracts this constipating effect. In many cases of intense pain from any cause, I have used, with much good effect, the injection of morphia under the skin, by means of a hypodermic syringe made for the purpose. And so quick is this remedy in producing the desired results, that a poor animal may be rolling and throwing itself about in the most intense agony, and one minute after the administration he will be absolutely free from pain and probably commence to eat. The application of blankets, which have been dipped in hot water and afterward wrung nearly dry, to the region of the bowels, is very comfortable and soothing to the suffering animal, and is a thing highly to be recommended. So much for the sedative treatment.

Secondly, if the colic is due to a spasmodic contraction of the bowels, produced by drinking while much heated of very cold water, the above-mentioned administration of opium, etc., is all that is needed; but if the attack is produced by the animal having eaten indigestible or unsuitable food, it is clearly evident that this material must be removed from the intestines by purgatives. For an ordinary-sized horse six drams of the best Barbadoes aloes should be given, mixed with one dram of Jamaica ginger, which will prevent griping; but it is necessary to remember in giving purgative medicine to horses that some horses, like some people, are very much more easily purged than others, and the administrator of veterinary medicine must remember this, as if he gives too strong a dose of laxatives the horse may die from super purgation. And this is an ailment—this diarrhea in horses—which is very difficult to stop, so that if the owner feels that he is not sufficiently acquainted with the individual peculiarity of the horse in question, he had better resort to giving bran mashes in large

quantities daily. This will have the effect of producing a loose discharge from the intestines, which can be regulated by means of lessening or increasing the quantity of bran. Linseed oil in this disease is also a safe medicine, given to the amount of one pint, and if a desired effect is not produced in 24 hours another half-pint may be given. I may state, in passing, that it takes 24 hours always in the horse to produce purgation.

There are a great many things in comparative pathology which are interesting, and speaking of colic in horses, I have often noticed that the animal is much more liable to an attack after extraordinary exertion, or when he has used up a great deal of vitality. It has been thought, but not proved, that new hay will at a certain period, when the chemical changes are taking place, the conversion into sugar, and so on, produce colic. Personally, I question this, and am much more inclined to think that the pain is produced by eating too much of this agreeable food, thereby over-distending the stomach, and the digestive system not being able to get rid of it, the ingesta undergoes fermentation and produces what is known as "flatulency," or windy colic. And in this disease the brandy and carbonate of soda, which "A Subscriber" gave, was rational treatment, and likely to do some good; the carbonate of soda neutralizing the generated gases and chemically converting them into liquids, which, taking less room in the intestines, does away with over-distention, and consequent pain. ROBERT J. DAWSON, 225 Geary St., S. F. Veterinary Surgeon.

POULTRY YARD.

A Born Orphan.

I am a lone, unfledged chick
Of artificial hatching;
A pilgrim in a desert wild,
By happier mothered chicks reviled,
From all relationships exiled,
To do my own lone scratching.

Fair Science smiled upon my birth
One raw and gusty morning;
And now the sounds of barnyard mirth
To lonely me have little worth;
I am alone in all the earth—
An orphan without burning.

Seek I my mother? I would find
A heartless personator;
A thing brass-hided, man designed,
With steampipe arteries interlined
And pulseless cotton-bating lined—
A patent incubator.

It wearies me to think, you see—
Death would be better, rather—
Should children e'er be born to me,
By fate's most pitiless decree
My little ones, alas, would be
With never a grandmother.

And when to earth I bid adieu,
To seek a greater,
I will not do as others do,
Who go to join the ancestral crew,
For I will just be gathered to
My incubator.

—Burdette, in Brooklyn Eagle.

Automatic Poultry-Feeders.

There has been something done in the way of automatic chicken-feeders, but the following from a correspondent of the *Calistogian* will be read with interest: A few days ago I saw an old lady emerge from a barn with a quantity of wheat in her apron, and heard her cry "chick, chick, chick," while she scattered the grains broadcast on the ground. I suppose that old lady has done the same thing day after day for years, and will continue to do so to the end of the chapter, if inventive genius does not come to her aid. As I watched the antediluvian process of feeding chickens, I wondered why the men who invented such labor-saving machines as egg-beaters, apple-parers, sewing-machines, etc., never thought of automatic, or some other matic, chicken-feeders. I have an idea borrowed from a pheasant preserve in Great Britain which may serve to put some practical mechanic in our district in the way of making a cheap and useful contrivance. In the preserve above mentioned, pheasants are fed with maize during the winter months, and I assure you a game-keeper would have a big job on his hands were he to feed all his birds by hand. Besides, were he to scatter it on the ground, all the birds of the forest would come in for a share. The difficulty is overcome by placing boxes in convenient localities and training the birds to come to them. The feeder is simply a box with a lid and a hole perforated low down on one side. Over the hole is a piece of board which swings on a pivot and opens or closes the aperture. On the side of the pivot away from the hole there is a step or a perch for a bird. When a pheasant lights on this perch, the maize runs out into a cup fastened to the side of the box. As soon as the bird flies away the lever falls back and covers the hole. The leverage is so arranged that birds lighter than pheasants fail to open the source of supply, and so the little sparrows, robins and wrens go on short rations. Could not old cracker-boxes with dented pieces of tin be manufactured into similar feed-boxes, and thus lessen the work of human chicken-tenders? It would be necessary to fill the boxes only once a week or month, according to the capacity of the box or the chickens.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

From the Veteran in Kansas.

We are gratified to hear again from Bro. T. A. Thompson, the pioneer Patron whose letter in the PRESS of April 9th many readers will recollect with pleasure, and we doubt not they will thank us for giving them the opportunity to read most of his latest missive and welcome him anon to the Grange homes and halls of California:

LAWRENCE, KANSAS, June 25, 1887.

Dear Sir and Brother: It is very gratifying to the early laborers in the Order to realize that it has outlived the opposition all new movements encounter and the mistakes of those who sought only pecuniary gain and never grasped the high and noble purpose to educate the farmers and bring them into association for social and intellectual development, and that it is firmly and securely established and destined to go on parallel with similar but older institutions, bringing to the farmers benefits little anticipated at first. Thousands who have stood aloof from the Order are now satisfied of its permanency and utility, and come flocking to its support.

I believe the Order is doing more good now than ever before. It commands the respect of all classes, and is enjoying a healthy and substantial growth. Very ignorant and dull must be that farmer who does not realize the necessity of organization by his class. The demand was never more pressing than now. Every other class and interest is organized, and only through organization can they expect to secure and enjoy their rights. I wish every farmer would ask himself, what is the tendency of the times, and whither are we drifting? and what has the Grange accomplished? and then seek to answer from an intelligent standpoint. An investigation of the facts will show the Grange came none too soon, and involves the welfare of the farmers, and, through their prosperity, the welfare of the whole people.

I am not located where I can enjoy any Grange privileges, there being no Grange in this vicinity, but Johnson county, adjoining this, is well organized, and the Patrons there have realized more from the Order than in any other county I am acquainted with. They have only demonstrated what the Order is capable of doing for a people. They have a bank and co-operative store, do their own business and mind their own business; have fine halls, and discuss questions relating to their interests, and advance in social and intellectual enjoyment.

I note with pleasure the reports of picnics and Grange meetings in the PRESS and the Patron. While you have many live and strong Granges, yet in California, as elsewhere, the Order is not so strong as it should be. Farmers think they cannot spend time to go to the Grange when it can be made the most profitable as well as the pleasantest time of the month. Farmers work too much and think too little; or rather, read and think and interchange ideas too little. As the Grange was designed, it is proving to be the greatest educator the farmers have ever enjoyed.

It has been my purpose to visit the Pacific Coast at as early a day as possible. This desire has been strengthened as I have become more familiar with the facts through the RURAL PRESS and California Patron, and documents sent by various friends. I have not been able yet to effect a sale of interests in Dakota and Minnesota. Before settling I wish to see various localities and visit many Granges, so as to be able to decide intelligently where I would like to make my home. To this end I now think of obtaining a ticket good for six months, and spending next winter in your State.

It has been my good fortune to enjoy a large observation of the practical workings of the Order; and if I mingle with the Patrons of California, I hope to give them such information as will encourage them to take renewed interest in the Order, and assist in strengthening the Granges; and where I can reach the public ear, aid in removing prejudice and indifference and awaken an interest in the Order, thereby increasing the membership.

Yours fraternally,
T. A. THOMPSON.

A New Grange in Placer.

Eureka Grange, P. of H., was organized June 18th, at the Columbia schoolhouse, five miles from Auburn, by State Deputy Overhiser. Bro. Flint, State Lecturer, was also present and lent valuable aid. This new organization, which starts with over 20 charter members, is largely due to the earnest efforts of Bro. V. W. Still, W. M. of Magnolia Grange. The officers are as follows: C. L. Corwin, M.; E. W. Striplin, O.; Mrs. R. C. Lewis, L.; J. C. Burns, S.; R. S. Futhy, A. S.; Mrs. L. Site, C.; Mrs. L. Site, T.; Annette Futhy, Sec.; E. E. Hulbert, G. K.; Elizabeth Hulbert, P.; Dora E. Burns, F.; Mrs. Burns, Ceres; Etta Hulbert, L. A. S.

POINT OF TIMBER GRANGE now counts over 40 members and expects to confer the fourth degree on a big class the 16th inst.

Interstate Commerce—Resolutions of Walnut Creek Grange.

The following preamble and resolutions, adopted at the last regular meeting of Walnut Creek Grange, were published in the Martinez Daily Item of June 25th:

WHEREAS, The Interstate Commerce Law, passed by the last Congress, has called forth much opposition and statements pro and con in regard to railroads; and

Whereas, The railroad companies, in our opinion, are seeking by odious and unwarranted constructions under said law to secure its modification and repeal in the interest of monopoly and favoritism and discriminations between persons and places; and

Whereas, We regard it as proper that we should express our opinion upon such vital questions; therefore,

Resolved, First—That railroad companies were not, in our opinion, chartered with the right of eminent domain and other rights which they enjoy, or organized, or permitted, for the sole purpose of making all the money possible for their promoters or shareholders; that the object of their creation was not to create any favored classes of people or particularly profitable business, but that the object of their creation was primarily the convenience and benefit of the public generally, and secondarily only, and incidentally only, the reasonable profit of the promoters and shareholders.

Second—That such and all other corporations authorized by law to administer a public trust, or

Grange Tracts.

Our National Lecturer, among other missionary work this year, is sending out various printed circulars, leaflets and slips to workers in the Order. Many of these campaign tracts are of a size convenient to slip into a common letter-envelope. Here, for example, is the body of one of the more recent—No. 11:

J. H. Brigham, Master of the Ohio State Grange, closed an address to the Patrons of that State with these words:

Let our watchword be, "Put none but honest, capable, sober, economical men in official positions." Let us demand a fair share of representation in the Legislature and Congress for the men who are directly interested in the nation's greatest industry. In a representative Government, the interests not directly represented always have and always will suffer. No one but a fool or knave will deny this. Shall past follies be repeated and continued? Shall we not act upon the theory that the "Lord helps those who help themselves"? There is no shadow of excuse for us. We can protect our every interest, and if we are not manly enough to do it then we deserve to suffer. If we are determined to give more attention to our own interests in the future, the first step must be to organize our forces. It is not probable that a political or party organization of farmers is desirable, but an organization which is not afraid of politics we must have. The Grange has its social, educational and moral features, but that is not all. We propose to boldly advocate political reforms, and co-operate for the overthrow of the "pirates."



THE BELLMAN INFORMED OF THE DECLARATION OF INDEPENDENCE.

use, or business, should at all times be subject to control by the public, and that any other theory or construction inevitably leads to the creation of favored classes, which we regard as inimical and destructive of republican institutions, and the rights and privileges of republican citizens, and at variance with and destructive of our form of republican government.

Third—That we recognize that the questions of proper control of such organizations are complicated and not easy of solution and require the calm and thoughtful consideration of our best talent; but that general rules prohibiting discrimination between persons and places and prohibiting excessive charges and prohibiting a higher charge for a short haul than a long haul, of which the short haul is a part, as embodied in the Interstate Commerce Act, are eminently just and should be the basis of all regulation.

Fourth—That the railroad companies should not be permitted to carry freights at nominal rates in order to build up business for themselves to the injury of local manufacturers or interests; that the people do not exist for the benefit of the railroads, but that the railroads exist for the benefit of the people.

Fifth—That the experience gathered after a few years of trial and strict enforcement of the said law will the better enable the Commission provided and Congress to apply proper remedies.

Sixth—That for these reasons we favor the strict enforcement of the said Interstate Commerce law for at least a sufficient number of years to allow business interests to adjust themselves thereto, and that we deprecate any attempt to change or alter said law until a sufficient number of years have elapsed to demonstrate whether the evils claimed to be consequent thereto are real, or mainly due to opposition to lawful control by the railroad companies.

STOCKTON GRANGE thinks the Interstate Commerce law should have a fair trial and has requested Congressman Biggs to use his best endeavors to that end.

who infest and sometimes control political parties. Farmers, join us in this work, and we will do you good, and hurt no man who is doing an honest, legitimate business.

The smaller ones usually end thus: "Read this, then hand it to your farmer neighbor, or fold it in the next letter you write. For further information about the Grange, address Mortimer Whitehead, Lecturer National Grange, Middlebury, New Jersey."

Bro. Whitehead invites Patrons to keep this kind of ammunition at hand, when writing letters or sending papers to friends or foes, and slip them in, and so keep them moving "for the good of our Order, our country and mankind." He also suggests that local papers might be willing to reprint some of them, as matter of interest. These suggestions are all worthy of consideration.

Grange Interests in Sonoma.

EDITORS PRESS:—Pomona Grange meets in Santa Rosa Grange hall the third Wednesday in July. Beside the usual business there will be a choice program of oratorical, rhetorical, musical, and elocutionary selections. A big attendance of Patrons is expected. All fourth degree members are welcome.

Santa Rosa Grange is growing. A class of four was elected at the last meeting. The visit of Worthy State Lecturer Daniel Flint was of great benefit. He made friends for himself and for the Order. Daniel Flint is the right man in the right place. But he will discharge the duties of any place with honor to himself, his friends and the position. As W. M. of the California State Grange, he amply

won the commendation, "Well done, good and faithful servant."

Santa Rosa Grange has just taken in five members by affiliation and one by initiation. There are also a number of applications for membership. The several committees appointed to make arrangements for the accommodation and entertainment of members of the State Grange are busily at work. There is no doubt of a large attendance at the October meeting of the State Grange. All who can should attend, for Santa Rosa is a splendid town, and a cordial welcome will be extended all visitors. D.

THE Patriotic Order Sons of America held their Eleventh National Convention in Chicago last week. The revised platform declares against permitting any foreign Socialists, Anarchists, or Nihilists to land at our ports, and would forbid foreign speculators and adventurers investing in American real estate.

THE Arcata Grangers' picnic at Dow's Prairie is said by the Union to have been an unusually happy occasion for all who participated.

Ring the Liberty Bell.

As near as we can remember, it was a hot and sultry summer day of 1776, that Thomas Jefferson gave a piece of his mind to the old folks across the water, in an essay or indictment called the Declaration of Independence. It was very handsomely done, and in substance says that the United Colonies had saved up money enough to set up housekeeping for themselves. On or about the 4th of July, 1776, this document was signed by Benjamin Franklin, John Hancock, et al., as plaintiffs in a case about to be tried in the Court of Mars. It is a very readable document and should be read once a year.

Suffice it to say that early in the morning of that memorable day everybody felt sure something startling was about to happen. Groups of excited men could be seen on the street or rushing toward the State house. Congress was talking over the great divorce question; the hour for the decree was approaching. The old bellman mounted to the belfry to be ready to proclaim the joyful news. The bell had been cast in England with this prophetic sentence around its rim: "Proclaim liberty throughout all the land unto all the inhabitants thereof." At length, at 2 o'clock the door of the hall opened and a voice exclaimed: "It has passed." Like lightning the words leaped from lip to lip and the building shook with huzzas. The boy at the foot of the ladder shouted to the old man in the belfry: "Ring, ring!" The first clang started every heart in Philadelphia like a bugle blast. "Clang, clang!" it sounded on; the echoes floated on the air to Boston, to New York, all over the land, blending with the boom of cannon, martial music and the shouts of a rejoicing people. The sound of that bell was borne on the breeze across the sea, and there is a tradition that old Lord North fainted, parliament cried like a child, and the whole island felt as solemn as a graveyard.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

CHERRIES.—Oroville Register, June 23: Mr. A. B. Knepper has sent us a box of very fine Bigarreau cherries, grown at Forbestown, on red land without one drop of water, except what nature provided, or any fertilizers whatever. The altitude is 3000 feet above the sea level. The cherries were extremely large, of brilliant color and of fine flavor. The cherry grows very large and fine in Oroville, and, as Forbestown is 26 miles distant, the whole foothill slope of 26 miles, and up to the altitude named, is a favorable region for cherries.

Fresno.

WHEAT.—Republican, June 24: Reports from various portions of the county indicate that wheat is turning out considerably better than expected. Summer-fallow is giving a first-class yield, and nearly all the early sown wheat is making a fair crop. Most of the wheat is first quality and will rank No. 1 in the market. Farmers tell us that they will make more on their crop this year than they did last. The average yield will not be so heavy, but the higher prices will more than make up the difference.

APRICOTS FOR PROFIT.—J. H. Harding has a 10-acre apricot orchard in Washington colony, of the Royal, Peach and Moorpark varieties, and is now engaged in picking and curing the first-named variety. His trees were set out three years ago last February, and bore a fair crop last season. He is now taking an average of 115 pounds of fruit from each tree, and there are 108 trees to the acre. This fruit will sell on the tree for one cent per pound, the packers doing their own picking. The yield of 1080 trees will be 124,200 pounds, worth \$1242 on the trees. Mr. Harding proposes to do his own drying, however, and reap the profits of that labor. His fruit when dried will weigh about 20,000 pounds. First-class sun-dried apricots sell readily at from 12½ to 15 cents per pound, so that he expects to realize from \$1200 to \$1600 for picking and drying, which he will do with little help outside of his own family.

San Diego.

HONEY.—San Jacinto Register, June 23: P. Bell reports the honey product light. The quality is not so good as last year on account

of the lateness of the flowers. He has obtained four tons of honey this year. He had more than double this amount last season.... H. T. Hallock states that his bees have made two cards of honey weighing $9\frac{1}{2}$ pounds each, and two cards weighing 8 pounds each.

HORTICULTURAL MEETING.—The regular monthly meeting of the San Diego County Horticultural Society will be held at Poway, July 6th. A cordial invitation is extended to all, with comfortable lodgings and plenty to eat.

Los Angeles.

WESTMINSTER PRODUCTS.—"R. S." in Los Angeles Times of June 23: Everybody is busy with the hay crop; stacks line the roads. The apricot crop is very good, and is now ready for market. Our crop is the best in this whole section, and will probably all be sold for consumption in the surrounding towns. The early Moorpark is the best apricot now known to us, combining earliness, large size, beauty and fine flavor. These were fully ripe here June 14th. The peach and apple crops are very promising, and the Anderson peach has now a fine color and will soon be in the market. The potato crop is large.... Jas. A. McFadden has furnished the Anaheim *New Era* with the following statement of produce grown and shipped from Westminster township during the past year: 22,000 sacks corn, 2,640,000 pounds (110 cars); 5000 sacks potatoes, 500,000 pounds, (25 cars); 7000 sacks barley, 700,000 pounds (35 cars); 3000 tons hay, 6,000,000 pounds (300 cars); 3840 cases eggs, 230,400 pounds (12 cars); 288 coops fowls, 40,320 pounds (2 cars); 18,000 rolls butter, 36,000 pounds (2 cars); merchandise received at stores, regular freight rates, 275,800 pounds (14 cars); carload rates, 120,000 pounds (6 cars). The preceding does not include stock raised or sold.

Mendocino.

WOOL-DAY AT UKIAH.—*Dispatch and Democrat*, June 24: The streets presented a most animated appearance last Saturday, and wool-buyers from the city, as well as the home buyers, were busy examining the many loads of wool that the growers had brought in to sell. The Mendocino spring clip proved one of the best ever put upon the market, and our wool-growers reaped their reward. Nearly all the sales were made in the afternoon, and within two hours' time, amounting to some 600 bales, or 180,000 pounds, and sold at from 22 $\frac{1}{2}$ to 23 $\frac{1}{2}$ cents. Humboldt and Mendocino wool always commands the best prices going for the Pacific Coast product.

Sacramento.

EAST-BOUND FRUIT.—*Record-Union*, June 28: Five carloads of fruit went East last evening by the express train, which had to be run in two sections. Two carloads were from Sacramento, one from Vacaville and two from Newcastle. The shipments of full carloads of fruit to New York by passenger train are much more extensive this year than heretofore.

San Joaquin.

WATERMELONS.—*Lodi Sentinel*, June 25: On account of the cool weather during May, watermelons in this, as in all other portions of the State, will be two weeks later this season than last. Indications point to a good crop.

Santa Cruz.

A NEW BERRY.—*Pajaronian*, June 23: Judge J. H. Logan has produced a new small fruit by grafting raspberry on blackberry stock. It is as large as a blackberry, but more of the color of the raspberry. It is firm and should be a good shipper. The flavor of both berries is blended, while it is similar to the raspberry in odor.

Sonoma.

THE NEW CANNERY.—*Santa Rosa Democrat*, June 25: Between 20 and 30 carpenters and laborers are hard at work to finish the new cannery on Sixth street next week. The building is of brick, 120x80 feet, commodious, well lighted and ventilated, and capable of accommodating 600 hands during the busy season. The floor is composed of 2000 pieces of 2x6 timber, aggregating 20,000 feet. The walls are about 12 feet in height, from which the roof ascends at an easy incline to the peak, which is fully 40 feet from the ground. A 30-foot well has been sunk, and a 35 foot windmill and 6000-gallon tank are to be erected. The warehouse is filled to the roof with 40,000 cans and well stocked with box material, upon which the box makers will commence work next week. Three hundred tons of fruit have been contracted for already, and Mr. Perry states that about 1,000,000 cans will be put up during the season.

Siskiyou.

SCOTT VALLEY NOTES.—*Cor. Examiner*, June 21: All danger of June frosts has passed. The late rains have insured the wheat crop, which promises to be of an excellent quality, while other grains and hay look well. Hundreds of acres of the foothills have been sown to alfalfa, and in many instances will yield from one to four tons of hay to the acre. An irrigating ditch leading down the eastern side of the valley is one of the enterprises projected.

Tulare.

MAIZE, MELONS AND BLACK CAPS.—*Visalia Times*, June 23: The first watermelons of the season were brought to this city yesterday by B. C. Anderson, from his ranch four miles east of town. He also brought in a few sample boxes of the Black-Cap raspberries, which were very fine.... The residents of Lime Kiln have been feasting on green corn and watermelons for the last 10 days. Lime Kiln is in

the thermal belt of the Sierra Nevada, and this early production of green corn and melons shows what an opportunity there is for supplying the whole country from here to El Paso with early vegetables, were our mountain ranchers disposed to turn their attention and industry in that direction.

Stanislaus.

USING STRIPPERS.—*Modesto News*, June 24: The farmers who have small tracts of land in the hills east of Oakdale are cutting their grain this year with strippers, which are giving the best of success. The cost of this machine is about \$400, and can be worked with four horses and two men, and cuts eight feet.

Yolo.

A FINE APRICOT.—*Woodland Mail*, June 25: G. D. Fiske yesterday placed on our table one of the finest clusters of apricots we have yet seen. This fruit is of the Routier variety and was grown on the premises of W. Coleman, near town, on trees only three years old. The apricots are large and of a delicious flavor. There were about a dozen on the branch, which was not over six inches in length.

RAISIN PRODUCT.—*Davisville Cor. Democrat*: I am informed that the Briggs family will place upon the Eastern market 100,000 boxes of raisins, besides some 50,000 in the hands of friends,

of April. Grain of all kinds is making a very rank growth, and old settlers say that it will be so late in the season before it ripens that there will be some danger of its being frosted. Should the weather be dry, however, from now until the 1st of August, there will probably be the largest yield per acre ever grown in this upper country. There is some old wheat yet in producers' hands, and some of it two years old. The farmers have been keeping it in hopes of getting a better price after awhile; and now that the railroad is completed over the Cascade mountains, those who have grain are in high glee, thinking they will soon have a chance to ship to the California market. If the commission merchants and wheat buyers of San Francisco would arrange for receiving and handling grain at Tacoma so farmers could ship directly to them, they could secure the largest portion of the crop in this region. Wheat is now selling at 58 cents per bushel.—*G. F., Spangle, W. T., June 20th.*

Sonoma County Notes.

EDITORS PRESS:—That busiest of all seasons, the harvest, is now at hand; and consequently an ordinary farmer correspondent can hardly find time for newspaper work. This explains

how much damage may yet come to his vineyard in the next 60 days.

That portion of our farmers who are engaged in the sheep business here did well this season. Sonoma wool always finds a ready sale at tip-top prices. We know of farmers who have sold their spring clip in home market this year for 23 $\frac{1}{2}$ cents per pound. What do you think of that?

If one can believe half he hears, there will be many miles of rail laid in this county within a year. No one seems to doubt the construction of the road from Santa Rosa to Benicia. It will be a paying line and ought by all means to be built. Then the new road from Santa Rosa to Green valley via Sebastopol seems sure of construction. That also will be a paying line. It will tap one of the best and most prolific fruit sections of California. Then again, the S. F. & N. P. R. R., or Donahue line, will probably be extended from Oloverdale, the present terminus, to Ukiah, the thriving county seat of Mendocino county. This road would tap an immense timber section, as well as the fertile Russian river valley. All of these roads ought to be built. Let it be so, is our prayer.

The fruit crop is very large, but will all be cared for. At Petaluma there is an immense cannery; a large one also at Healdsburg, and the largest of all at Santa Rosa. Then there are fruit-driers at Sebastopol, Healdsburg and Santa Rosa, and beside many farmers have their own driers. Peaches and Bartlett pears are being contracted at \$30 and \$35 per ton. This seems to us a paying price for the producer.

Corn never promised a better yield. In short, everything in this grand old county is booming on a safe yet paying basis. We have no land boom, and do not want one. All we want is a steady growth, and that we have, and are sure to keep on having.

Lumbermen are busy making both lumber and money.

Dairymen talk of a short season, but say they have done fairly well.

Grangers growl, yet they ought to be the happiest people on earth.

State Grange season fast approaches. Santa Rosa expects a large crowd the first week in October. All who attend may expect a good time.

Next in order is the Fourth of July, and after that comes plenty of hard work. Here's to the Fourth and to the work!

OCCASIONAL.

Santa Rosa, June 28, 1887.

Mollie Pitcher.

The battle of Monmouth was fought on the 28th of June, 1778. It was on the Sabbath and the hottest day in the year. It was stubbornly contested, and may be regarded as a drawn battle. It was during this battle that an Irishman by the name of Pitcher, while serving his gun, was shot down. His wife, named Molly, only 22 years of age, employed herself, while he loaded and fired his piece, in bringing water from a spring near by for the thirsty soldiers. While returning with a supply, she saw him fall and heard the officer in command order the gun to the rear. She immediately ran forward, seized the rammer, declaring she would avenge his death. She fought her piece like a hero to the last. The next morning, Gen. Greene, who had been struck with her bravery, presented her to Washington, who immediately promoted her to a sergeant, and afterward had her name put on the half-pay list for life. Previous to this she fired the last gun when the Americans were driven from Fort Montgomery. Gentle Mollie was a fair specimen of our fore-mothers, whose amiable daughters now declare that taxation without representation is a wrong and an outrage that must be righted or there will be another rumpus in the land.

The Fourth of July.

After John Adams had signed the Declaration of Independence he wrote to his wife the following prophetic words concerning the Fourth of July:

It will be the most memorable day in the history of America. I am apt to believe that it will be celebrated by succeeding generations as the great anniversary festival. It ought to be commemorated as the day of deliverance by solemn acts of devotion to God Almighty. It ought to be celebrated with pomp and parade, with shows, games, sports, guns, bells, bonfires, and illuminations from one end of this continent to the other, from this time forward, forever more.

A MONUMENT TO STARR KING.—The Unitarian church in this city, built during the ministry of Thomas Starr King, has lately been sold and will soon be torn down. The remains of the mighty, brilliant, patriot-preacher will be taken up and laid elsewhere. This has again brought up, in grateful remembrance and admiration, his inestimable service to the State at the time of the war for the preservation of our national oneness, and a strong movement is well afoot to have a fitting monument erected in Golden Gate park in memory of the man who confessedly did more than any other to keep California loyal to the Stars and Stripes, and who gave his life for the cause of Liberty and Union as truly as did those who fell on southern battle-fields.



MOLL PITCHER AT MONMOUTH.

which they can contract. This is about one-sixth of the entire product of the State, and will justify their intention of entering the market independent of the middleman.

Yuba.

A FLOWING WELL.—*Marysville Appeal*, June 24: W. F. Lavy, whose place is about 10 miles south of this city, on the Sacramento road, says: "Four years ago I started boring a pump-well in one of my grazing fields. Imagine my surprise when at a depth of 30 feet a stream of water came out about one foot in the air. For six months of each of the past four years, that well has watered all my stock; and by digging deeper I could undoubtedly have secured a perpetual flow. In 1864, on the Eberhard ranch, I assisted in boring an artesian well which has made the large-sized pond now on the place, and which receives its life from that well. No, the surrounding country does not need irrigation—Dry creek runs through so much of it."

HARVEST HELP SCARCE.—*Wheatland Graphic*, June 25: On Wednesday and Thursday \$2.50 a day and board was offered, but every available man in town was at work or had been engaged. In consequence of the scarcity of local help, workmen had to be procured from Marysville and Sacramento, and then were hard to get.

WASHINGTON TERRITORY.

EDITORS PRESS:—More rain has fallen throughout the Palouse country during the month of June than has been known before for many years, and the ground is as thoroughly soaked as it is in ordinary seasons on the 1st

why "old Sonoma" has not been heard from lately.

The hot spell hit us here, but did very little serious damage. Wheat may be a trifle shrunken in consequence, but the yield will be remarkably large. There has not been such a crop of grain in this county for the past 10 years as will be harvested this summer. Already the self-raking reaper, the improved header, and the twine-binding harvester are to be seen in scores of grain-fields. Threshing has not commenced yet, but the machines are being put in order for that work, and soon the shrill whistle of the steam-threshing engine will be heard at early dawn, at noon-time and at dusk.

The hop crop of Sonoma is one of its staples, and brings many thousands of dollars to the tillers of the soil. So far the outlook for an abundant yield of hops is very encouraging, and the promise for price is not at all discouraging. Report hereabout says that certain dealers have offered to engage the coming crop at 20 cents per pound. That means \$400 per ton, which is a paying business.

In the vineyards there is every reason to expect a fair return of grapes. True, the late frosts did some damage, but the new acreage will more than offset the harm done by frost. Therefore, at the present writing, it seems the vintage of 1887 will be as large as that of 1886. That being the case, the outlook for price is not very encouraging, for wine-makers realized little profit last year, and they do not seem at all anxious about buying grapes, especially at fancy prices. However, there is yet abundant time for the grape crop to be materially damaged. The long, hot days of July and August are very trying, and no one knows



A Pioneer's Romance.

A Fourth of July Before the War.

[Written for the RURAL PRESS by M. B. D.]

Tom Raymond's proud turnout went glittering through the streets of Merrimac. The new buggy literally gleamed in the afternoon sunshine, and the pair of spanking bays were glossy as satin.

"The whole thing looks as though 'twas greased," said one newsboy to another as the equipage passed them.

It whirled on to the station, met the train, and soon came back; and now the vacant seat beside Mr. Raymond was occupied by a handsome girl. No stranger was she to the many they met, and who recognized her with a glance of surprise. Only a year ago she had left for her last term at Northampton, a slip of a girl, with the gentlest manners and a wild rose face that made her a general favorite. But what a change! She had returned not only with her graduating honors, but with a beauty and air of fashion that was evident even from the glance obtained of her in passing. Her cheeks glowed and her eyes sparkled through her fluttering veil, while she smiled and nodded to her old friends with conscious delight at seeing them. Yet there was a young man unrecognized, and he felt that one of those gay little nods to him would be a treasure, as he gazed with open admiration at this meteor which was soon out of sight, gliding on down the elm-shaded avenue.

This young man was Oliver Lloyd, the rich pioneer from California; for this was in the year 1861, when the pioneers of the Pacific Coast were young men, the most venturesome and the strongest of the country, who sought fame and fortune where those less vigorous and bold would hardly have dared to penetrate. Not a month ago his arrival in Merrimac had occasioned a ripple of excitement, especially among the young people, and immediately the girls had curled their tresses with more studied art, while their admirers were resolved on keeping their favor in spite of this dangerous lion, who was supposed to be a competitor for it. His first appearance was at a party given by Mrs. Elco, a leader in society. On the appointed evening her large triple parlors were ablaze with light, which glittered in the depths of broad mirrors over the fretwork of the gilded cornices and costly pictures.

Her nieces, Maud and Ina Hurley, were indeed striking figures among the bevy of bright and youthful ladies about them. They did their best to attract the particular attention of the new lion, and so did Miss Vincent, an acknowledged belle, whose dark eyes beamed bewitchingly over the plumes of her snowy fan; but all this array of beauty was in vain for him.

Nevertheless he was very genial and popular, and he attended their parties and picnics with a constancy and evident enjoyment that was gratifying to his entertainers. And yet there were shadows about his keen gray eyes, and, at times, a melancholy expression upon his rather strong and haughty features, that made him still more interesting to those who were either sentimental or sympathetic than he was to the light hearts of vanity. He might sometimes be seen at dusk upon a lonely ramble, and Miss Miller, a kindly old maid, declared that his sadness must be owing to some heartache. She was a music-teacher, and being out upon her errands of instruction, often met him. He frequently walked to the cemetery, and once she followed him out of curiosity, but was rewarded only by seeing him rest by his mother's grave. The dusk had nearly merged into night, when he started to return, and perceiving her, joined company and walked on to the village. To him her quaint humor and innocent gossip was amusing, and when he met her by chance he was not averse to listening to it. Along the avenue they proceeded until they had passed the more thickly settled portion of the town and found themselves again beyond the suburbs. Half a mile further on still, Miss Miller paused before a large, deep garden that nearly concealed the farmhouse it enclosed.

"I am going in to see Miss Belmont. You know she only returned this evening from her finishing term at school, and she will have lots of news and plans to tell of."

"May I have the pleasure of joining you?"

"Not for the world would I give you such trouble. I shall return quite late, perhaps, and my nephew will see me home."

Mr. Lloyd had been on the point of asking for an introduction to the little graduate, but, from the manner in which she interrupted him, was not quite certain that this would be agreeable to her. His surmise was well founded. Tom Raymond was her favorite nephew, and she strove to promote his wishes in regard to Miss Belmont, since, like others, he too had been charmed with her sweetness and beauty.

As Mr. Lloyd wandered on, the fragrance of roses and mignonette grew faint and was lost in the light air that blew from a grove in the west, where the sunset was dying in a glow which grew brilliant as carmine against the horizon. Taking a footpath, he began to penetrate the deepening shades of these groves, but before he had wandered far he reached a sheet of pure spring water, which was almost a lake. How its glassy face glimmered like a fire opal in the sunset light. Blushing lilies starred its margins, and tall reeds and bushes leaned over its marshy banks. A tiny boat was moored to a small sapling. The oars were secured inside, and, casting off the painter, he leaped into the light bark. He reached the middle of this fairy lake, then explored the shores, and finally found the outlet, a silvery stream that seemed to lose itself in the vistas of the wood. Following its course, at length he saw its ripples grow diamond-pointed by the moonbeams that fell through the opening above and between the trees.

"What a glorious place for a moonlight stroll!" thought he, pausing to enjoy the view; "but it is a trifle lonely," and a thought of the farmer's daughter in the farmhouse yonder came to his mind.

As if in response to the fancy, he saw a lady whose white dress was clearly outlined against the dark foliage behind her. A wealth of sunny curls fell down over her shoulders and reached to her waist in rich profusion, while a fleecy scarf covered her head and encircled her delicate face, now beaming with pleasure. At first she seemed alone, but presently he heard her merry voice and laugh as a tall man came from some rosebushes, with his hands full of fresh damask roses which he had just gathered for her. She took them with the eagerness of a child, and inhaled their dewy fragrance as joyously.

Mr. Lloyd frowned, thinking, "Here comes the lover—a fine old fellow, too; but I'll cut him out if mortal man can do it." He had passed the confines of the garden, and now, becoming aware of his trespass, hastened to leave it.

"I had better take you in out of this damp, Maggie," he heard the gentleman remark while he silently plied his oars.

"Oh! no, papa. I have not been so happy this summer as I am to-night. It must be lovely down by the pond; let us go."

Mr. Lloyd unconsciously listened for his reply, but could not catch it above the babbling of the brook. Then he hastened away. The quivering path of silver over which he floated seemed winding to the land of enchantment. He had recognized the girl whom he had seen in the fine equipage during the afternoon, and her moonlight walk disclosed to him her filial love and fondness for home, which he thought adorable traits of character.

On regaining the road he walked with rapid steps, and as he passed the farmhouse snapped from its stem a half-blown rosebud that leaned over the garden wall and fastened it in his buttonhole.

His resolution to win Miss Belmont he found difficult of accomplishment. At church, at parties, and in her own home, to which he soon gained admittance, he often met her; but she seemed as indifferent to him as she did to others who were just as anxious to gain her favor, and Mr. Raymond was not an exception, although he was a most formidable rival. She sometimes drove out with him in his fine carriage, and this Mr. Lloyd beheld with jealous pangs and renewed determination to carry out his resolve. He saw them on the morning of the Fourth of July speeding down the avenue just after the parade of the firemen and several societies that had turned out to celebrate the occasion.

This year the exercises were particularly interesting, since the breaking out of the war had aroused the patriotic spirit among them to the pitch of enthusiasm. Crowds of spectators were still watching the uniformed townsmen and listening to the strains of martial music which rang upon the sultry air, when the carriage passed him, and now he received a gay little nod from Miss Belmont, but not with the gratification he had once imagined such notice would give him. He was quite disturbed, but sauntered on, trying to devise some plan of making the evening particularly pleasant to her.

There was not to be any public display of fireworks, since the moon was full and would detract from its success. A public ball was to be given, but this she declined to attend.

Miss Miller looked from her high dormer window just as he turned a corner, and he caught sight of her sharp face, which expressed unusual satisfaction, for she too had seen the company her nephew had secured. Like a flash a plan came to his mind, and the idea that she would make a good assistant occurred to him; so shortly he found himself in her stiff little reception-room unfolding it to her unfriendly ears.

"Miss Vincent will be delighted, no doubt," she remarked at the conclusion, affecting not to understand his purpose, and added: "Indeed I will see the thing through; so let us begin."

The summer evening was simply perfect after the hot, oppressive day. A balmy breeze came from the woods, and the flowers seemed to revive in its gentle breath. Before the stars had fully appeared in the purple dome of heaven, the moon rose and dimmed their sparkling light with her full-orbed splendor.

It was a most select and brilliant assembly that gathered by twos and threes in the old farmhouse, until the parlors were overflowing. Maggie Belmont was in high spirits at the com-

pliment of this gay surprise party. Mr. Lloyd was at her side and seemed most devoted. He found an opportunity of calling her attention to the exquisite moonlight without, and solicited a walk.

"What a fine idea! We will all go down to the bridge," she returned merrily. And so, after some delay in securing the dainty wraps of the ladies, they sauntered out through the garden.

Miss Belmont walked demurely with Mr. Lloyd, pouting to herself because that gentleman had on a sealskin cap. "How absurd!" thought she. "A man nearly six feet high wearing a fur cap in July."

"What a warm climate you must have in California!" she said with an arch glance. "This must be cold in comparison."

"Yes, it is warmer, but much more comfortable, for we have not the humidity which makes the heat oppressive. The hottest day is followed by a cool, refreshing evening, such as we never know here. In mid-summer, when the verdure upon the hills of Tuolumne is dry and yellow, and even the green chaparral looks dusty against the cloudless skies, we always have a breeze of pure air winging up from the coast, or down from the lofty Sierras, until, like the Olympians, we seem blessed with a royal atmosphere."

They had been walking a little in advance of the others, and now reached the bridge that spanned the Merrimac river. The beauty of this stream invited them to pause, and as they gazed upon its dark, moon-kissed waves, she went on rather saucily:

"If you are afraid of the dews and damps of New Hampshire, perhaps an overcoat would be serviceable."

He had bent down, and stood leaning over the railing of the bridge, which was high above the current. Lifting a floating end of her scarf up at arm's length to adjust it, her bracelet clasp caught in the objectionable seal cap, and as she drew her arm back suddenly, it whirled through the air down, down until it rested like a tiny boat upon the waves below them.

"There!" she exclaimed with an unconscious smile of glee, as she saw it whirl like a leaf in the eddies. "What are you going to do now?" she asked, and her face had a half-wicked, half-sympathetic look in it that made it bewitching.

"I will forgive you the accident if you will return to the house with me by the shortest cut, up yonder through the woods."

He could hear Mr. Raymond and Miss Vincent, who were approaching in company, laugh, probably at his discomfiture, he imagined.

"Such a delightful way," Miss Belmont replied. "We will pass the mill and the pond further on;" and raising her voice, she called to the rest, "Follow your leader," rather proud to guide them through the romantic vistas ahead at the side of this lion who walked like a chief, as imperturbed at the loss of his cap as though he had never worn one. His fine thick hair was displayed to advantage, and his good spirits and pleased manner made him more agreeable than ever before.

The dark, silent mill loomed into view, its sharp outlines as distinct as those of an etching against the arch of moonlight beyond it. The milldam was dark and smooth as a lake of ink, its still depths being shadowed by the woods on one side and by lofty piles of new balsam-scented lumber on the other.

But a few steps further on was the pond, and they crossed the little stream, its outlet, upon a bridge of planks. On reaching the center of this insecure structure, Miss Belmont glanced up, and, raising her hands, exclaimed: "Look! look at the pond!"

A volcano seemed to have sprung up in the midst of it and to have thrown balls of fire all around the banks. Crimson and yellow and purple lanterns waved beneath the deep shadowy boughs of the tree, and the floating pyramid of light in the heart of the lake illuminated the whole of its limpid surface.

They rushed on to view the wonder more closely, and reached a nook where an old lady offered them sherbets and ices, which sparkled in pitchers arranged about her fairy cave. Further on was another, and here two little girls presided over a feast of sandwiches and cakes.

"What does this mean?" asked Miss Belmont, scanning the host of friends who had reached her and now gazed about with as much wonder as she betrayed.

Before their expressions of surprise had ceased, a new vista of light blazed out, and a band struck up a cheering strain that swelled till the waters of the pond seemed a-quiver, and the woods rang with myriad echoes. Pleasure was reflected upon every face. With the thoughtlessness and enthusiasm of youth, they dispersed in groups, examining the pretty wonders about, when a shower of Roman candles shot up from the floating ark of light and made the heavens as brilliant as the grove. Then what cheering and clapping of hands rose above the music! This was followed by rockets, and more candles from the banks, and again more cheers. Perfect success had crowned the surprise.

At the head of the lake a tent had been pitched, and the earth under it carpeted to protect its occupants from the dampness. A large company of older people were seated comfortably inside, or before it, enjoying the surprise of those who came later than themselves as well as the unusual scene about them.

The hours fled with rare mirth and pleasure until the moon looked down from her luminous

throne in the zenith, and the candles had burned low in the lanterns.

Miss Miller had been bustling about, giving a hint here and there of the part she had taken in preparing the entertainment; her chipper voice and mysterious suggestions making her for once the center of every circle she entered.

But the air had begun to grow cold, and she sighed for a hot cup of tea. In fancy she could see the thin steam curling up from the warm cup, and the sugar and cream waiting to be mixed with the fragrant beverage in the mimic well. There were sugar and cream, and tea and cups, but all were cold, so cold that she shivered at the thought of them. A bright idea came to her aid. Why not heat some tea in a tin bucket, gipsy fashion? It was easy enough to build a little camp-fire. Oh! she would add another surprise for her tea-loving friends.

In a few minutes she had a fine blaze leaping up a heap of dry twigs and cones under some fir trees. The kettle began to bubble, and her gaze, which had been earnestly riveted upon the steaming liquid, did not note the little sparks that had shot away from her camp-fire and now wound along like serpents over the dry fir needles that had long since fallen and become as inflammable as paper. These treacherous fires crept up the trunk of the tree behind her, growing fiercer and stronger as they fed on the rich resinous drops that exuded through its bark. Unfortunately this tree was dying at the top, and as soon as the fire reached above the green portion it began to rage and flare boldly, growing wilder every instant in the breeze that fanned it. The tongues of fire reached out for other trees that interlaced their green boughs among the crackling branches of this one.

The consternation and surprise which transformed the gay company at hand into dumb spectators of the threatening calamity can be readily imagined. Miss Miller observed the sudden change, and, discovering the danger almost above her head, fled precipitately, and, unwittingly stumbling, fell with a shriek into the pond.

"Oh! my father's mill and all the lumber!" moaned Miss Belmont, clinging to her companion's arm. "Oh! they will all be burned, and that means ruin to us," she exclaimed with sudden energy, looking up into Mr. Lloyd's face.

He left her with her mother. The next moment the scream and splash of Miss Miller told of her mishap. Throwing off his coat, he plunged into the water after her with all the confidence of a good swimmer, and soon brought her thin, drenched form to the bank and laid it upon the grass, to be cared for by her friends.

Then he dashed toward the flaming woods, snatching up as he went an ax that had been left by those who had pitched the tent. While with vigorous strokes he chopped at the trunk of the burning fir, strong, active men procured buckets from the mill and brought water to quench the burning branches as they fell, and prevent a further spread of the fire upon the dry leaves beneath.

At length, the blazing monster came down with a crash, its flaming crown falling toward the lake; and ere the flames upon its charred limbs were extinguished, the smaller trees which had caught fire crashed down upon it and shared the deluges from the buckets, filling the air with clouds of steam and smoke.

In less than an hour from the time the fire had first been observed, Oliver Lloyd had rescued a lady from drowning and prevented a conflagration. He leaned upon his ax before them, dripping with the water of the lake, flushed and burned with the heat, blackened by the falling cinders, and half exhausted by his heavy exertions.

The company gathered around him, vying with each other in offering attentions; for he was no longer a mere lion, but had become a hero. Miss Belmont insisted upon twining her fleecy scarf about his neck, at the same time murmuring, "This Fourth-of-July entertainment is worthy of a Roman, and we owe it all to you, in addition to the preservation of the mill." The glance of her glowing hazel eyes said even more to him than her words and manner, and he placed her arm through his own with an air of confidence.

Every spark of the lanterns and all of the fire had been carefully put out; so he led her back to the farmhouse in triumph, followed by her hosts of friends.

Miss Miller was not seriously injured by her accidental drenching and fright, and she soon recovered, when her gratitude to the new hero was unbounded. Mr. Raymond continued to be assiduous in his attentions to Miss Belmont as heretofore, but after this long-remembered Fourth-of-July evening he received no more encouragement, since Oliver Lloyd had become her hero, and when he returned to the genial climes of Tuolumne he took her with him—his bride.

EDIBLE SNAILS.—New Orleans is the largest consumer of snails in this country. They are first thrown into hot water, says a Southern epicure, and killed. Then they are washed in a weak solution of lye, which removes the slime, and the shells are cleaned with stronger lye. Then the meats are boiled and replaced in the shells, with a dressing of bread and parsley, and thus prepared the snails are roasted. When the covers are removed from the dish one must eat the snails whether one likes them or not, the flavor is so enchanting. They can be eaten in two ways—the meat can be picked out with a fork, or the shell may be put to the mouth and the snail sucked out bodily.

The Fourth of July.

[Written for the RURAL PRESS by DR. J. W. GALLY.]

HISTORIC.

Since great John Adams first did say
That this should be, for after times,
A celebrated "epocha"
Of loud applause and ringing chimes,
We have not been remiss in noise,
Of voice and powder loud and high;
Of marching crowds and shouting boys
On this the 4th day of July.
Ah! there were boys, some here to-day,
Who, fired with glory years ago,
Were happy in the home display
And thrilled with music's brazen blow.
What since have those old boys beheld
When war's dense vapor filled the air,
And home-bred foeman loudly yelled
To fright the flag of Union there?
Well, they have seen that we'd forgot
In our great growing, full of pride,
The older struggle for our lot
By those who nobly did and died;
Forgot the little things that make,
Like mountain rills, the greater stream,
Till, face to face, we wide awake,
In bloody battles, from our dream,
To waste in men, and cash, and might
[Saying naught of broken hearts, though brave],
Enough to twice have bought the right
Of Freedom to the unhappy slave;
But, patience lost, we wrathful grew,
Lost all respect we either held
For either and to battle flew,
One cheering while the other yelled.
Not so the old men of yon day,
The heroes, of July the Fourths
"Mankind's opinion," so wrote they,
[Except King George's or Lord North's,]
We do respect with decency;
And then they made their great appeal
Which, often as we read, we see
Is strong with reason, calm and real;
No haste, no anger, no vile word,
No taunt from out the tortured heart;
But quietly they drew the sword
And coolly played the hero's part.

NEW THINGS.

New times are grand, new things are bright,
New men, new measures, new machines,
Bring with them thrills of new delight
And hopes of greater human means.
We know not if these things be best
For man's great future; but we know
That rest is born of great unrest.

OLD THINGS.

His name is lost who first put wheels
Upon an axle for the ox,
And he, no doubt, took to his heels
Pursued by "packers" orthodox;
That other name is, also, lost
Of him who first wrought iron tools—
Gone, gone forever, tempest-tossed
"Mid Time's old prehistoric" tools;
But iron and axle, rail and wheel,
Have quickened modern thought and skill
Till now we know not but we feel
That man grows more a manlier will.
Hail then to him, our far-off sire,
Who first took pry to aid his left,
When hunting caves to feed his fire
And earthen pot with savage thrift!
Hail honest thought expressed in stone,
Or wood, or metal, word or deed,
From pry sticks to the telephone!
Thus human thought aids human need;
But never let us loose our hold
On those great anchors of the past.
Use well the new, respect the old
So long as time or men shall last—
Take Patrick Henry's lamp to guide
Our feet, when darkness shuts the way;
But look ahead, as Morning wide
Spreads the new glory of a day.

SOME THINGS.

But something now must we abate,
There must be naught of hate for hate;
The grander North, the newer South
Have far outstripped the Nation's youth,
And peace, with her white wings outspread
Shadows a blessing on the dead
And, dove-like, to the living still
Means peace on Earth—to all, good-will.

BRITISH THINGS.

Even Britain, our most heavy ancient foe,
For whom this day means battle's overthrow,
Has nearly learned that hatred does not pay,
And takes our (now dead) hero from his way,
Around the world, to show him all respect.
Why should not we, if wisely we reflect,
Return a compliment the same to her
At any time, should favoring chance occur?
And more than that has old Great Britain done.
(A marvel under all the shining sun),
She's nearly found, 'neath very wise control,
That a Corkonian has almost a soul;
Seven hundred years she's held to the reverse,
And that same holding been, to her, a curse—
Beneath her young-old Premier, who can tell
How soon John Bull will get entirely well
So long as his physician's Charles Parnell?

SOME OTHER THINGS.

But leaving politicians to their lot,
Which may be as it may be, we know not,
There is another power marching on;
A Knighthood, not the chivalry that's gone,
But the young blood, the brawny-fisted Knight,
He that has come to stay and stays to fight—
Not fight with violence or war's display
But just enough to have his say and day.
As wealth, and church, and crown have had
Their days of power, both good and bad,
Why should not labor, honest labor,
Marching with his next-door neighbor,
Step o'er the list, with glove in helm,
And claim a loud voice in the realm?
He, certainly, has earned the right
To show, if there is aught in might,
That he's the mightiest man abroad—
The very child of the living God—
Who, whether under curse or grace,
Lives by the sweat of his honest face.
Hail Knights of Labor! from the shop or farm!
We lean upon your stalwart arm
In peace; and when the war drum rolls alarm
To you we look to shield us from all harm.

THE LATEST.

Now, if browed labor and high scheming wealth
Can come together, openly or by stealth,
No matter how, so long as honor rules,
And all men's children still may have the schools,
When will this day, the day we celebrate,
Be what it was, for Freedom square and straight?
But if all wealth falls to the cunning few,
And education narrows in her view,
Then will our annual plaudits be a lie—
And then farewell the 4th day of July.

POST SCRIPTUM.

The Muse had a word about the flag,
And a thought that is free from pelf,
But what is the use to boast or brag?
"Old Glory" speaks for himself.

YOUNG HOLKS' COLUMN.

The Heart's-Ease.

There was once a king who had a very beautiful garden, with grounds arranged with taste to please the eye, to afford refreshing shade, retired walks, commanding views, and, besides, all the delightful fruits that could be procured. There was one superb old oak, so high and grand that it could be seen for miles around. There were roses and lilies, and flowering shrubs of every kind; in short, nothing was wanting to make it a most perfect spot. One

clinging to the trellis and trees, but trailing sadly on the ground. He stopped and said: "Grapevine, what is the matter with you? Why are you lying so dolefully on the ground?" "Ah," said the vine, "you see what a poor weak creature I am; I don't even hold up my own weight, but must cling to a tree or post, and what can I do? I neither give shade like the oak nor bear flowers like the shrubs; I always must depend for support upon something else, and surely I am of no use."

On went the king, quite in despair to see his place going to destruction; and it grieved him to think that for all that kind care and attention he had lavished upon his garden, he was to be repaid but by murmuring and repining. But he suddenly spied a little heart's-

San Francisco. Woodland is a very handsome city, and one of beautiful homes as well as fine business streets. It is surrounded also by a rich and progressive country.

We are glad to call the attention of our young people to this structure at Woodland and the association which has secured it. The work done among our young men and young women by these organizations is incalculably valuable. There should of right be a disposition on the part of the people to aid and support them, and a desire among our young people to show, by their profiting by the work of the association, that they appreciate what is being done for them. We would like to see such an institution as that at Woodland in every town in the State.

The Opening of the Ball.

Our fathers were fighters, men who believed in Providence, but kept their powder dry. When they heard the Stamp Act had passed, which provided that the pigs and toothpicks must all bear the stamp of the Government, the stamps to be paid for by the colonists, of course, they instantly held town meetings in all the district schoolhouses and hurled defiance at the British throne. Patrick Henry, a member of the Virginia Legislature, on hearing of it, arose and said: "Sir, we must fight—I repeat, sir, we must fight."

"Death to the man who offers a piece of stamped paper to sell!" shouted the people of Boston. The ball opened on the 18th of April, 1775, at Concord, where our fathers had very thoughtfully stored away a big lot of explosives, probably for the purpose of celebrating their forthcoming Fourth of July. The precious store was guarded by a small squad of minutemen. General Gage sent a detachment of about 3000 redcoats to destroy these explosives. In dead silence, by the dim moonlight, they stole out of Boston, supposing their movements were unknown. But the patriots had eyes that could see in the dark and ears that could hear in the silence. In the gray dawn of the morning, Major Pitcairn rode up to a company on the village green and said, "Disperse, you rebels!" Regarding the remark as rather impolite, the militia retorted, "You're another," whereon there was a pretty lively time for a few minutes. The woods were full of minutemen. There seemed to the dazed eyes of the redcoats that there was one behind every boulder and fence-post. From every house, barn, pigpen and fence sped the unerring ball. Darker and fiercer the storm gathered. Wearied, mortified and disgraced, they reached Charlestown late in the evening, and on counting noses found they were short 273 men. Pretty good for the first day's work. The accompanying cut is supposed to be a realistic representation of the British army on its retreat. It seems to have been conducted in a somewhat informal manner. The unstudied action of the pedal extremities indicate a pressing engagement suddenly remembered. There are sundry other anatomical peculiarities about this picture of which the least said the better.

DOMESTIC ECONOMY.

CREAM CAKE.—One-half cup butter or one cup sweet cream, $\frac{1}{2}$ cups sugar, four eggs (one beaten separately), one-half cup sweet milk, two teaspoonfuls cream of tartar, one teaspoonful soda. Bake in a long pan. When done, cut open and spread between one pint whipped cream, one cup sugar. Flavor with lemon.

CHICKEN CROQUETTES.—Take a cold chicken, roast, boiled or broiled; mince it very fine, or it will not adhere; moisten with a rich gravy or with cream; season with pepper and salt and a little mace, if you like the flavor; make up into small forms, dip in egg, roll in breadcrumbs and fry slowly in pot lard.

BEEF FRITTERS.—Chop pieces of steak or cold roast beef very fine; make a batter of milk, flour and an egg, and mix the meat with it. Put a lump of butter in a saucepan, let it melt, then drop the batter into it from a large spoon. Fry until brown, season with pepper and salt and a little parsley.

TEA CAKES.—Rub together four teaspoonfuls of butter and one of sugar, add one well-beaten egg, one tablespoonful of cream and two cups of flour, into which has been sifted two teaspoonfuls of baking powder. Bake in small pans and eat while fresh.

SUET PUDDING.—One cup of molasses, one cup suet, one cup raisins, one cup of milk, two teaspoonfuls baking powder; add flour till very stiff to beat with spoon; put in a steaming pan or floured bag, and steam constantly for three hours.

EGGLESS CAKE.—Two-thirds of a cup of sugar, $\frac{1}{2}$ of a cup of sweet milk, $\frac{1}{2}$ of a cup of butter, two cups of flour and two teaspoonfuls of baking powder. Flavor to taste, and before putting in the oven grate sugar over it.

CHOCOLATE COOKIES.—One cup of butter, two cups of sugar, three cups of flour, four eggs, one cup of grated chocolate, $\frac{1}{2}$ teaspoonful of soda, and one teaspoonful of cream of tartar. Roll thin and bake in quick oven.

CREAM SAUCE.—Melt three ounces of butter; add flour to thicken with half a pint of cream; season with pepper and salt; let it boil and serve with chicken, veal or sweetbreads.



NEW BUILDING OF THE Y. M. C. A. AT WOODLAND, CAL.

day the king's head gardener came in and exclaimed: "O king, pray come and see what is the matter with your garden; everything is wilting, drooping and dying!"

While he spoke the other gardeners came running in, and all had the same story to tell. So the king went out, and there found all as they had said. He went up first to the grand old oak tree, his pride and admiration, and said: "Why, old oak, what is the matter with

ease, low down on the ground, with its face turned up to him, looking as bright and smiling as possible. He stooped and said: "You dear little heart's-ease! what makes you look so bright and blooming, when everything around you is withering away?"

"Why," said the heart's-ease, "I thought you wanted me here; if you wanted an oak, you would have planted an acorn; if you wanted roses, you would have set out a rosebush; if



THE RETREAT OF THE BRITISH FROM CONCORD.

you that you are withering and dying away?" "Oh," said the oak, "I don't think I am of any use, I am so large and cumbersome; I bear no fruit or flowers, and I take up so much room; and, besides, my branches spread so wide and thick that it is all dark and shadow under them, and no flowers or fruit can grow there. Now, if I were a rosebush, it would be worth while, for I should bear sweet flowers; or if I were a peach or pear tree, or even like the grapevine, I could bear you fruit."

The king next went to his favorite rosebush, and said: "Well, rosebush, what is the matter with you—why are you so drooping?"

"Why," said the rosebush, "I am of no use; I can bear no fruit, I have nothing but flowers; if I were an oak, like that one in the middle of the grounds, I should be some use, for then I could shelter you, I could be seen for miles around and be an honor to your garden; but as it is, I might just as well die."

The king then went to a grapevine, no longer

you had wanted grapes, you would have put in a grapevine. But I knew what you wanted of me was to be heart's-ease; so I thought I would try to be the very best little heart's-ease that ever I could!"

Dear children: Would you be like the heart's-ease? Then be just what God made you—a child; loving, kind and good; be the best little heart's-ease that ever you can!

Y. M. C. A. Building at Woodland.

We give on this page an engraving of the front of the Young Men's Christian Association building now in course of construction in Woodland, Yolo county. It is a handsome design, and is the work of Gilbert & Son, architects of Woodland. It is a credit to the energetic young men of Woodland that their fine town has the second Association building on the coast, the first being on Sutter street, in



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W. B. EWER.

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Agricultural Implements—Baker & Hamilton.
Wadsworth—Pacific Manufacturing Company.
Golden Gate Plug (Cloth)—Joseph Badie.
Gloves—Waterproof Glove Co., West Oakland.
Field Seminary—Mrs. R. G. Knox.
Trinity School—Rev. E. B. Smallding.
Dairy Machinery—G. G. Wickson & Co.
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See Advertising Columns.

The Week.

The observance of the National Birthday promises to be unusually wide and pronounced this year. It is fitting that it should be. Patriotism, it is to be hoped, we shall always have with us, but patriotism assumes forms of expression according to the prevailing moods and conditions of the people. Therefore as the disposition of Californians at the present time is buoyant, as activity pervades all our lines of industry and of thought, and as progress seems to be stamped upon everything involved in the advancement and development of our State, it is natural that there should be a general tendency toward marked commemoration of the favorite American holiday, the Fourth of July. From Shasta to San Diego various towns are getting ready for a grand time next Monday. We have not space to specify the many details of arrangements at interior points which come to our notice. They are doubtless well watched for in the local papers by the people most interested. As some of our friends always like to come to San Francisco, we will state that preparations foreshadow a memorable celebration in the metropolis this year—in fact, it is promised that it will be the "grandest ever held in the city." It is expected that there will be over 9000 men in the procession. There are to be eight divisions, and at the head of each division will be a "float" expressing some patriotic idea. In front of the

Native Sons there will be the great seal of California. The usual literary exercises will be provided and no doubt those who become the city's guests on the Fourth will have quite as much sight-seeing as they can attend to.

Those who are prevented by distance or otherwise from participating in formal celebrations will, we trust, plan for themselves and their children some fitting exercises. It is a good thing to recall to mind, and to teach the youngsters the great significance of the day.

Desert Land Frauds.

Whatever may be said of the theory of the late "desert land law," and whatever honest development may have been done under it, it has been fully demonstrated that it has been the cloak of some of the most wholesale and shameless land-grabbing. There has been so much of this grabbing done during the last decade, under one pretext or another, that it is difficult perhaps to tell exactly which specious measure has cloaked the most, but certainly the "desert land law" did its full share of the mischief. It now appears that the Government, under the lead of Gen. Sparks, is recovering some of this land, by sending out agents to see what the sworn statements of improvements amount to. Last Saturday Gen. Sparks took the necessary preliminary steps to cancel 55 desert land entries in Wyoming Territory, aggregating in all about 35,000 acres. In these cases the "final proof" was, on the face of it, all that was required, documents being filed to show that by means of ditches already constructed an ample supply of water is at hand to properly irrigate the land; that the claimants own the right to the water thus secured, and have never parted with their interest and have never agreed to do so. But the real state of the case is shown by the report of an agent of the Land Office from which the following is taken:

Upon a majority of the entries no ditches that would convey water have ever been constructed, while the few ditches that have actually been constructed never have been utilized. A survey of one large and several lateral ditches was made, and a plow-furrow made in many places to show the line of surveys, but no actual bona fide ditching was ever done by the claimants, or by any one for them. All the ditching that was ever done was of the most shadowy nature, and was not substantially useful, nor intended to be so. The land has not been reclaimed or irrigated to the slightest degree in any one of the 55 cases enumerated, and was, at the date of investigation, in the condition it was at the time the entry was made.

It is upon this evidence that Gen. Sparks proposes to recover the land for the Government. Certainly land that has been clearly forfeited should be recovered. The law was certainly good or bad enough to have honest work done under it, and it should be insisted upon. The provisions were exceedingly favorable to those who took up land under it, and where they were not complied with, the land should revert.

We like to see development and progress, and wish the desert to blossom as the rose, etc., but it is time that there should be no more haste in disposing of the title to public lands. The country is settling up so fast that all the vacant areas will be soon called for by individuals who desire to make homes upon it, or by co-operative colonies who can furnish the amount of labor and capital required to bring in water and undertake other large enterprises. There is no need to dispose of more at wholesale to large operators, who desire to hold it as large ranges or to peddle it out in homesteads to settlers and thus enrich themselves at the expense of the settlers. The railroads have been liberally treated, and new lines are multiplying without bonuses because the traffic is worth contending for. It would seem the plainest common sense to hold the rest of the public lands for actual settlers, and thus save some room for the overflow of population from the old and thickly settled States. We are glad the Land Office has a head who believes the Government land is good for something else than to get rid of.

Fires more or less disastrous in field and forest are reported from various quarters—as usual at this season. The heedless camper, the dropped match, the cigar-stump and the gunwadding are chargeable with sad losses every year. Let us, each one of us, be careful that we do not cause the mischief.

The Declaration of Independence.

The movement for independence was not any sudden explosion of heated passion, nor was it the work of one man or assembly of men. For months it had been talked over as a "consummation devoutly to be wished" by the mechanic in his shop, the fisherman along the northern coast, the planter in the Sunny South and the pioneers and hunters of the West. It had been discussed in town meetings, social parties, in the pulpit, newspapers, pamphlet, committees of safety and Provincial Legislatures. The members of the Colonial Congress were no company of reckless adventurers who had everything to hope and nothing to lose by a revolution. They all hesitated and listened to hear the voice of the people. On the 10th of May, 1776, Mr. John Adams ventured to suggest a measure which Congress adopted, "that all the colonies which had not established governments suited to the exigencies of their affairs adopt such governments as would conduce to the happiness and safety of their constituents in particular and America in general." That was the first step. It was a feeler of the popular pulse. June 7th, Richard Henry Lee, in the name and by the special authority of Virginia, proposed this resolution: "That the United Colonies are and of a right ought to be free and independent States, that they are absolved from all allegiance to the British Crown, and that all political connection between them and the State of Great Britain is and ought to be dissolved." This resolution was seconded by John Adams. The debate that followed was long and warm. Many of the members hesitated about taking so decided a step. Some still hoped that the eloquence of Chatham and the influence of Rockingham might effect an honorable reconciliation. The matter was finally adjourned to the first day of July.

The day set apart to consider Lee's resolution arrived. Fifty-one members were in their places. The outlook was ominous. The excitement caused by the display of gallantry at Bunker Hill by untrained militia had passed over. The business of the day began by reading a letter from Gen. Washington, who returned the whole number of men under his command that were fit for duty as 7754.

Many of these were volunteers for a year, whose term of service had nearly expired. All needed money, clothing and ammunition, and Congress had no power to levy a tax nor credit to borrow. Sir Henry Clinton had just arrived before Charlestown with a line of battle-ships, and the safety of that place was in doubt. New York was threatened by Lord Howe with a formidable armament that had already arrived at Sandy Hook. Gen. Montgomery had panted out his brave soul under the walls of Quebec, and the little army that had invaded Canada with so much hope was on the retreat, badly shattered by disaster and disease. The Indians on the frontier were already on the war-path. As yet no foreign power had sent a word of sympathy that could kindle a ray of light in the bosom of the most sanguine. Such was the aspect of affairs on the first of July, 1776. Is it any wonder that, when the order of the day was announced, for a few moments a perfect silence prevailed? John Adams broke the solemn stillness by a speech which tradition says was sudden, impressive, impetuous and powerful, and on the evening of the second day the resolution passed with only one dissenting colony, New York, not yet being able to concur. The Rubicon was crossed. The old 13 British colonies stepped forth among the nations of the earth free and independent States.

It now only remained to give the world the reasons for this important act, and to indicate the principles which this new people would acknowledge as the basis of their political action. It was ordered that a committee be appointed to prepare a declaration in support of this measure. This committee was chosen by ballot, and consisted of Thomas Jefferson, John Adams, Benjamin Franklin, Roger Sherman and Robert R. Livingston. It is usual when committees are elected by ballot to arrange their order according to the number of votes each one received. Mr. Jefferson had the highest and Mr. Adams the next highest number. It is said there was only the difference of one vote between them. Standing thus at the head of the committee, they were requested by the

other members to act as a sub-committee to prepare a draft. Mr. Jefferson drew up the paper. He showed it separately to Adams and Franklin, who only made a few verbal corrections. Congress now entered upon the consideration of this document. For two days its statement of principles was closely analyzed, and every word critically scanned. On the Fourth of July, 1776, it received the final approbation of Congress, and copies were ordered to be sent to each State, and that it be read at the head of the army. The crowning act was on the Fourth of July, and hence for all time the recurrence of that day will be fragrant in the memory of every patriotic heart. We can render no higher homage to those noble men who laid the foundation of our nation than annually to baptize our souls afresh in the spirit and meaning of this declaration.

It has been said, as if it were in derogation of this Declaration, that it contained nothing new; that it was a recital of old ideas and arguments that had seen service before. No doubt people sitting in darkness, wearing the yoke of oppression, may at times have caught a glimpse of the truth, that all just government derives its powers from the governed, and started as one who in a foreign land has suddenly heard the familiar accents of home. The growth of this idea, like all other great ideas, was slow and silent. It was cradled in the Magna Charta extorted from King John, June 19, 1215. It grew through the centuries, as the great oaks grow, becoming strong and tough in wrestling with terrible gales. From the discovery of America to the settlement of Massachusetts and Virginia, nearly all over Europe political and religious events were taking place, that to the wise men and seers of the day were harbingers of a new era. England for more than a century, unconscious to herself, was undergoing an education that was destined one day to run under the sea and shoot up in a fresher soil into a richer growth. The fostering of the spirit of commerce, the encouragement given to arts and manufactures, the modification of the feudal system of entails, these and kindred measures were helping slowly to form a new class in society aside from the barons and great land-holders and retainers of the crown, that would sooner or later claim a voice in political affairs. The great religious controversies, from the times of Wycliffe and Luther, perhaps more than any one agency, helped to change and liberalize society. But still we may safely aver that, up to the time of the announcement of this Declaration, the idea of laying the foundation of government exclusively upon the will of the people at best had never been anything more than a beautiful ideal that had sadly failed on trial in Greece and Rome, but might be realized in the millennium. It was our fathers alone who had the genius and courage to rise above all traditional reverence for kingly prerogatives and heraldic families and assert, as the corner-stone of their new government, that God had mingled divinity in the blood of every man, and the poorest and lowliest might rise up and say, "I, too, am a sovereign."

Improved Condition of Orchards.

Inspector Klee, who has just come back from a tour among the orchards of several interior counties, informs us that in Alhambra valley, Contra Costa, he found the trees in good condition and fruit promising, although in some portions of the county the fruit is rather small on account of the drouth. A general improvement is noticeable here, owing to faithful application of insecticide treatment.

From Contra Costa the inspector passed up the Sacramento river, spending several days in this fruitful region, where, more than anywhere else, he noted a decided advance over previous years. Orchards which were in very bad condition last season now show renewed life and vigor, and the crop prospects in general were very encouraging.

At Winters, Vacaville and Pleasant Valley the peach and apricot crops are very large; the preparations to dry and pack for foreign shipment are extensive, and all available help is busily at work.

In some localities the late hot winds damaged the Tokay grape considerably, but they also nearly annihilated the San Jose scale, so perhaps the gains equaled or outweighed the losses.

ENTOMOLOGICAL.

The Life History of the Icerya.

Forms of the Male Cottony Cushion Scale.

[From Advance Sheets of Report by PROF. C. V. RILEY,
U. S. Entomologist.]

Last week we gave the different forms of the female *Icerya*, and this week we have forms which are distinctively those of the male sex. It will be understood that the sex of the egg and of the newly hatched larvæ is not distinguishable, consequently Fig. 1 and Fig. 2, as used last week as early stages of the female, are to be considered as also leading up to the more advanced forms of the male, as given on this page.

The following is a quotation from Prof. Riley's report describing the figures given on this page:

The Male Larva—Probable Second Stage.—Neither Mr. Coquillett nor Mr. Koebele were able to distinguish the male larvæ until these had reached the stage in which they form their cocoons. Among the specimens studied at the Department, and which were sent alive from Los Angeles by Mr. Koebele, we have found a larval form which has not yet been described, and which we strongly suspect may be the male in the second stage. This form is illustrated at Fig. 1. It differs from our supposed second stage of the female in its more slender form, longer and stouter legs, and longer and stouter antennæ. The legs and antennæ are not only relatively longer and stouter, but are absolutely so. The body above is much more thickly clothed with the short stout hairs than the corresponding female stage, and the mentum is longer and darker colored. The antennæ are six-jointed, and the joints have precisely the same strange relative proportions as in the female. The secretory pores are present, but are not quite so numerous as in the female.

Male Larva—Third Stage.—In this, the third or last larval stage, the male is readily distinguished with the naked eye from the female in any stage by the narrower, more elongate, more flattened, and evenly convex form of his body, as well as by his greater activity in crawling about the trunk or branches of a tree. More careful examination shows that the beak is entirely wanting, the tubercle from which it arises in the earlier stages being replaced by a shallow triangular depression. The body is almost naked, being very sparsely covered with a short, white, cottony matter, and is destitute of the short but stout black hairs which are found upon the body of the female during the third and fourth stages of her life. In the absence of black spots and in the nine-jointed antennæ he agrees with the similar or third stage of the female, and the average length when full grown is about three mm. and diameter about one mm.

The Male Pupa and Cocoon.—When the male larva has reached full growth and is ready to transform it wanders about in search of a place of concealment, finally secreting itself under a bit of projecting bark, under some leaves in the crotch of the tree, or even wedging itself down under a mass of females. Very frequently, probably in the majority of cases, it descends to the ground and hides under a clod of earth, or works its way into some crack in the ground. Having concealed itself, it becomes quiescent, and the delicate, flossy substance of which the cocoon is formed begins to exude abundantly from the body. This material is waxy in its character, but is lighter and more flossy and less adhesive than that of which the egg-sac of the female is composed. After a certain amount has been exuded the larva moves backward very slowly, the exudation continuing until the mass is from 7 mm. to 10 mm. in length. From this method of retrogression it happens that the body of the larva is frequently seen protruding posteriorly from the mass, which naturally leads to the erroneous conclusion that the material is secreted more abundantly from the fore part of the body, whereas the reverse is the case. When the mass has reached the proper length the larva casts its skin, which remains in the hind end of the cocoon and pushes itself forward into the middle of the cocoon.

The pupa (Fig. 2) has the same general color as the larva, the antennæ, legs and wing-pads being paler and the eyes dark. It has also the same general form and size. All the members are free and slightly movable, so that they vary in position, though ordinarily the antennæ are pressed close to the side, reaching to basal part of metathorax (ventrally); the wing-pads also against the side, elongate-ovate in form and reaching to second abdominal joint. The legs are rather shorter than the diameter of body, and the front pair thrust forward. The anal end is deeply excavated, the abdominal joints well separated, the mesonotum well developed and the pronotum tuberculous or with some eight prominences; but there are no other structural peculiarities. The surface is, however, more or less thickly covered with waxy filaments, which are sometimes exuded in sufficient quantities to give quite a mealy appearance.

Whenever the pupæ are taken from the cocoon and placed naked in a tin box, they exude a certain amount of wax, often enough to partially hide them from view. If disturbed,

they twist and bend their bodies quite vigorously.

The cocoon is of an irregular, elongate shape, appearing a little denser in the center where the pupa has placed itself, and at the edges delicate and translucent. The material of which the cocoon is composed is very delicate, and appears like the finest cotton, but on submission to a gentle heat it melts as readily as the coarser secretion of the female, and leaves the larva or pupa, as the case may be, clean and exposed.

The Adult Male (Fig. 3).—A careful description of the male of this species has never been published. It was unknown to Mr. Maskell at the date of his first paper and has not been mentioned in any of his subsequent papers. Mr. Trimen attempted to breed it, but was unsuccessful. He says: "So little is certainly known of the males of the Coccidæ that I have kept from time to time a large number of this *Dortheia* under glass in the hope of obtaining the males, but hitherto without success. I once, however, found on my window a male of some *Coccus* which I thought was very probably that of the introduced species, as it agreed in most of its important characters with Westwood's

Fig. 1.



Fig. 2.

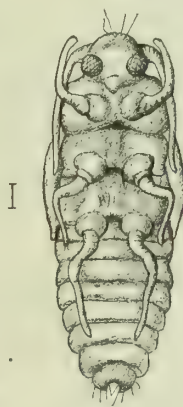
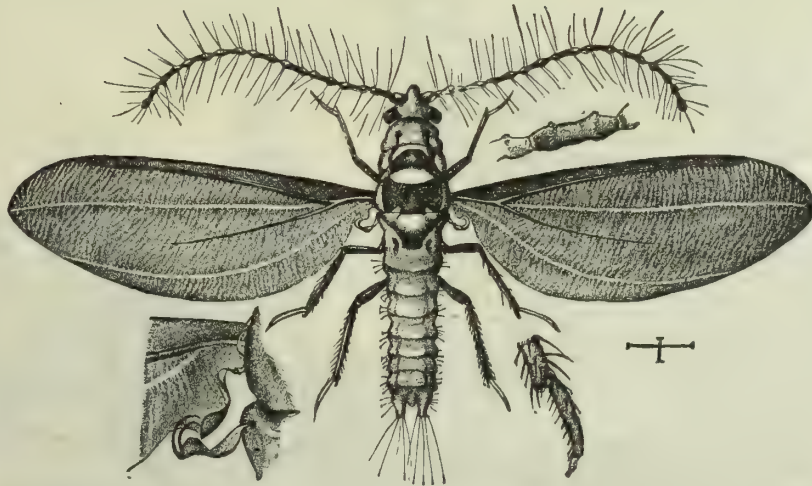


Fig. 3.



MALE FORMS OF COTTONY CUSHION SCALE.

figure of the male *Dortheia characias*. It was dark red, with the wings gray, and very slender and fragile in its structure. It measured 15 48 inch across the expanded wings."

The male was unknown to Prof. Comstock, but was very briefly mentioned by Dr. Chapin in the first report of the Board of State Horticultural Commissioners, Sacramento, 1882, p. 68. He found the male in numbers during a period of two weeks from September 25, 1881, but did not observe it in 1882. It is also mentioned by Matthew Cooke in his "Injurious Insects," etc., 1883, p. 166, and a rough and uncharacteristic figure is given at Fig. 146, plate 3. His few words of description are: "Male insect, winged; color, thorax and body dark brown; abdomen, red; antennæ, dark colored, with light hairs extending from each joint; wings, brown, iridescent." The following detailed description is drawn up from numerous specimens both mounted and living:

The adult male is a trifle over 3 mm. in length, and has an average wing expanse of 7.5 mm. The general color is orange-red. The head above is triangular in shape, with the apex blunt and projecting forward between the bases of the antennæ. The eyes are placed at the other apices of the triangle, and are large, prominent, and furnished with well-marked facets. There are no mouth-parts, but on the under side of the head is a stellate black spot with five prongs, one projecting forward on the conical lengthening of the head, one on each side to a point just anterior to the eyes and just posterior to the bases of the antennæ, and the remaining two extending laterally backward behind the eyes. The antennæ are light brown in color and are composed of 10 joints. Joint 1 is stout, almost globular, and

nearly as broad as long; joint 2 is half as broad as 1 and is somewhat longer; joint 3 is nearly twice as long as 1 and slightly narrower than 2; joints 4, 5, 6, 7, 8, 9, and 10 are all of about the same length as joint 3, and grow successively a little more slender; each joint, except joint 1, is furnished with two whorls of long light-brown hairs, one near base and the other near tip; each joint is somewhat constricted between its two whorls, joint 2 less so than the others. There are no visible ocelli. The pronotum has two wavy subdorsal longitudinal black lines, and the mesonotum is nearly all black, except an oval patch on the scutum. The metanotal spiracles are black, and there is a transverse crescent-shaped black mark, with a short median backward prolongation. The mesosternum is black. The legs are also nearly black and quite thickly furnished with short hairs. The wings are smoky black, and are covered with rounded wavy elevations, making a reticulate surface, a cross-section of which would appear crenulate. The costa is thick and brown above the subcostal vein, which reaches costa at a trifle more than four-fifths the length of the wing. The only other vein (the median) is given off at about one-sixth the length of the wing, and extends out into the disk a little more than one-half the wing length. There are, in addition, two white lines, one extending out from the fork of the subcostal and the median nearly straight to the tip of the wing, and one from the base in a gradual curve to a point

ruary, and he therefore concluded that the individuals observed by him would not attain full growth before that time.

The mature male larva requires on an average about 10 days from the time it begins to form the cocoon before assuming the pupa state, and the pupa state lasts from two to three weeks. The more reliable information we have been able to obtain would show that at Los Angeles the average number of generations each year is three.

Habits.

The newly hatched larvæ settle upon the leaves and tender twigs, insert their beaks, and imbibe the sap. On passing into the third stage they seem to prefer to settle upon the smaller twigs, although a few are found upon the leaves and still fewer upon the larger branches and trunk. The adults, however, almost invariably prefer the trunk and largest branches.

The insect is rarely found in any of its stages upon the fruit.

The species differs markedly from most Coccidæ in being active during the greater part of its life, though most of the traveling is done by the female immediately after the third molt and by the male just before settling to make his cocoon. At these periods they wander up and down the trunk and larger limbs until they find some suitable place, when they settle down, the male to pupate and the female to insert her beak and develop her eggs and their characteristic waxy covering. She is capable of slow motion even after oviposition has commenced, but rarely does move unless from some exceptional cause. In thus settling after their last wanderings both sexes are fond of shelter and will get under any projecting piece of bark or under bandages placed around the tree, the male often creeping under clods of earth. Both the female and the male, in adolescence, are most active during the hotter parts of the day and remain stationary at night; but the perfect or winged male is rather sluggish during the day, usually remaining motionless on the under side of the leaves of low plants or high trees, in crevices of the bark, or wedged in between females on the tree. There seems, in fact, to be a well-marked attempt at concealment. The recently developed individuals are found abundantly on or under clods of earth near their pupal cocoons, and they issue most numerous during the latter part of the afternoon. They are at first weak, awkward and ungainly, and instinctively seek some projection on the tree or elevation on the ground from which to launch on the wing.

At the approach of night they become imbued with a very high degree of activity and dart rapidly about on the wing. At such times they swarm around the infested trees. In September and October Mr. Koebele noticed that the males began their flight about 5 o'clock, and as soon as it was fairly dark they again settled down to rest. None have been observed flying at night and none have been attracted to the electric lights.

Machinery and Labor.

John Swinton, a labor advocate of some reputation at the East, recently gave an address in Boston on the revolutionary forces of the times. His audience, according to a report of the address in a Boston paper, pretended appreciation; but, according to the report before us, if true, he must have dealt largely in incoherent talk about Rome, Greece and mediæval history. Moreover his language must have been found very difficult of application to the points which he assumed to illuminate. One of the forces which were mentioned by him was the growth and massing of machinery. The truth of his statement is not to be disputed, but when he alludes to it disparagingly as working to the detriment of the laboring classes, he is running tangent to facts that have been demonstrated time and again as favoring the social and material condition of the working people. Though said with a sort of railery, there was much truth in the vulgar remark: "When the clodhopper reads, the clodhopper is lost. When the guttersnipe's head becomes a knowledge-box, the guttersnipe is impossible." The lowness of man's employment is raised in proportion to his mental education. No vocation is servile or degraded in itself, and it becomes so only because intelligence does not enter into its execution. Let the mind be educated to the employment of the hand and street-sweeping develops into a science. The meanness of labor is so because of the abasement of man's nature; elevate that and all that he undertakes is elevated. Instead of denouncing the condition of affairs in their relations to mankind, the best thing that can be done is to improve them, not to overthrow them.

MERCURY from 120° to 122° in the shade is the temperature reported at the Needles for three days last week, while Phoenix, Arizona, got it above 117°.

THE wheat crop in the Willamette Valley promises to be the largest raised for years.

The Women's Fourth of July Declaration of Independence.

[Written for the Rural Press.]

"I call this here meeting to order. I aint the president, ladies, I am only the chairman 'pro tem,' as that monster, man, says in his public perceedins."



THE PRESIDENT PRO TEM.

"Don't call no names," spoke up a little married woman who looked as if she was the "boss of the ranch," to use a homely expression; but the speaker gave her a severe look and proceeded: "Now, ladies. I want you to elect a promi—, no, a permanent president. This fol de rol way the—men have of doin' business, nominatin' and electin' two or three trumpety presidents afore they settle down to business, is just a wastin' time. Let us show our superiority by doin' things up to wonst. I therefore move we elect the woman that has—that has—what is it the men say?"

"If you please, Mrs. President, pro tem, we aint here to re-echo what the masculine gender say. We wish to be original; we must be, to improve our lowly brothers, or else, why this meeting?" spoke up a lady with a fair education and a fair exterior.

"Ladies, excuse me; it was a lapsis—well, a lapsis—"

"Lapsus linguae," prompted the lady with the fair exterior.

"Well, yes," said the P. pro T. "Now let us nominate the woman with the most grit and go in her for the office, and if it isn't your 'umblservant, let it be the next best woman." Then there arose a mighty

Babel of Voices.

Such as the Russian historians say characterizes their town meetings remote from the Capital even to this day; but out of which confusion order and good laws are at length evolved; so pardon the women.

After awhile the ladies got tired of nominating everybody and finally settled upon one of the handsomest, best-dressed and most intelligent women among them, and elected her by acclamation. She was assisted to the platform and introduced by the P. pro T. as "Our honored Presidentess (remember the 'ess,' ladies), Mrs. Lorina Madeline Clemmance, who is heart and sperrit in our cause." Then, amid the applause, she took not exactly a "back seat," but one at the side where it was convenient for her to jump up every little while and help direct the proceedings.



THE PRESIDENT.

The President bowed gracefully and said: "Ladies, this meeting, as far as I can understand, is called for the purpose of our declaring our independence; that is why it is called on this glorious anniversary of our breaking the tyrant bands that bound us to a foreign land under an odious King—"

"Queen—Queen Victori!" interrupted the P. pro T.

"Excuse me," smiled the President, "but that dear lady did not reign till many years after. Ladies, we must, we will make this glorious 4th of July more memorable than our forefathers did the 4th of July of old, for from this day we will become the

Foremothers of the American People.

The foremothers that have been so wrongfully, so ignominiously left out of history. We hereby declare that we will break the iron bands of custom, the 'What will Mrs. Grundy say?' of the women, the 'It isn't proper!' of the men. We know that there are many things that are right and beautiful and good for women to do,

from which they are debarred by tyrant custom." (Applause and cries of "hear! hear!" from the assembly.)

"We will take the every-day affairs of life first; the grand, the heroic, the beautiful will be discussed in their regular order."

"From this day we declare that it is just as right for a man to stay at home at night and take care of the baby, and get acquainted with it, as it is for a woman to do so; also to let his wife, his wife who has worked and worried and worried and worked all day long, go out and spend an evening in innocent amusement—not to have a 'jolly time,' as the men do eight times out of seven—"

"Oh!" came from the audience.

"Yes, I mean it. Till 12 is one night, but the gentlemen stay out very occasionally till two or three in the morning. Add these hours together and you will get the extra night, and perhaps two. (Applause.) We declare that they have just as much right to the sleepless nights, walking the floor with the twins, as we have."

"We declare from this time forth that the father is as much proprietor of the child as the mother is—that is, in its care and maintenance; that till 9 o'clock in the morning, when most of the gentlemen have to go to work, that they shall share the domestic economy, either cook breakfast or hold the baby while we do it, or, if there is no baby, sweep the dining-room or set the table; for, my dear sisters, we know too well that at breakfast-time there are generally a dozen things to be done at once, which the woman is expected to do with a pleasant face and without a murmur, while the (then) ornamental partner is dressed in his next-to-best clothes, and quietly (if he is not grumbling because we cannot do more things at once) reading the newspaper. Now, why should he have a

Half-Holiday Every Day.

For they generally end work at 5 P. M., while woman has not one, from month's end to month's end. When I say woman you will understand I do not mean the few, who for awhile are so favored by fortune that they can sit with idly folded hands if it pleases them to do so; no, I mean the women who make the world, who rear the voters—"

A voice came from the assembly, "Yes, and we oughter vote, too."

"I will speak of that presently," replied the President in a gentle tone. "Women who advance the arts and, I was about to say, sciences, but in that realm, my sisters, I am sorry to say, we are but in our infancy, save an exceptional few; but I am digressing. This is to be the day of our Declaration of Independence from error, from superstition, from wrongdoing and from scandal."

A few of the most enlightened of the assembly applauded, but some thought it a dreadful thing not to be allowed to say what they pleased of everybody else; but nobody must say anything of them, let them dare; and then who ever would begin anything on Friday; so there was quite a murmur of disapproval, but the President was firm and said:

"What is the use of meeting and speaking if we are to remain in the same old groove? 'Talk is cheap, and so are prayers,' whispered a gifted sister to me lately at a W. C. T. A. meeting. How men as well as women would sit in a chair or on the curbstone and talk till their tongues gave out, if the good things of this world would come to them for mere words; and others would pray till their knees were sore, if by doing so the blessings of this world and the next would descend upon them; but not all words are valuable, and not every so-called prayer ascends to the throne of Grace. Deeds, deeds are the key-notes to character. I see a lady standing. Please do not do so—if you only knew how unkind it is to those behind you. I was once at a public exhibition of the attainments of the pupils of the

Dumb and Blind Institution.

A lady in front of me persisted in standing. I finally told her that others behind her wished to see also, so for awhile she sat down very discontentedly, but at the more interesting part up she jumped again and remained standing. I thought her manners and her looks were great friends, for both were ugly. In a few moments up jumped a young giantess in front of her, this seemed like retributive justice, but I could see still less, and had no parol to poke her to sit down, for she looked as if she had some sense, but her actions belied her looks. Afterward, I asked one of those 'terrible creatures'—she smiled—a man—'what ailed my sex. Was it thoughtlessness or what?' 'Pure unmitigated selfishness,' he replied; 'they care but for themselves; if they see, all right, the rest can do without or stay at home.' Oh! my sisters, I have often thought we need missionaries at home almost as much as the poor African. We need to be taught to think of the comfort and pleasures of others, even strangers whom we may never meet again. We need to be taught when the car is full to draw our skirts a little nearer to us, to move just a little bit, to even take the child upon our lap, for whom we would grumble to pay a fare, to be just a little considerate, that others may be tired as well as we. Do you think that God takes no notice of these little things? Do you think there is as high a place in heaven for a woman who would stand up at an instructive exhibition knowingly cutting off the view of those behind her? Do you think there is as bright a crown awaiting the woman whose tongue has stabbed the reputation of a sister woman, or repeated evil words of another? Do you think that Christ will say

'well done thou good and faithful servant,' to the woman who hurts the feelings of the tender-hearted, or withholds the hard-earned money of those who labor for their bread, as for those who fulfill the spirit of God's tender laws? Oh! my sisters, we need to be taught in many things, so that we can set that example of purity of heart and tongue, that example of unselfishness of word and deed to our dear brothers, who profiting by it may reach that higher plane, from which they can clearly see that we, more than one-half of the human race, have not our full and proper rights."

Oh, now the applause was long and generous.

"Mrs. President, hadn't we oughter vote?" demanded the same voice as before.

"To vote is nothing," replied the President, "unless we can vote intelligently. A child can put a slip of paper in a box, but to put the right slip requires more study and thought than a woman can always give; yet I think she has the right, and if a great number tried, I think they would be allowed to deposit their vote, for there is nothing in the constitution to forbid it; but they should each subscribe a little money so as to be able to defend their cause by law. I think we have a right to a voice in the decision of who shall teach our children, and who shall preach in our churches. I think we have a right to utter our protest against selling immense tracts of

Public Land to Wealthy Men.

Or to foreigners. One man should never be allowed to own more than 500 acres of land at the most. One hundred and sixty acres is evidently enough to support one man and his family, or wise Uncle Sam would have made different laws about granting land to settlers. I was so happy the other day, when riding so far into the country that fences almost disappeared, that I exclaimed, 'Oh, this looks as if God owned the land.' 'You don't like fences?' asked a lady by my side. 'I do not like the whole country fenced in as if no one had a right to put their foot outside the confines of a dusty city. I do not like to think that our children and our children's children that come after us shall be debarred from the privilege of all God's creatures, a little home of their own. I would like women to have a voice in the matter of selling property belonging to the city in which they live, so that the little parks and breathing-places shall not be recklessly disposed of by a few officials whose term of office lasts but a few years, but the effect of whose bad deeds remains forever. Witness the selling of the city's property on Market street, where a beautiful small park could have been made that would have been a boon to the citizens of San Francisco, and made the public buildings an ornament instead of the unsightly pile they now are, and to think that poor beautiful Oakland



AFTER MARRIAGE.

is likely to suffer also, for the hand of sacrifice is already raised above the only pretty public spot there is for half her citizens; and like the claws of the terrible vulture is impatient to descend upon its prey." (Applause.) "If there is a lady present from the country, we should like her to come upon the platform and give her views of what is needed to ameliorate the condition of women whose lot is cast in the beautiful country."

Up rose a tall, gaunt woman of 40 summers. "We want less work." "Step right on to the platform," said the P. pro T. "Less worry, less hours of labor, more good clothes, more amusements, more books and more newspapers," and down she sat amid great applause. "Is there a single lady present who will please to step this way and tell

What She Thinks Would Benefit

Those who have the courage to remain single and take up a life of work."

A very sweet lady arose. "I have but a few words to say, so will not come to the platform. We, being single, are not represented in the various administrative assemblies in the country, as the gentlemen claim that we are; and as we number many thousands, and many of us own property, therefore we have taxation without representation, which is tyranny, so that tyranny is exercised toward us American women, against which our forefathers fought, bled and died; but what can we do—we, the poor old maids of the land?"

"Old maids, indeed! I think we are the most sensible of all the female portion of the world," said a sour-faced woman, walking straight to the platform. "Welcome, my sis-

ter," said the P. pro T., embracing her. "No man to worry our lives out," she continued, holding her umbrella under her arm, "no master to order our goings and comings, and to begrudge us our hard-earned clothes. No husband to be flirting with the girls behind our



FLIRTING.

backs, but before marriage so sweet, yet after that important event letting us drag along the best way we can, carrying all the babies. No! if we are compelled to earn our own living, when we come home it is to peace and comfort, and a good book. It is the old maids who have done something for the good of the world. Witness Rosa Bonheur, the glorious painter;



BEFORE MARRIAGE.

witness Miss Herschel, the wonderful astronomer; Florence Nightingale, the dear mother of the sick and sore. But it is true what my sister says: we should have representation, and the day is not far distant on which the tyrant man will be compelled to give it to us!"

She sat down amid tremendous applause.

The president said: "Ladies, I wish you to think well over all that has been said, and help us on our next meeting night with your advice and counsel. Our 'declaration' will be ready by that time, to which we wish all your signatures appended, and they will become as celebrated as those of the signers of the declaration of old. Ladies, work heart and soul for our great cause, and you will never regret it!"

"Three chairs for our noble presidentess," shouted the P. pro T., and they were given with a will. Then the assembly adjourned, to meet again at no distant day.

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Genuine Home Testimonials can be seen at our office.

SENT, ON RECEIPT OF PRICE, TO ANY PART OF THE WORLD.

MAIL ORDERS. "Smoke Ball" and "Debellator" packages sent by mail, with full directions, on receipt of price, \$5.00 (Smoke Ball, \$3.00; Debellator, \$2.00), two 2-cent stamps. Remit by Postal Note, Wells, Fargo & Co., or Postoffice Money Order, Registered Letter, or in coin by express.

CARBOLIC SMOKE BALL CO.,

Rooms 7, 8, 9, 10, No. 652 Market St., Cor. Kearny (opp. Lotta Fountain), San Francisco, Cal.
Separate Parlor for Ladies, who will be waited upon by skilled and polite lady attendants.

The New Music Books of the Season

Musical people on their travels are invited to call at the various Stores of OLIVER DITSON & CO., Boston, New York and Philadelphia, or at LYON & HEALY'S, Chicago, to examine the very superior Music Books brought out during the last few months.

Piano Classics,
Young People's Classics for Piano,
Song Classics,
Song Classics for Low Voices,
\$1 each. High class music, refined and pleasing.

Good Old Songs We Used to Sing,
\$1.25. 115 Songs.

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Voices of Praise, } Each 35 cents.
Songs of Promise, } For Sunday
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Voices of Nature, 40 cts. } Good, easy,
Forest Jubilee Band, 40 cts. } new,
New Flora's Festival, 40 cts. } Cantatas.
Life of Liszt, \$1.25. } New Bi-
New Life of Mendelssohn, \$1.50. } ographies

These are but 16 books out of 2000 that are in stock. Lists cheerfully furnished, and all inquiries promptly answered.

Any Book mailed for Retail Price.
OLIVER DITSON & CO., Boston.
C. H. DITSON & CO., 867 Broadway, New York.

EVERY FARMER THE BEST is the CHEAPEST HIS OWN MILLER



WE HAVE HAD
32 years Experience.

Use the Halladay Standard Geared Wind Mill, I-X-L Corn Sheller and I-X-L Iron Feed Mill and do your shelling and grinding at home, thus saving toll and teaming to and from the grist mill. This work can be done rainy, windy days, when outdoor work is suspended on the farm. The same mill will cut corn stalks, saw wood, run churn and grind-stone, pump water, etc.

We manufacture the Halladay Standard Geared and Pumping Wind Mills, I-X-L Corn Shellers, I-X-L Iron Feed Mills, I-X-L Stalk Cutters, Horse Powers, Jacks, Saw Tables, Standard Haying Tools, consisting of Anti-Friction, Reversible, Swivel and Rod Hay Carriers, Harpoon and Grapple Horse Hay Forks, Pullers and Floor Hooks. Also a full line of Tanks, Tank Fixtures and Pumps for Farm, Ornamental, Village and Railway purposes. Send for catalogue and prices. Reliable Agents wanted in all unassigned territory.

U. S. WIND ENGINE & PUMP CO., Batavia, Ill.

DIVIDEND NOTICE.

San Francisco Savings Union,
532 California St., corner Webb.

For the half year ending with June 30, 1887, a dividend has been declared at the rate of four and thirty-two one hundredths (4 32-100) per cent per annum on term deposits, and three and six-tenths (3 6-10) per cent per annum on ordinary deposits, free of taxes, payable on and after Friday, 1st July, 1887.

LOVELL WHITE, Cashier.

BAKER & HAMILTON,

Junction Market, Pine and Davis Sts., San Francisco. Nos. 9, 11, 13 & 15 J St., Sacramento.

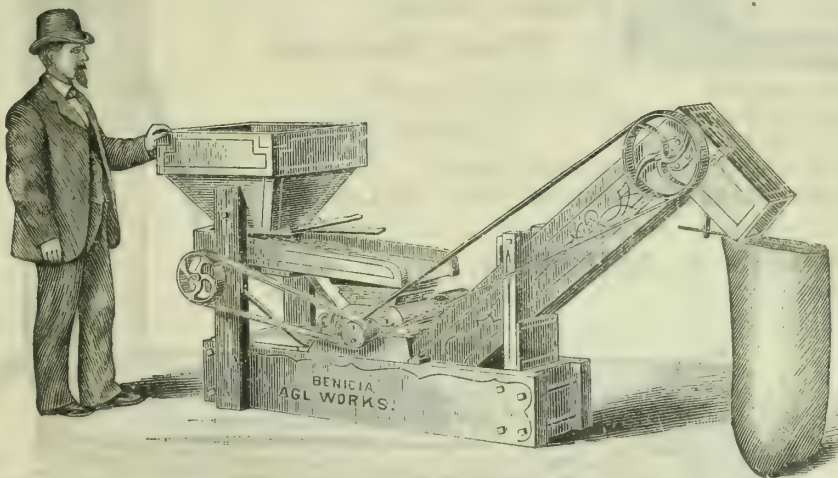
MANUFACTORY—Benicia Agricultural Works, Benicia, Cal.

EASTERN OFFICE—88 Wall Street, New York.

IMPORTERS, MANUFACTURERS AND DEALERS IN

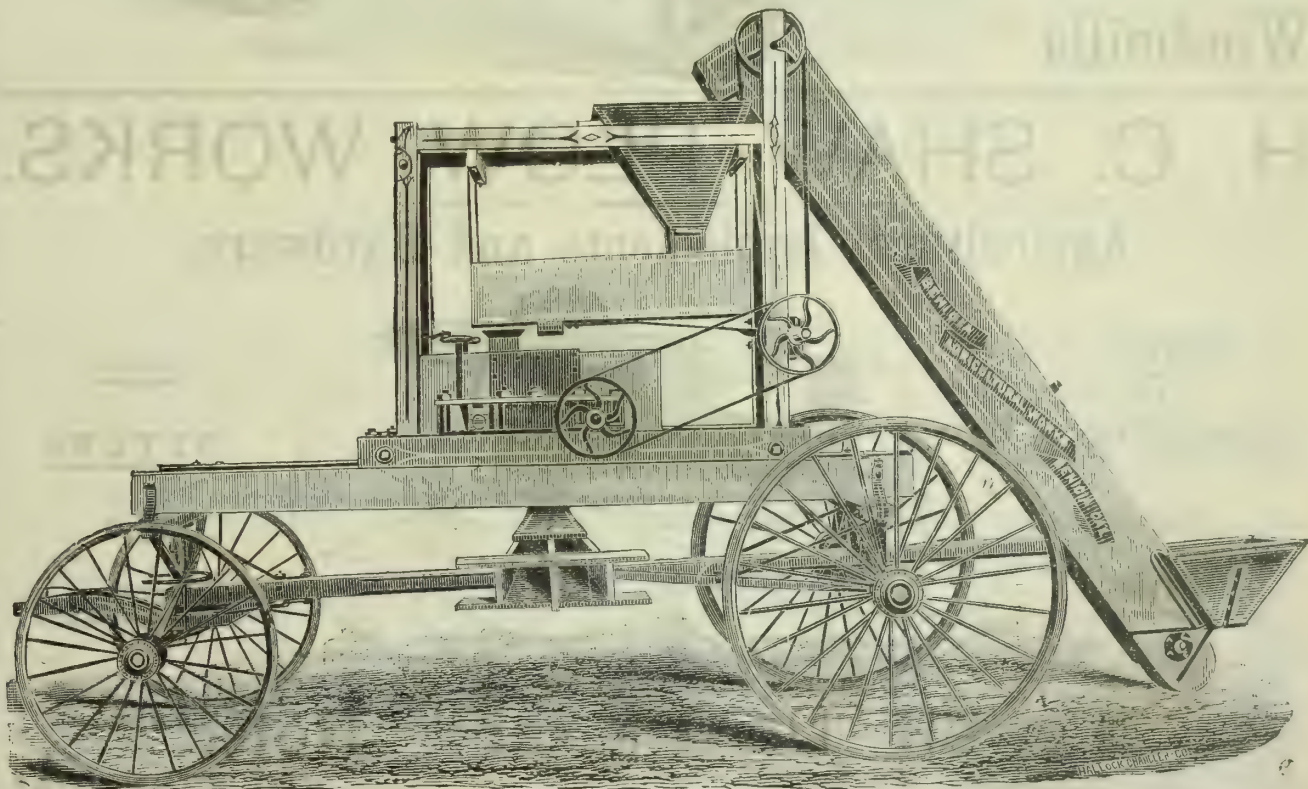
HARDWARE and AGRICULTURAL IMPLEMENTS.

BENICIA BARLEY CRUSHERS.



No. 1, or Small Size, weight, 675 pounds; capacity, one ton per hour.....Price, \$125 00

Has rollers 8 inches long and 6 inches in diameter. Should be speeded not less than 1000 nor over 1200 revolutions per minute. Should be run with not less than 6-horse power.



No. 2, or Large Size, weight, 1620 pounds; capacity, 30 tons and upward per day.....Price, without wagon, \$200 00

Rollers are 12 inches long and 18 inches in diameter. Should be speeded not less than 600 nor over 800 revolutions per minute. Should be run with not less than 10 horse power.

Small Farms on Easy Installments.

GRAIN, FRUITS and VEGETABLES RAISED
WITHOUT IRRIGATION.

A choice portion of the Reading Grant, two miles from the town of Reading, hitherto reserved for farming purposes, now divided into 20-acre lots and thrown open to purchasers. River bottom soil, sandy loam and very productive. Prices from \$30 to \$50 per acre. Other agricultural lands, in lots to suit purchasers, at from \$10 to \$25 per acre. For circulars and maps call on

FRISBIE & WILEY, Redding or Anderson, Shasta Co., Cal.

A GOLDEN OPPORTUNITY

Invest in a Fresno Vineyard

We have for sale, till July 31st, a one-half interest in a fine vineyard ranch, 266 acres, all level and susceptible of easy irrigation, situated near Minturn, Fresno county; 135 acres in best varieties wine and raisin grapes three and four years old, in full bearing; low estimate is 350 tons this year; 15 acres in 8-year-old orchard and table grapes, full crop; 8 acres in 8-year-old almond in full bearing; 50 acres alfalfa; 40 acres grain. Entire tract under rabbit-proof, lumber fence; amply cross-fenced. Main dam, gates, ditches, dykes and water, all belong to premises. No litigation, no riparianism, no costs. Undoubtedly best system of irrigation in the State; beautiful reservoir. Two good dwellings picturesquely located beneath the beautiful foliage of 9-year-old ornamental trees. Two very large barns, an abundance of shed-room. Agricultural implements, machinery, etc. Horses, hogs, mules, cattle and sheep. The object in taking a partner is to build wine-room, storage house and adobe cellar, and must be sold before July 31st in order to utilize the coming immense crop. Price \$20,000. For full particulars address us or (better) come and see the property.

STATHAM & HYDE,

Real Estate Agents, Fresno, Cal.

GLOVES.

THE ONLY GENUINE SAW-YER'S Oil-Tanned, Waterproof, hand-sewed Buckskin Gloves manufactured on the Pacific Coast are made by the WATERPROOF GLOVE CO., West Oakland, Cal. The Hand-sewed Harvest Buckskin Glove will be sent by registered mail at our risk on receipt of \$1.25. Money will be refunded for every pair that does not give satisfaction. Send your address, and price list of other styles, with samples of the buckskin, will be sent FREE.

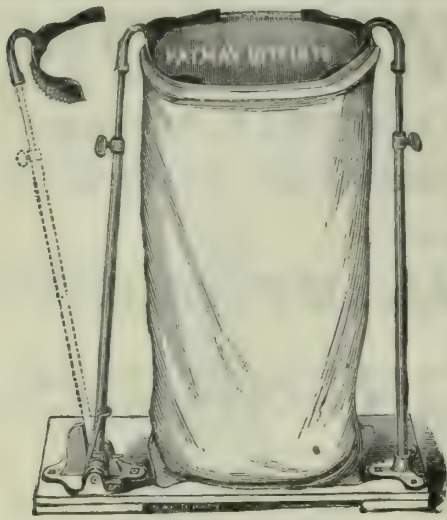
PUMPS FOR IRRIGATION AND RECLAMATION

Steam Engines, Horse Powers & Wind Mills.

Complete Pumping outfits—all sizes—for every purpose. The latest, best and cheapest. If you need any thing in this line, write to

BYRON JACKSON
625 6th St. San Francisco.





PATENT BAG HOLDER
For Sacking Grain, Coal, Ore, Potatoes, Salt,
Beans, Coffee, Flour, Etc.

ASBESTOS PACKED COCKS AND VALVES.

STANDARD THERMOMETERS, WEIGHTS and MEASURES.

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517 and 519 Market Street, SAN FRANCISCO, CAL.

AGENTS

—FOR THE—

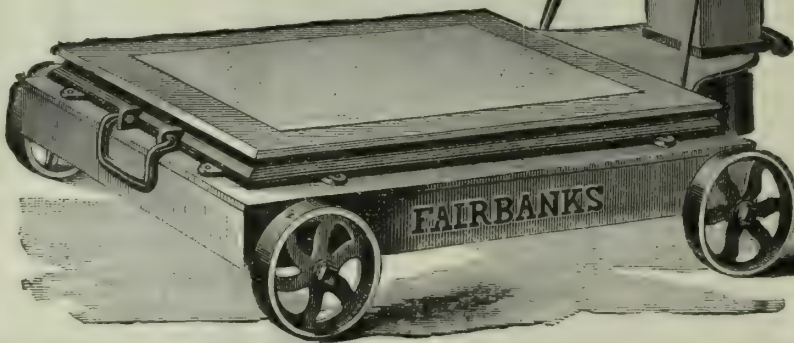
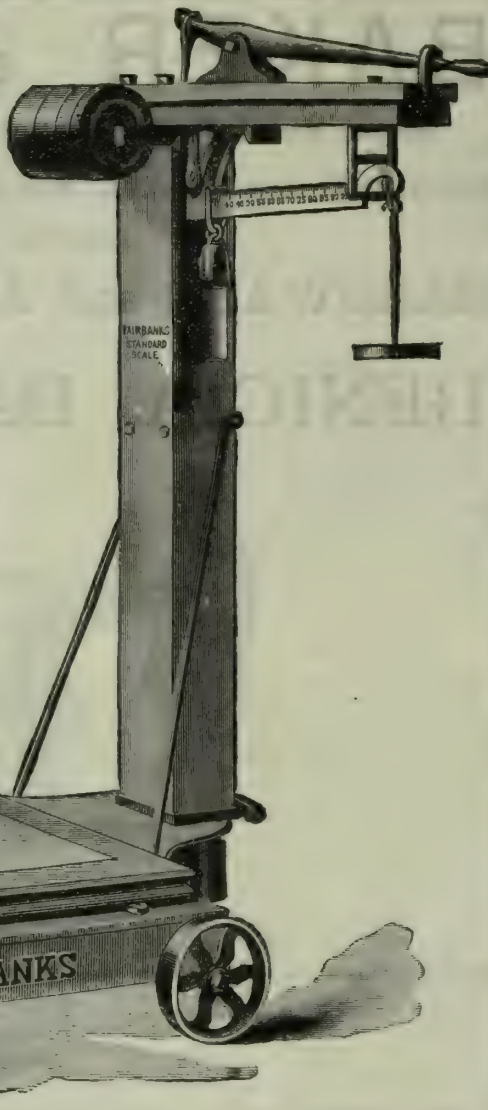
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GOLDEN GATE

Windmills

FAIRBANKS' STANDARD SCALES,

Coffee Mills,
Store Trucks,
Steel Scoops,
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Money Drawers,
Cheese Safes,
Wood Measures,
Wood Scoops,
Counter Fillers.



H. C. SHAW PLOW WORKS.

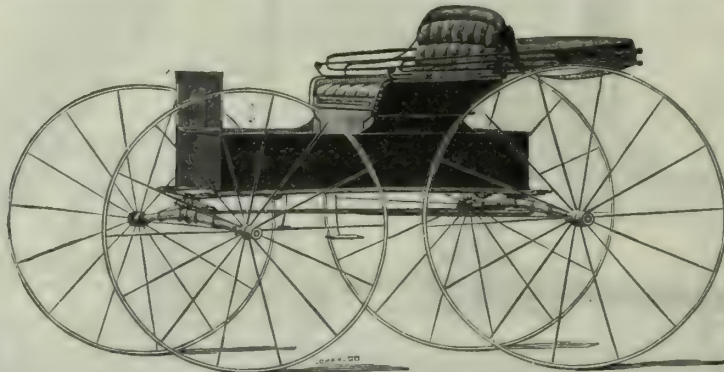
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PRICES.

Powell Derrick and Nets.

365-7 EL DORADO STREET,

STOCKTON, CAL.

THE JUSTLY FAMOUS

Anderson Springs

Are beautifully and delightfully located in a grand natural park, with fine large groves of forest trees, gurgling trout brooks, and the greatest variety of valuable mineral springs known in any one locality, including hot iron and sulphur springs and a cold iron spring.

These springs have been well established for years by the present proprietors, who furnish

Excellent Board with Good Home Cooking.

Good care is taken to make living at the hotel and cottages as pleasant and agreeable to all as possible.

The remedial qualities of the springs are indeed wonderful. Excellent bathing in both mineral and pure water, including natural-puffing steam baths.

Board, \$10 to \$14 per week. Children under 12 and over 3 years of age, half price; 2 and 3 years of age, one-fourth price. Route from S. F.: Take morning train to Calistoga, Napa Co., Cal. Stages leave Calistoga daily for Middletown, fare, \$2. Private team to springs, \$1. Express and P. O. address, Middletown, Lake Co., Cal. Write for further information.

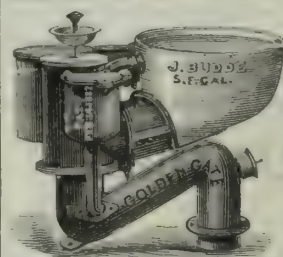
J. ANDERSON, Proprietor.

WEST COAST LAND CO.

TEMPLETON, SAN LUIS OBISPO CO., CAL.

Home of Wheat, Fruit, Wine and Olive; 15,000 acres sold in past 3 months to 220 settlers, representing a population of 1100; 49,000 acres—small subdivisions—average, \$22.50 an acre; 1 cash, balance 5 years, 6 per cent. Catalogues and maps free. C. H. PHILLIPS, Manager.

THE GOLDEN GATE PLUG CLOSET.



WITH TRAP.

This Closet is the Best, Because

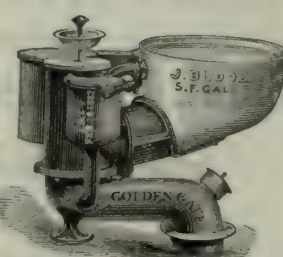
1. It has a simple, strong valve, suitable for any pressure, self-closing by a genuine Phosphor Bronze Spring, acting with the pressure. To prevent breaking and weakening of the spring, I have gone to the expense of using Phosphor Bronze Wire, which will have the desired effect.

2. It has a real sanitary overflow, a copper float attached to a bell of the same metal resting on face of the brass overflow pipe, operated by the rising of the water in the closets above its level, thus absolutely preventing any escape of sewer gas, even the closets being without water.

3. It has no dead corner, consequently no foul water will be left in the closet after lifting of the handle. A constant rush out of the flood chambers will keep the closet and trap perfectly clean.

With above stated points, I am able to call my Closets the most perfect and cheapest in the market. N. B.—Architects who endeavor to furnish their patrons with the most reliable goods, should not hesitate to give this closet a trial. Send for descriptive catalogue.

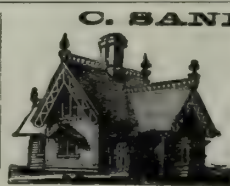
JOSEPH BUDDE, Manufacturer, 43 Fremont St., San Francisco.



WITH OFFSET.

A NEW COLONY

On the new extension of Southern Pacific Railroads, on the lands belonging to R. T. BUELL, Esq., near Los Alamos, Santa Barbara county, Cal. Parties desiring to visit the property now, can go via San Luis Obispo and take the cars from thence to Los Alamos, thence by stage to the Colony. 20,000 acres of the best lands in California, subdivided into 20, 40 and 80-acre farms; \$30 to \$300 per acre. INTERNATIONAL IMMIGRANT UNION, 401 California St., San Francisco.



C. SANBORN,

ARCHITECT,

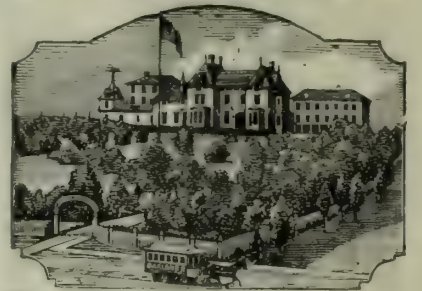
Builder and Superint'dt. Preliminary Drawings and Estimates furnished gratuitously. Plans and Specifications prepared with accuracy. No. 6 Eddy Street, S. F.

Educational.

California Military Academy

OAKLAND, CAL.

NEXT TERM BEGINS...JULY 20, 1887



Thorough instruction in all Departments. Business Course complete. Location unsurpassed. Send for Circular. COL. W. H. O'BRIEN, Principal.

VAN NESS SEMINARY,

(Ralston House) 1222 Pine Street,

BOARDING and DAY SCHOOL

—FOR—

YOUNG LADIES and CHILDREN.

ENGLISH,

FRENCH,

GERMAN

AND

LATIN

TAUGHT BY COMPETENT PROFESSORS.

A Sunny Primary Room and Gymnasium are to be added to the establishment this term.

Will Re-open July 25, 1887.

For particulars apply to

MRS. SARA B. GAMBLE.



—IRVING INSTITUTE—

A Select School for Young Ladies.

For catalogue or information, address the Principal,

REV. EDW. B. CHURCH, A. M.,

1036 Valencia St., San Francisco, Cal.

FIELD SEMINARY!

School for Girls and Young Ladies

1825 Telegraph Ave., Oakland, Cal.

Address MRS. R. G. KNOX, Proprietor, or

MISS FRANCES A. DEAN, Principal.

The 16th year will begin Wednesday, Aug. 2, 1887.

TRINITY SCHOOL

For Young Men and Boys,

1534 MISSION ST., S. F.

Christmas Term opens August 1, 1887.

For information apply to

REV. E. B. SPALDING, A. M., Rector.

SACKETT BOARDING and DAY SCHOOL

For Boys and Young Men,

529 Hobart Street, Oakland, Cal.

English, Scientific, Commercial and Classical Courses of study. Gives the best preparation for best college and universities. Next School Year will begin July 19, 1887. Send, as above, for Catalogue to

D. P. SACKETT, A. M., Principal.

BOWENS ACADEMY.

University Avenue, Berkeley, Cal.

Preparatory, Commercial and

Academic Departments.

NEXT TERM BEGINS

Monday, Aug. 1, 1887. Send for Circulars to

T. STEWART BOWENS, B. A., T. C. D., Principal.

THE OAKS,

An English, French and German Home and Day School.

Oak Street, Oakland, Cal. The next year will begin

July 27, 1887. Address, Miss L. TRACY.



HEALD'S BUSINESS COLLEGE,
24 Post St. S. F.
Send for Circular
Shorthand, Typewriting, Penmanship, Bookkeeping, etc.

FRUIT MARKETING.

Fruit Union Notes.

EDITORS PRESS:—Telegram received from Chicago June 28th reads: "Bartlett's selling at from \$4 to \$4.50 per 40-lb. box; Royal Hative plums, per 20-lb. box, \$2; Royal apricots, in crates of 20 lbs., \$1.50 to \$1.75; peach apricots, \$1.50 to \$1.75; peaches at \$1.50. Weather is fine and cool, and fruit keeping well."

We are loading a car every day here now, which is being made up of small consignments from all around. Peaches at \$1.50 pay very well. The price is what it is because of the unusually large number of Tennessee peaches in the market which are fully as good in taste as our early peaches of the Briggs' Red May and Alexander varieties. Just as soon as we begin shipping Early Crawfords we can expect better prices; but even at the above figure it nets the grower at least 65 cents for not over 18 pounds of fruit.

Messrs. Dix & Wilkes have been appointed agents in Baltimore, and Blake & Ripley agents in Boston.

Messrs. Sgobel & Day, agents in New York, write us that they can furnish an immense market for our grapes; that from October 15th to November 15th, last year, their city used 22,000 barrels of Almeria grapes weekly, equal to five trains of our fruit each week, and none sold for less than \$4 per barrel of 50 pounds. Their people much prefer our grapes, if they can get them, as they far excel in flavor the Almeria grapes. Our great difficulty in selling at auction, they inform us, will be to have the fruit put up in a uniform manner. It is sold entirely by sample, and should the sample of any shipper be either better or worse than the rest of his pack in the same lot, the result would be equally disastrous. Then, too, they find trouble in getting our growers to have all marking on one end. The shipper's name and residence and the variety of the fruit should all be on the same end. They have worked the matter up very thoroughly, and the dealers there are all on the qui vive to get our fruits at auction, which will allow them all a chance to get some. Apricots are selling at \$3 per 20-pound crate at this date, in a small way. We have sent two cars, and a third goes to-night. Next week more will follow. The first car arrives to-day, and at this writing, if all is well, the first auction of California deciduous fruits is now going on, with Messrs. Brown & Secomb as auctioneers, in New York City. We will probably receive word from there by wire this afternoon.

Our Eastern manager, Mr. Blowers, is so sanguine of the outlook for prices in the East that he notified his foreman to ship his apricots to New York City.

The Baltimore, Boston and New York people seem to have taken the agency of the Union with a desire to make it a success, and are straining every nerve to bring about that result. To date we have sent 38 cars East.

H. A. FAIRBANK,
Secretary Cal. Fruit Union.

Sacramento, June 28.

Sacramento Notes.

EDITORS PRESS:—The fruit season has commenced in earnest. The strawberry crop is about over; was a light yield this season. The Early Wilson blackberry has been in market since June 6th, and had it not been for our late hot wave the crop would have been heavy. The Kittatinny are coming in and will soon be followed by the Lawton.

The peach crop will be immense. Shipments of early varieties began some weeks ago; others will follow as they ripen. Prunes will not bear a corner. It is an off year—not one-fourth of a crop. What there are will be large and fine.

Our grain-growers are harvesting their crops. The yield is better than expected. Wheat shrunk somewhat.

Mixed farming is the true plan for small farmers in this State, in fruit, grain and varied heads of stock. If one thing is depreciated or light, other things come in to balance.

The boom keeps everything moving, both in city and county. Real estate is open for purchase, and large tracts are being cut up to accommodate a more thickly settled population. With all our varied tropical fruits and flowers and healthful climate, our California homes are reaching far and drawing in the people of all races and tongues.

G. R.
Sacramento, June 27th.

FRUIT PROSPECTS.—On another page of this week's RURAL may be found brief notes from fruit-growers all over the State, concerning the outlook for the different fruits. The reports are condensed from a long report made to the State Horticultural Society by B. M. Lelong, secretary of the State Board of Horticulture. It will be noticed that most correspondents report fewer traces of the apple worm or codling moth larva than usual. We hope it may prove so through the season, but we fear the worm has been retarded by the character of the season and may appear in force later. However, anything which may betoken a reduction of the pest is good news.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 252 Market St., S. F.

FOR WEEK ENDING JUNE 21, 1887.

- 365,163.—SAW LEVEL AND SET GAGE—John Beaulieu, Arcata, Cal.
365,165.—NUT LOCK—Campbell & Hetzler, El-lensburg, W. T.
365,168.—GRIP RELEASE FOR CABLE R. R.—J. T. Cooney, S. F.
365,170.—DISENGAGING SCALE-BEAM LATCHES—E. O. Deming, S. F.
365,333.—BUTTON-HOLE CUTTER—C. Dickenson, Portland, Ogn.
365,055.—SNOW PLOW—A. E. Dietz, Oakland, Cal.
365,176.—PIPE MOLD—W. A. Frick, Los Angeles, Cal.
365,128.—FIRE LADDER—H. T. Hayes, East Oakland, Cal.
365,181.—TRAMMEL—A. Heiron, San Leandro, Cal.
365,256.—STEREOSCOPE—G. D. Horton, Snohomish, W. T.
365,342.—SMOKE-CONSUMER—J. W. Hubber, S. F.
365,140.—DREDGER—H. H. Lynch, S. F.
365,144.—VEHICLE AXLE—Wm. F. McNutt, S. F.
365,317.—COMBINATION LOCK—J. G. O'Neill, Nevada City, Cal.
365,320.—PENHOLDER—M. I. Rodrigue, S. F.
365,277.—WOOD-TURNING MACHINE—A. Schuch, Sacramento, Cal.
365,153.—AUTOMATIC OILER—J. T. Smith, S. F.
10,846.—INSULATING MATERIAL—J. B. Williams, S. F., reissue.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

THE WEATHER.—The weather of the week has sustained its reputation for being "exceptional." There has been another hot wave, but fortunately the grain is beyond harm, and we do not hear that it was high enough to injure fruit, though it has precipitated the ripening somewhat more than desirable in some cases. The southern part of Santa Clara and the Pajaro valleys had a rattling thunderstorm which terrified old residents and made new-comers from the East feel at home. There has also been rain at several points in the State. Grapes are reported somewhat affected by adverse weather conditions this year, both in blasted berries and coulure.

GRAPE GRAFTING.—It is announced that J. H. Wheeler, Chief Executive Viticultural Officer, is getting up detailed suggestions for the use of those who desire to experiment with "herbaceous grafting" of the grapevine. It is said to have been practiced extensively in Hungary for 50 years past, and consists in grafting in summer on the green grape shoots, thereby forming a resistant cutting that may be immediately planted the following spring. The idea is to get resistants to the phylloxera the first year, instead of waiting two or three years.

THE LOS ANGELES COUNTY POMOLOGICAL SOCIETY will hold its next quarterly gathering at Orange, July 7th. These horticultural love-feasts have become famous, and wherever they are held there is sure to be a good attendance and interesting proceedings. This society has done more than any other to bring about an acquaintance between people of different sections of the county and to inspire a feeling of fraternity and co-operation among the fruit-growers. Orange is sure to give the pomologists a hearty reception.—Los Angeles Times.

Florida, "The Land of Flowers,"

Is a paradise for the invalid, and the "Fountain of Youth" was once thought to be hid in one of its forest glades. It is now the haven of many consumptives, who find benefit in her genial warmth and fragrant flowers. The consumptive invalid need not necessarily go so far from home and friends to get relief. For if not in the last stages of the disease, Dr. R. V. Pierce's "Golden Medical Discovery" will restore to perfect health. For all chronic throat, bronchial and lung diseases it is a most reliable specific. By druggists.

Mother's Smiles are the Sunlight of Home.

There would be fewer clouds and brighter sunshine in many households if every dispirited suffering woman realized what a boon Dr. Pierce's "Favorite Prescription" is for all weaknesses and maladies to which her sex is liable. No lady who gives this wonderful remedy a trial will be disappointed by the result. It not only acts promptly upon all functional derangements, but by its rare nerve and tonic properties strengthens and repairs the whole feminine system. Price reduced to one dollar. By druggists.

It outwits all.—Dr. Sage's Catarrh Remedy.

A GLOVE.—There is probably no line of goods that requires more care in manufacturing than gloves. This is owing to the large number of pieces which must be accurately adjusted in order to make even a presentable glove. A visit to and an inspection of the Leak Glove Manufacturing Co.'s establishment is all that is necessary to convince one that they are fixed to do just what they profess to be doing—making the best gloves in the world.

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.]

DATE.	Portland.				Red Bluff.				Sacramento.				S. Francisco.				Los Angeles.				San Diego.			
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.
June 23-29.																								
Thursday.....	.00	70	Nw	Cl.	.00	94	S	Cl.	.00	80	SW	Cl.	.00	61	W	Cl.	.00	82	W	Cl.	.00	68	N	Cl.
Friday.....	.00	58	N	Fr.	.00	96	S	Cl.	.00	78	S	Cl.	.00	65	W	Cl.	.00	78	W	Cl.	.00	66	Nw	Cl.
Saturday.....	.00	58	N	Cy.	.00	74	S	Cl.	.00	66	S	Cl.	.00	58	W	Cl.	.00	72	SW	Cl.	.00	66	Nw	Cl.
Sunday.....	.00	60	Nw	Cy.	.00	80	N	Cl.	.00	78	Nw	Cl.	.00	70	W	Cl.	.00	82	W	Cl.	.00	68	W	Cl.
Monday.....	.02	64	Nw	Cl.	.00	88	N	Cl.	.00	84	Nw	Cl.	.00	81	Nw	Cl.	.00	82	W	Cl.	.00	68	SW	Fr.
Tuesday.....	.00	68	Nw	Cy.	.00	94	N	Fr.	.00	90	Nw	Cl.	.00	74	W	Cl.	.00	80	W	Cl.	.00	68	Nw	Fr.
Wednesday...	.00	66	Nw	Cl.	.00	96	Cl.	Cl.	.00	90	Nw	Cl.	.00	66	W	Cl.	.00	88	W	Cl.	.00	68	Nw	Cl.
Total.....	.02				.00				.00				.00				.00				.00			

EXPLANATION.—Cl. for clear; Cy., cloudy; Fr., fair; Fy., foggy; — indicates too small to measure. Temperature. Wind and weather at 12:00 M. (Pacific Standard time), with amount of a fall in the preceding 24 hours. Note "T" indicates precipitation inappreciable.

THE STATE FAIR

At SACRAMENTO, Cal., Sept. 12 to 24, 1887.

\$2000 in Cash for County Exhibits.

SPECIAL ATTENTION OF THE FARMING COMMUNITY

Is called, as well as the various Immigration Societies, Boards of Trade of the several Counties, and all others interested in bringing out the resources of their respective Counties, to the advantages offered by an Exhibition at the

STATE FAIR

Of the varied products of their counties. The supervisors of each county are invited to make a liberal appropriation, sufficient to pay the expenses of getting together an Exhibition of County Products. Premiums received can be returned to the treasury of each county making the appropriation, so that their respective counties would be written up and advertised at a small expense by an exhibition of this character. The Railroad Company transports the same free of charge.

THE LIVE STOCK EXHIBITION, connected with the State Fair, is sure to attract Eastern visitors anxious to view the resources of California.

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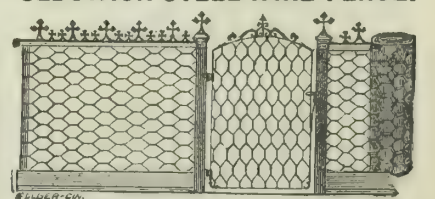
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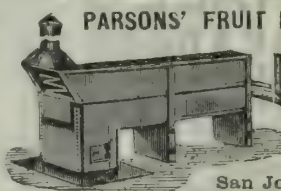
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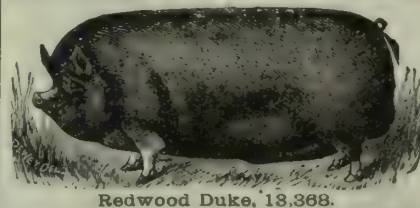
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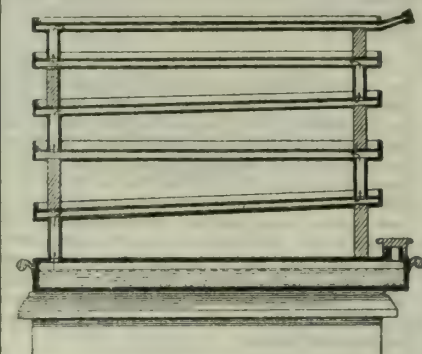
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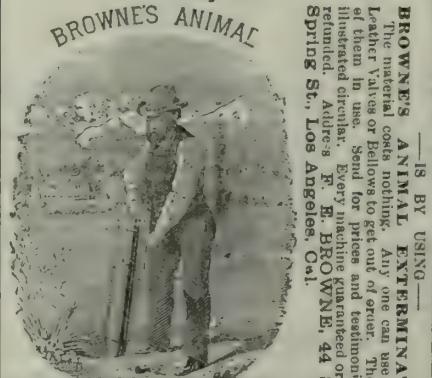
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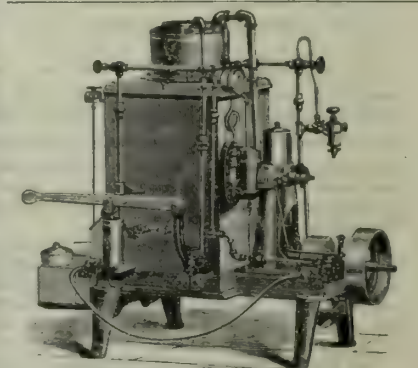
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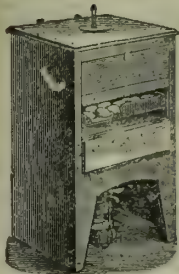
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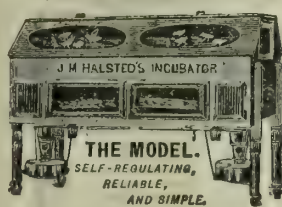
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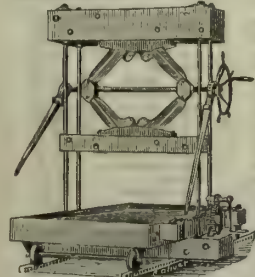
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Mixes instantly with Cold Water.

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S. F. MARKET REPORT

NOTE.—Our quotations are for Wednesday, not Saturday, the date the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, June 29, 1887.

The weather the past week has been hot, but there was an absence of hot winds, which are the dread of this State in the months of June and July. Harvesting is progressing favorably, although the grain in some sections is shelling out. The Eastern market has ruled fairly steady at low prices, about \$1.20 per cental for August options. European advices are virtually unchanged. To-day's cable is as follows:

LONDON, June 29.—Cargoes off coast, seems weaker; cargoes on passage and for shipment, weaker; red wheat, very dull; white, firmly held; French country market, dull; Liverpool wheat, spot, inactive; Liverpool wheat, Cal. 75 to 75 rod.

Eastern Wheat Markets.

NEW YORK, June 26.—The collapse of the wheat deal and vigorous purchases of shippers here started an unusual movement of grain from the West. Walker, ex-statistician of the Produce Exchange, places the amount of wheat on the canal between Buffalo and New York at 2,570,000 bushels. Estimates of decrease in visible supply now range from 1,500,000 to 2,000,000 bushels. A fairly active business in wheat was done within the two hours allowed to trade in on Saturday; purchases for export exceeded 230,000 bushels, and the market was steady, without important variations. June closed firm, at 92c. Other deliveries closed weak—July at 85½c; August, 85½c.

NEW YORK, June 29.—12 M.—87c for cash, 93½c for June, 84½c for July, 84½c for August, and 85½c for September.

CHICAGO, June 29.—1 P. M.—Wheat, firm; cash, 69½c; July, 70c; August, 72½c. Corn, about steady; cash, 35½c; July, 26c; August, 27-16.

California Products at Chicago.

CHICAGO, June 28.—California green fruits are in good request and fairly active as follows: Apricots, 20-lb. boxes, \$1.50 to \$1.75; Apricots, ½ crates, \$1.75 to \$2.00; Peaches, 20-lb. boxes, \$1.75 to \$2.00. The arrivals to-day were rather small. The demand, however, was also light. Fine goods could be sold, but the peaches coming in continue of common quality and rule dull. The retailers regularly do not care to handle them, and stand-peddlers and dealers in fancy fruit prefer California goods. Plums are coming in to only a moderate extent. Really fine, large are salable and steady; common and small are as usual, slow. Ten-pound boxes of the cherry variety sell at \$1.25 to \$1.50 box. Peaches, 20-lb. boxes, \$3 to \$3.25 and ½ crates of Royal Hative, \$2.75 to \$3. Cherries are scarce. Choice cherries, either soft or sweet, find ready sale and command good prices. Oranges, 25 to 40 boxes, according to quality. The offerings and demand are both light. Beurre Giffard pears being \$3.50 to \$4.00, and Bartlett \$4.50 to \$5.00; stock in soft order sells at less prices.

Of California dried fruits the supply is rather light and the market quiet; pitted plums, evaporated, 10 to 15c; pitted plums, sun-dried, 10 to 15c; apricots, evaporated, spot goods, 22 to 25c; future delivery, 10 to 15c; sun-dried, none here; prunes, 9 to 11c; raisins, London layers, 20-lb. boxes, \$1.40 to \$1.50; loose Muscatel, \$1.25 to \$1.30; California layers, \$1.25 to \$1.30.

New potatoes \$1.75 to \$1.90 per 100 lbs.

California Products in New York.

NEW YORK, June 26.—Green Fruits.—Fine California peaches, \$1 per doz; blue plums, 35c per doz; Tangerines 75c per doz; selected apricots, 25c per doz. Seeds.—California yellow and brown mustard has met with increased attention, with sales reported of about 800 bags on private terms. It was quoted at the close at 4½ to 5½c, respectively.

New York Hop Market.

NEW YORK, June 26.—Holders of desirable goods are firm at quoted prices, but buyers are equally firm in holding back. There is no business worth speaking of. Coast crop, 1886, best, 22 to 23c; same, common to good, 16 to 20c; 1885, good to prime, 10 to 13c.

Eastern Wool Markets.

NEW YORK, June 26.—The general tone of the market seems to be on the mend. The manufacturing demand is improving, but fleeces are still scarce, and there is a decided difficulty in finding desirable parcels of mediums. Among sales were 2,000 lbs. spring California at 22c; 20,000 lbs. fall California at 14c; 10,000 lbs. scoured California, mostly at 56c; 10,000 lbs. Oregon at 26c; 15,000 lbs. Montana at 23½c.

The Philadelphia market remains unchanged. Receipts are light and sales lighter than week before last. Among sales were 1000 lbs. of California fall at 13c; 29,000 Oregon fine at 28 to 28½c; 7000 lbs. Territory scoured at 54c; 2000 lbs. coarse Territory at 28c; 2000 lbs. coarse Territory at 36c; 2500 lbs. Territory fine at 19c; 2000 lbs. Territory fine at 21c; 2000 lbs. medium Territory at 22c.

The Boston market is considerably mixed and prices quoted vary widely. Among sales were 107,500 lbs. Territory at 21½ to 22½c.

BOSTON, June 28.—Wool is in fair demand. Ohio and Pennsylvania extra fleeces, 33c; XX, 34 to 35c; Michigan extra, 31 to 32c. Other grades are unchanged.

PHILADELPHIA, June 28.—Wool is quiet and unchanged.

NEW YORK, June 28.—Wool is quiet and generally steady. Domestic fleeces, 30 to 37c; pulled, 14 to 34c; Texas, 9 to 24c.

Local Markets.

BAGS.—The market is not quite so active, with an easier tone, owing to the June contracts coming in on the market. Standard Calcuttas are quotable at 6½ to 7 cts.

BARLEY.—The market held to steady prices throughout the week for actual barley. On Call, trading was fairly active, with only slight fluctuations. To-day's sales were as follows:

Morning Session: Buyer 1887—100 tons, \$1.16½;

200, \$1.17; 900, \$1.16½. Seller 1887, new—100 tons, \$1.08½; 100, \$1.08½ per cwt. Afternoon Session: Buyer 1887—400 tons, \$1.17 per cwt.

BUTTER.—Gilt-edged high colored hard butter is very scarce, and wanted; but off colored and soft is in over-supply, with the market weak.

CHEESE.—The market is easy, under liberal supplies and a light demand.

EGGS.—Strictly choice fresh laid are wanted, and command 25 cts, while off qualities are in heavy supply and move slow at from 18 to 22½ cts.

FLOUR.—The market is steady at full prices. Several mills will shut down for repairs.

WHEAT.—The market is inactive for actual wheat here, although free sales of choice in the country are reported at full figures. In options, trading was free throughout the week, with strong buyers taking all offered for sale. At to-day's Call sales were as follows:

Morning Session: Seller 1887—1800 tons, \$1.88½; 300, \$1.88½ per cwt. Afternoon Session: Seller 1887—200 tons, \$1.88½; 1900, \$1.88½; 600, \$1.88½; 300, \$1.88½; 100, \$1.89; 100, \$1.89½; 100, \$1.89½ per cwt.

[COMMUNICATED.]

Market Information.

Cereals.

The Revenue and Agricultural Departments of the Government of India have issued the following report, dated Simla, April 27, 1887, on the estimated outturn of the wheat crop in the Lower Provinces of Bengal, for the season of 1886-87: "The cultivation of wheat on a large scale is, in the Lower Provinces, confined to the Patna and Shahabad districts of the Patna division, and to the Bhagulpore and Monghyr districts of the Bhagulpore division. Excessive rain during September and October last made it impossible to prepare land for wheat in due time, and the crop has, moreover, suffered from rust brought on by the heavy rains in January. On the whole, it may be said that the area sown was less than the normal, and the outturn will be about three-fourths of the average." A cable from London says that the Indian Government's final crop estimates are received. They say: For the northwestern provinces and Oude the prospects of the wheat trade appear less favorable for 1887 than was realized in 1886, and far less than for 1885. First, because the outturn is 6 per cent less than in 1886; second, because stocks are drained to their lowest ebb; third, other food crops are inferior, causing a great consuming demand. The central provinces, the report says, prove rather worse than was expected. In the north, where some damage was reported done by the frost, this proves more extensive than was believed.

In this department the writer has given the utmost attention to the statistical situation of wheat, and by reference to back numbers of the RURAL PRESS patrons will see that everything combines in forcing the conviction that before another harvest we will see higher prices than known for years. Briefly stated, the situation is as follows: The reserve supplies in England, France, Russia and Germany (India is noted above) is all of 50 per cent below the average of the past three years. Owing to the low price of wheat for the past two years, the acreage seeded to the cereal in Great Britain and throughout Europe is less than seeded the two preceding seasons. Owing to unfavorable weather in France, and also in Hungary, parts of Russia, and also in India, the crop is below an average. In Great Britain the outturn, at this writing, promises a full average. The consumption of wheat-flour in Europe has increased to a most remarkable extent, and therefore the requirements are much greater. Turning from Europe to this country, we find an unfavorable outlook, for under the most favorable circumstances the crop of the United States will not go above 400,000,000 bushels, if that, against about 460,000,000 bushels last year, and an average for the past five years of 440,000,000 bushels. Not only will the crop be short, but the consumption will be larger. Aside from this, the carryover will be the smallest known for years. At the very outside it will not exceed, visible and invisible, 50,000,000 bushels against a carryover, from the season of 1885-86, of over 75,000,000 bushels. The Argentine Republic had a larger surplus this year, as had Australia, but they combined will not export 300,000 tons—not as much as Washington Territory and Oregon will export this year. Still in the face of all this the San Francisco Chronicle is advising such action on the part of the Produce Exchange of this city as it is claimed by the many will send the price of wheat down here.

To give its remarks more force, the paper cites the action of the Chicago Board of Trade which brought about the recent panic in wheat at the East, and caused cash wheat in Chicago to sell at 67½c per bushel (equal to \$1.12½ per cental), which is the lowest price within 25 years. The lowest price in 24 years previous to this was on December 15, 1885, and on October 11, 1886, when cash wheat sold at 69½c per bushel. The Chronicle has evidently overlooked itself in trying to send the price of wheat down against farmers' interests, but then it is said that this is not the first time the daily papers wrote against farmers' interests. Last year when wheat was low, the RURAL PRESS gave all the information correctly and predicted higher prices, but the daily papers only saw low prices and wrote against wheat. Patrons of the PRESS will bear the writer out when he asserts that No. 1 shipping wheat went from \$1.30 per cwt. at which it sold in July, 1886, to \$1.85 in last month—a difference in favor of farmers of \$1.10 per cwt.

Crop advices in this State are not quite so favorable. The hot drying weather has matured the grain too fast, and more shelling is being reported than was last year at harvest-time. Aside from this, the crop of white wheat is less in some counties than is red wheat. This is particularly the case in Los Angeles county, where the mills will have to import white wheat for their use. The crop in that county is about 20,000 tons, against 31,000 tons last year. The Oregon and Washington Territory crop is turning out well. The surplus there promises to be fully as much as it was in 1885-86, when it reached a little over 300,000 tons against about 240,000 tons for the season drawing to a close. But then this does not include the flour exported.

The visible supply of wheat at the East, as telegraphed to S. S. Floyd & Co. of this city, was on June 27, 39,270,000 bushels, a decrease of 2,000,000 bushels for the week.

Advices from the different sections where harvest-

ing is going on report that barley is brighter in the coast counties than it was last year. This probably is due to the fact that there was less fog this year. The crop this year will not exceed 325,000 tons against about 500,000 tons last year. The Los Angeles Express states that the crop in that county last year was about 1,000,000 bags, but this year it is placed at 600,000 bags, with the consumption more than double that of last year. Taking the consumption in Los Angeles as a basis, it is safe to say that the consumption of the State will this season be all of 400,000 tons. In estimating the consumption it is hardly safe that the increase of the entire State will be more than 33½ per cent, for in several counties there will not be any increase.

The oat crop of the State is not up to an average, but the crop in Oregon and Washington Territory is above an average. The consumption of oats is light, owing to their high cost, but as supplies and receipts are light the market is fairly steady.

Corn has a steadier tone at the low prices, owing to diminishing stocks at the East.

Rye is inactive under light supplies and no demand, owing to the high asking price.

Feedstuff.

Ground feed is in good demand, but supplies being more liberal, values are barely steady for bran and middlings; but for ground barley and feedmeal the tone is firm.

The hay crop is about all cut. The yield is not up to last year, but the quality averages better. Owing to the large increased consumption and the poor pasture, farmers sell sparingly, which keeps the market strong.

Fruits.

The market continues bare of dried fruits. All coming in are sent to the East, where there is an active trade call.

Raisins are in light supply, but the demand is also light. Apricots are in good supply. Canners are free buyers at from \$30 to \$40 per ton for the more choice.

Cherries, currants and gooseberries are coming in more sparingly, causing a stronger market. Blackberries and strawberries are in liberal supply, with the market gradually easing off.

Apples and pears are in free supply, but the quality is, as yet, only fair.

Peaches are in light receipt, but heavier supplies are expected to come in soon. Lemons are strong and higher, as are limes. Plums are coming in more freely, but as yet they are only sold to the trade.

Live-Stock.

The market for beef cattle and mutton sheep continues depressed, with more sellers than buyers. It is claimed that prices here are below those ruling in the country. Small calves are becoming scarce, and are wanted. Hogs for the block are more inquired for, but buyers do not quote a higher range. In work-horses the demand is quiet, but for general utility horses and matched teams there is a continued free inquiry.

The following are the wholesale rates of slaughtering to butchers:

BEEF—Extra, 7c; first grade, grass fed, 6½c—c per lb; second grade, 6c; third grade, 4½ to 5½c.

MUTTON—Ewes, 5 to 5½c; wethers, 6 to 6½c.

LAMB—Spring, 7 to 8c.

VEAL—Large, 6 to 7c; small, 6 to 8c.

PORK—Live hogs, 4½ to 4¾c for heavy and medium; hard dressed, 6½ to 7c per lb; light, 4½c; dressed, 6½ to 7c; soft hogs, live, 3½ to 4c. On foot, one-third less for grain or stall fed, and one-half less for stock running out.

Vegetables.

Cabbages are lower, and weak at the decline. String beans and peas are strong, as is choice asparagus. Other vegetables are weakening off under more liberal supplies.

Tomatoes are coming in quite freely, with sellers shading prices each day. Canners, it is thought, will soon be in, at least when the harder kinds come in more freely.

It is impossible to give a fair index of the market, as prices are governed from day to day by the receipts.

Wool.

The market continues to hold to strong prices, with buyers still paying a slight advance for the better grades. The Philadelphia Commercial List just to hand has the following to say of the market: "Manufacturers have no confidence in present prices, and, while many of them are short of wool, they buy sparingly at ruling figures, or are holding off for a break in prices, which they feel must come later in the season, in which view they are strengthened by the break in the coffee and wheat speculation of this week. Some Eastern dealers are withdrawing their buyers in the country, as they are unwilling to follow the upward tendency in prices, in the belief that a loss on wools bought at ruling rates in the interior is inevitable. The oldest houses in the trade cannot recall a time so near midsummer when there was such universal determination not to buy the clip at going prices, which appear to be on an average from 50 to 60¢ per lb above the opening prices of last year. In some sections where medium washed wools are grown, a greater advance has been demanded. One prominent Eastern house, whose agents had exceeded instructions and who had bought considerable wool at 35c in Ohio, resold its entire purchase to the agent of another Eastern concern at 36 to 37c on board the cars. We hear of other instances in which purchases have been resold for similar reasons."

Miscellaneous.

The tonnage movement compares with last year at this date as follows:

On the way.....271,133 306,803

In port, disengaged.....115,212 33,319

In port, engaged.....15,567 27,324

Totals.....401,912 367,446

The above gives a carrying capacity as follows:

1887, 643,059 short tons; 1886, 587,908 short tons; increase over last year, 55,151.

No vessels have been taken the past week for wheat loading. As will be seen above, the tonnage here and to arrive is more than enough to take away this year's surplus crop.

The hop crop of Washington Territory is placed at one-third less than last year, but in this State it

is more. Buyers are anxious and bid 20 cts for fair new hops.

Beans are steady, although some dealers report a weaker tone.

Honey is coming in more freely, with good grades in request at full figures.

Poultry, under light receipts and a good demand, is higher.

San Francisco, June 29, 1887.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, June 29, 1887.

BAKING AND PEAS.	Paper shell.....	19 @ 20
Bayo, chl.....	190 @ 225	11 1/2 @ 13
Butter.....	175 @ 200	9 @ 11
Peas.....	180 @ 200	4 1/2 @ 5
Red.....	140 @ 165	10 @ 11
Plum.....	125 @ 160	7 @ 8
Large White.....	190 @ 200	
Small White.....	175 @ 200	
Lima.....	175 @ 225	
Wild Peas, blk. sp.....	100 @ 105	
do green.....	100 @ 112 1/2	
do Niles.....	125 @	

DAIRY PRODUCE, ETC.			
BUTTER.			
Cal. fresh roll, lb.	16	@	20
do Fancy brand	21	@	22 1/2
Pickle roll	20	@	24
Firkin, new	16	@	20
Eastern	—	@	—
CHICKEN.			
Oheese, Cal. B.	9	@	10 1/2
Eastern style	11	@	12 1/2
EGGS.			
Cal. ranch, dos.	24	@	25
do, store	20	@	22 1/2
Ducks	—	@	—
Oregon	—	@	—
Eastern	18	@	—
FEED.			
Brasn, ton	23	@	24 00
Cornmeal	28	@	24 00
Grd Barley ton	25	@	26 00
Hay	9	@	25 00
Mel. alfalfa	25	@	26 00
Oil Cake Meal	36	@	28 50
Straw, bale	40	@	60
Peas	—	@	—
Salt Lake	—	@	—
New Potatoes	50	@	85
HONEY AND COMB.			
Hens, dos.	6	@	8 00
Roosters	5	@	11
Broilers	3	@	27
Ducks, tame	4	@	6
do Mallard	—	@	—
do Sprig	—	@	—
Geese, pair	1	@	1 25
do	1	@	1 50
do Goslings	1	@	25
Wild Gray, dos.	—	@	—
Turkeys, B.	15	@	17
do Dressed	—	@	—
Turkey Feather, tall and wing	10	@	30
Snipe, Eng., dos.	—	@	—
do Common	—	@	—
Doves	—	@	—
Quail	—	@	—
Cabins	1	@	00
Hare	1	@	25
Venison	—	@	—

CHEESE.		
Cheddar, Cal., D.....	9 @ 10 1/2	
Eastern style.....	11 @ 12	
do Swiss.....	11 @ 12	
Cal. ranch, doz.....	24 @ 25	
do store.....	30 @ 22 1/2	
Ducks.....	— @ —	
Oregon.....	— @ —	
Eastern.....	18 @ —	

FEED.		
Bran, ton.....	23 @ 24 00	
Cornmeal.....	20 @ 00	
Grd Barley ton.....	25 @ 26 00	
Hay.....	9 @ 14 50	
Middlings.....	25 @ 26 00	
Oil Cake Meal.....	30 @ 28 00	
Straw, bale.....	40 @ 60	

FLOUR.		
Extra, City Mills.....	4 95 @ 5 70	
do Country Mills.....	4 45 @ 5 45	
Superfine.....	3 70 @ 4 45	
GRAIN, ETC.		
Barley, feed, chl.....	1 10 @ 1 17 1/2	
do Brewing.....	1 15 @ 1 25	
Oatmeal.....	1 45 @ 1 60	
do Coast.....	— @ —	
Buckwheat.....	1 00 @ 1 20	
Corn, White.....	1 15 @ 1 25	
Yellow.....	1 10 @ 1 20	
Small Round.....	1 30 @ 1 30	
Nebraska.....	1 07 1/2 @ 1 15	
Oats, milling.....	1 85 @ 1 90	
Choice feed.....	1 70 @ 1 75	
do good.....	1 60 @ 1 70	
do fair.....	1 45 @ 1 55	
do black.....	— @ —	
do Oregon.....	— @ —	
Eye.....	1 25 @ 1 50	
Wheat milling.....	1 87 1/2 @ 1 92 1/2	
Gilt edged.....	1 82 1/2 @ 1 87 1/2	
do fair to good.....	1 72 1/2 @ 1 80	
Shipping choice.....	1 80 @ 1 85	
do good.....	1 80 @ —	
do fair.....	1 75 @ —	

HIDES.		
Dry.....	14 @ 16	
Wet salted.....	7 @ 8 1/2	
HONEY, ETC.		
Beeswax, B.....	30 @ 32	
Honey in comb.....	9 @ 12	
Honey in comb, fancy.....	13 @ 14	
Extracted, light.....	4 1/2 @ 5	
do dark.....	3 1/2 @ 4 1/2	

WOLFSKIN.		
Oregon.....	17 1/2 @ 22	
California.....	15 @ 22 1/2	
ONIONS.		
Pickling.....	— @ —	
Red.....	40 @ 60	
Silver skin.....	50 @ 75	
Walnut, Cal., B.....	13 1/2 @ 14 1/2	
do Chila.....	— @ —	
Almonds, dbl.....	5 @ 7	
Soft shell.....	18 @ 19 1/2	

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, June 29, 1887.

APPLES, BX COMM.	30 @ 50	
do choice.....	50 @ 1 25	
Apricots.....	30 @ 40	
do Royal.....	35 @ 50	
Bananas, bunch.....	2 00 @ 3 25	
Blackberries, ch.....	5 00 @ 8 00	
Cantaloupes, cr.....	10 @ 60	
Cherries white bx.....	40 @ 60	
do black bx.....	30 @ 50	
do Royal Ann.....	60 @ 80	
Cherry plums.....	30 @ 50	
Cranberries.....	10 @ 12 50	
Currents ch.....	2 50 @ 5 00	
Gooseberries.....	24 @ 75	
Figs blk.....	40 @ 75	
Grapes.....	70 @ 1 25	
do Rose Peru.....	— @ —	
do Muscat.....	— @ —	
do Tokays.....	— @ —	
Isabel.....	— @ —	
Wine, Zinfandel.....	— @ —	
do Mission.....	— @ —	
Limes, Mex.....	11 00 @ —	
do Cal. box.....	— @ —	
Lemons, Cal, bx.....	2 00 @ 3 50	
do Sicily, box.....	6 00 @ —	
do Australian.....	— @ —	
Nectarines box.....	— @ —	
Oranges, Com bx.....	1 25 @ 1 50	
do Chocho.....	2 00 @ 2 50	
do Navel.....	3 00 @ 4 50	
do Panama.....	60 @ 1 25	

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The Cheapest!
The Most Durable!
The Most Economical!
The Only One Absolutely Fire Proof!

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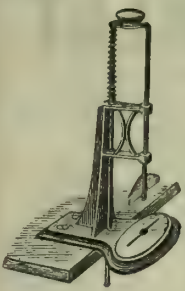
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Plums, Apricots, Nectarines, etc.

Also a full stock of Apple Parers, Peach Parers, etc.

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44 Third Street, San Francisco, Cal.

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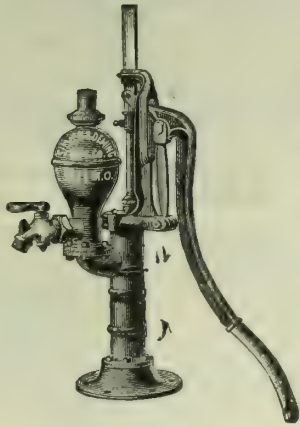
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SPRAY PUMPS,
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IRON PUMPS,
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Single and Double Acting PUMPS,

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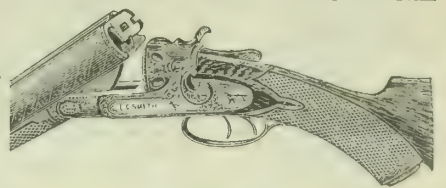
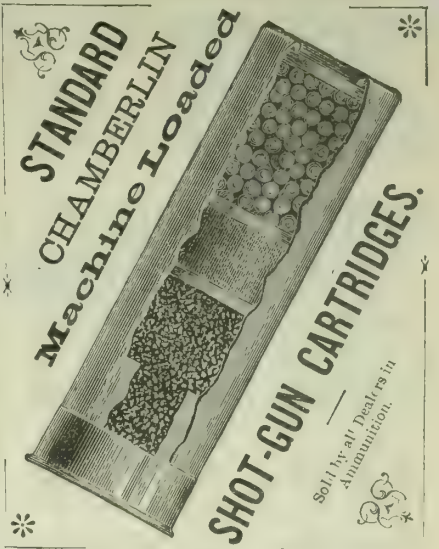
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12 and 14 Market Street, San Francisco, Cal.,

MANUFACTURERS, IMPORTERS AND JOBBERS

Pumps, Windmills, Stoves, Ranges, Metals, Sheet
Iron, Stamped Ware, Tinware, Lanterns,
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of Guns, Pistols, Cartridges, Powder, Shells, Air Guns,
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Fine Gun work done by first-class smiths.
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525 Kearny Street, San Francisco, Cal.

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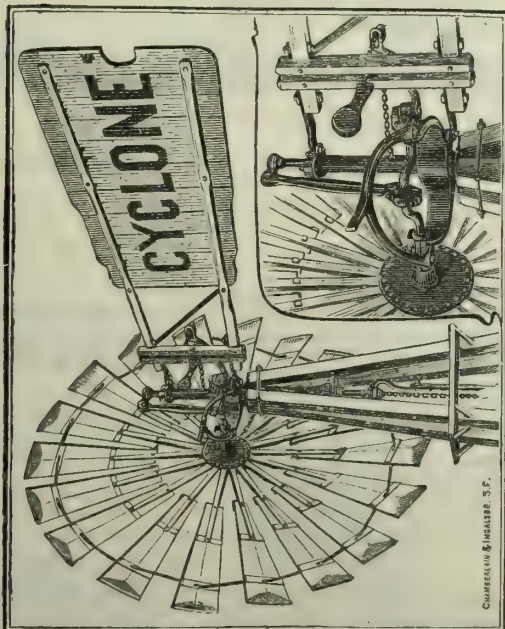
Promptly Eradicates
Freckles, Tan, Sunburn,
Moth Patches and all
discolorations without
injury, and imparts to
the skin Purity and Vel-
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COMPLEXION SOAP
Removes Pimples, Fleas, Worms, Blackheads and cures
Oily Skin. Either of the above articles sent post-paid for
25 cents each, or 5 packages for \$1. Be sure and mention this
paper. The W. Millard Co., Buffalo, N. Y.

THE DOG In health, habits and disease. All breeds
and treatment; 50 cuts; 25c. This office.

IN THE DRY SEASON

The WATER QUESTION beomes very important. It is now a SETTLED FACT that the CYCLONE WINDMILL will raise MORE WATER with LESS WIND than any Mill yet produced. There is no wind about this advertisement, but there will be MUCH WATER, because some people will buy a "Cyclone" after reading it, and consequently the Agents of other Mills WILL WEEP. These tears, however, being SALT WATER, are not available for IRRIGATION.



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Illustrated
Catalogue

And Address of
Nearest
Local Agent.

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934 & 936 Mission St., San Francisco, Cal.

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 120 Sutter St., San Francisco.

SEEDLESS OONSHIU

ORANGE TREES

And all kinds of Japanese Trees, Plants, Etc.
 Send for Circular.

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JAPANESE

Trees, Plants, Bulbs and Seeds,
 UNSHIU SEEDLESS
 AND SATSUMA
 ORANGE TREES.
 SEND FOR CATALOGUE.

ORANGE SEED!

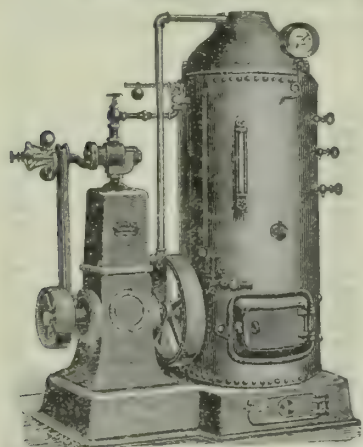
This is the last opportunity to secure PURE TAHITI
 ORANGE SEED. Price is reduced so as to clean up at
 once. If you need any, please send your orders imme-
 diately to

L. G. SRESOVICH & CO.,
 413, 415, 417 Washington St., San Fran'co.

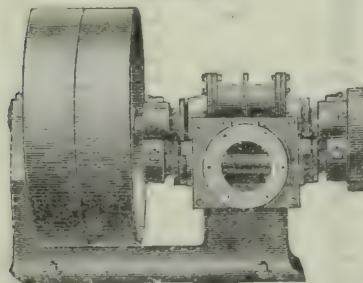
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WORKS,

39 to 51 Fremont St., San Francisco, Cal.
 Manufacturers of New and Dealers in Second-hand

Boilers, Engines and Machinery
 Of Every Description.

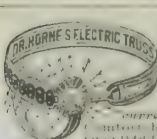


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 (Combined).



WILBRAHAM ROTARY PISTON PUMP.
 Hydraulic Mining, Quartz and Saw-Mill
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—AGENTS FOR THE SALE OF—
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Effectively cured in 60 days by Dr.
 Horne's Electric Belt. Thousands
 of cases cured. Guaranteed. No
 operation. No pain. No expense.
 Dr. Horne's Electric Belt. Thousands
 of cases cured. Guaranteed. No
 operation. No pain. No expense.
 ALSO ELECTRIC BELTS FOR DISEASES.

DR. HORNE, INVENTOR, 702 MARKET ST., SAN FRANCISCO.

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SHIPPING AND COMMISSION MERCHANTS,

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Agents for Growers and Manufacturers. Charterers of Vessels for all Trades. Agents
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Have correspondents in all the chief cities of the United States, Europe, Australia, India, China and the prin-
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April 1, 1887.

At Last to "Perfection."



SENT ON
 60 Days
 Test Trial.

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 and tried to be appreciated. Awarded first premiums 1883, 1884, 1885 and
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 and Wringer on 60 days' trial, the party to pay for them at WHOLESALE
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 lose money by waiting until some one else orders samples and secures an
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 have great success selling this washer. WRITE AT ONCE for New Illustr-
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 Mention this paper. DO NOT DELAY.

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1887.

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Mission Rock Grain Dock and Warehouses,
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Regular Warehouse for S. F. Produce Exchange Call Board.

Storage Capacity for 75,000 Tons of Grain.

THE CALIFORNIA DRY DOCK CO., Proprietors.

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Freight paid, fire insurance and loans effected, and proceeds forwarded free of commissions. Money advanced
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 All applications for storage or other business addressed to CHAS. H. SINCLAIR, Superintendent.

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INSURE YOUR BUILDINGS AND GROWING CROPS.

PHENIX ASSURANCE COMPANY

OF LONDON, ENGLAND, ESTABLISHED 1782.

Losses paid to date, \$78,612,829.46.

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Buggies, Spring Wagons, Harness, Saddlery, Robes and Whips.
 HARNESS REPAIRING.

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AMERICAN EXCHANGE
HOTEL,

319 & 321 Sansome St., San Francisco.
 One door from Bank of California.

The above well-known hotel offers superior ac-
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The table is kept at top grade and
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RATES—\$1.00, \$1.25 and \$1.50 per day.

Free Coach to and from the Hotel.

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WEAK, NERVOUS PEOPLE



And others suffering from
 nervous debility, exhausting
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 positively cured by Dr.
 Horne's famous Electro-
 Magnetic Belt. Thousands
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 DR. HORNE, INVENTOR, 702 MARKET ST., SAN FRANCISCO.

THE DOG In health, habits and disease. All breeds
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A MAGIC CURE

—FOR—
 Rheumatism, Neural-
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Everybody should have it.
 G. G. BURNETT, Agt
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Cold Water Bleaching Soap

Was Awarded the First Premium at the State Fair at
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It can be used in Bath, Toilet or Laundry, and dis-
 penses with Fuel, as no Warm Water or Boiling is
 Necessary. Beware of Cheap Imitations.

The Genuine is manufactured only by

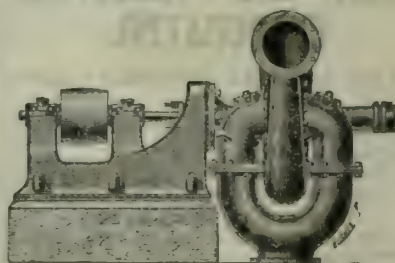
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No. 12 Bush Street, San Francisco.

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WEBBER'S CELEBRATED

IRRIGATING
PUMPS.

WE ALSO CARRY IN STOCK THE LARGEST LINE OF

MACHINERY

In the UNITED STATES,
 Consisting of Wood and Iron Working
 Machinery. Pumps of every
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ENGINES AND BOILERS

A SPECIALTY.

GRANGERS' BANK

OF CALIFORNIA.

SAN FRANCISCO, CAL.

Authorized Capital, \$1,000,000

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$645,360.

Reserved Fund and Paid up Stock, \$21,178.

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LOANS ON WHEAT and country produce a specialty.
 COLLECTIONS throughout the Country are made,
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Wrapping and Packing Citrus and
 Deciduous Fruits.

Cut to any desired size. Full Stock always
 on hand of Linings:

WHITE WAXED TISSUE,
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Raisins and Dried Fruits.

We have facilities for executing large or special orders
 at short notice.

S. P. TAYLOR & CO.,

No. 416 Clay St., San Francisco,

PAPER DEALERS.

BEST TREE WASH.

"Greenbank" 98 degrees POWDERED CAUS-
 TIC SODA (test 99.3-10 per cent) recommended by
 the highest authorities in the State. Also Common
 Caustic Soda and Potash, etc., for sale by

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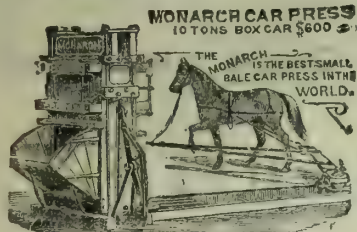
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DYE WORKS,

1332 Market St., opp. Odd Fellows' Build'g
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All kinds of Ladies' and Gents' Garments Cleaned and
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 CHAS. J. HOLMES, Manager.

HEADQUARTERS FOR ALL KINDS OF BALING PRESSES —AND— HAYING TOOLS.

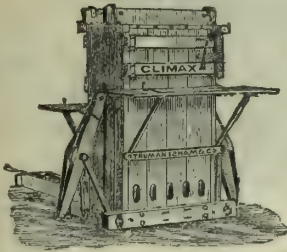
THE MONARCH, JR., HAY PRESS.



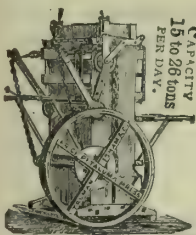
IMPROVED FOR 1887.

Any young man can earn more on an investment of \$500 in this press than can be earned in expending \$2000 for any other machine. We have a Monarch Press, which we sell for \$800, but has been used a very little and is just as good as new, which we will sell for \$450.

THE CLIMAX HAY PRESS, \$300.



Weight, 2200 lbs. A crew of three men—four can be used to advantage. Five ropes are used on the bales. Capacity, 10 to 15 tons per day. The best press for the money in the world.



The Celebrated Petaluma Baling Press.

Weight, 2600 lbs. Price, \$350, delivered at the factory. Size of bale, 22x22x48 inches. Capacity, 26 tons per day. Weight of bale from 225 to 400 lbs. This remarkable machine still stands at the head of all vertical baling presses, and probably bales three-quarters of all the hay west of the Rocky Mountains.

Whitman's IMPROVED New Rebound Plunger.

GREATLY IMPROVED FOR 1887.



Do not confound our New Press with that made two years since. EVERY PRESS FULLY WARRANTED. For one or two horses. The most powerful in use. The most rapid and durable, and the most perfect. Makes the most perfect bale. The most simple to operate. Least expense for repairs. NO STOPS FOR TYING BALE.

The Greatest Success of the Age.

Victorious in every contest. Double-acting, with new concentrating power. Do not buy a Press until you have seen the IMPROVED New Whitman with concentrating power. Puts from 10 to 15 Tons in a Car.

16x18 Mounted, weight, 3600 lbs. \$400 00
16x22 Mounted, weight, 3300 lbs. 450 00
All make bales of variable size.

Hay Forks, Hay Carriers, Harpoon Forks, and all kinds of Haying Tools in great variety. In baling your hay, use our Steel Baling Ties. Cheaper than Wire—Better than Rope.

TRUMAN, ISHAM & HOOKER,
421—427 Market Street, San Francisco.

THE GIANT POWDER COMPANY.

PATENT OWNERS OF
NOBEL'S DYNAMITE,
NOBEL'S EXPLOSIVE GELATINE,
NOBEL'S GELATINE-DYNAMITE,
Best and Strongest Explosives in the World.

As other makers IMITATE our Giant Powder, so do they Judson, by Manufacturing a second-grade, inferior to Judson.

BANDMANN, NIELSEN & CO, General Agents, San Francisco.

JUDSON POWDER,

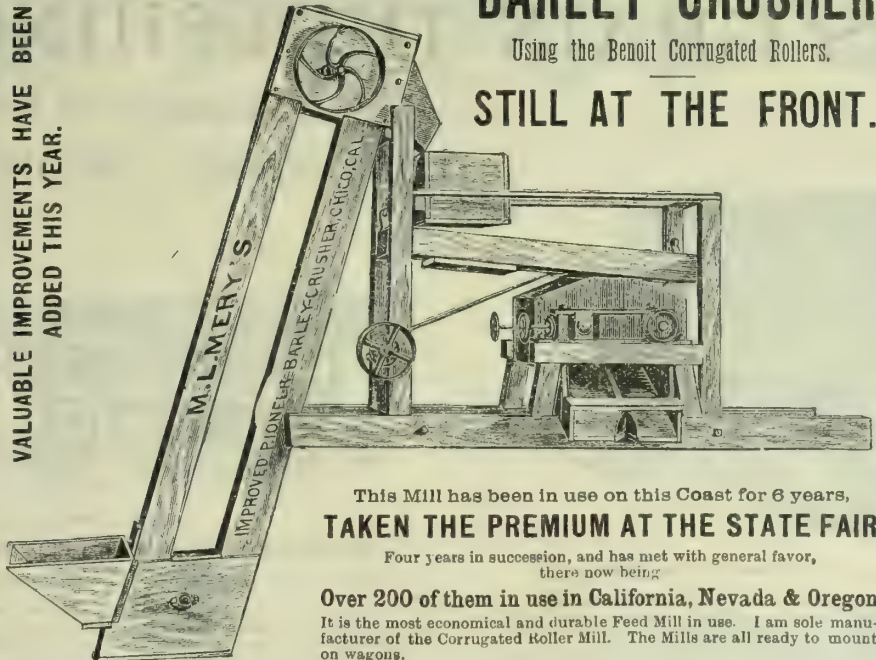
The Only Reliable and Efficient Powder
For Stump and Bank Blasting. From 5 to 20 pounds blows any Stump, Tree or Root clear out of ground at less cost than grubbing. Railroaders and Farmers use no other.

MERY'S IMPROVED PIONEER

BARLEY CRUSHER

Using the Benoit Corrugated Rollers.

STILL AT THE FRONT.



This Mill has been in use on this Coast for 6 years,
TAKEN THE PREMIUM AT THE STATE FAIR

Four years in succession, and has met with general favor, there now being

Over 200 of them in use in California, Nevada & Oregon
It is the most economical and durable Feed Mill in use. I am sole manufacturer of the Corrugated Roller Mill. The Mills are all ready to mount on wagons.

I thank the public for the kind patronage received thus far, and hope for a continuance of the same.

M. L. MERY,
CHICO IRON WORKS, CHICO, CAL.

PRESCOTT HOUSE.



S. W. Corner Kearny and Montgomery Avenue, San Francisco.

Free Coach to and from the House

J. W. BECKER, Proprietor.

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A. BLATCHLY, manufacturer of all kinds and sizes of Driers, from the smallest Family Stove Drier to the huge Raisin Drier, holding 100,000 pounds of fruit at a charge. Also, all Machinery required in building Driers, as Steam Engines and Boilers. Steel Fan Wheels—the strongest and lightest running made. Heaters—a great variety. Iron and Wooden Cars of all sizes, with wheels running equally well on a track or floor. Trays, large or small, with Wood, Metal or Wire Cloth Bottoms. Car Tracks, Thermometers, Hygrometers, etc.

RAISIN DRIERS A SPECIALTY.

Being the first to make in Fresno, in 1884, a machine-dried Raisin that sold for as high or higher price than the sun-dried, and having the experience of the last three years, renders it possible to build a Raisin Drier guaranteed to be superior to any now in use in cheapness and efficiency. Estimates and prices furnished on application to

DR. A. BLATCHLY,

237 FIRST STREET,

SAN FRANCISCO, CAL.

THE EUREKA IMPROVED

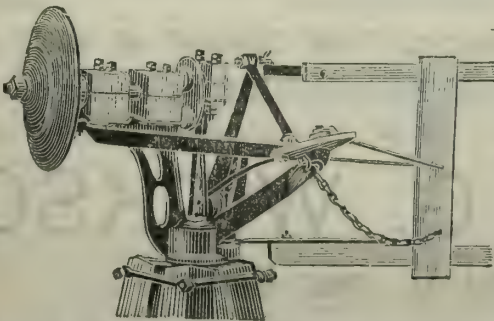
Is offered to the citizens of California as the Most Perfect Windmill in Use.

The Simplest, Strongest, most durable, easiest controlled and cheapest ever offered to the public by the inventor of the Cyclone, Saunders, Hercules, Eureka. It is a recent invention, combining the best points in windmills, after years of experience. AGENTS WANTED in every town on the Coast, to whom a liberal commission will be allowed. A discount will be allowed on the first order from places where there is no agent.

PRICES:
12-ft. \$85 00 16-ft B. \$110 00
14 ft. 75 00 18-ft. 120 00
16-ft A. 90 00 20-ft. 135 00

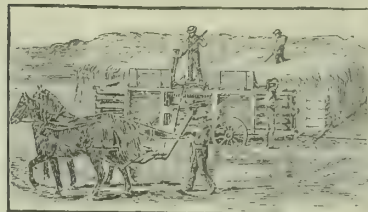
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96 Montgomery St., San Jose, Cal.



DEWEY & CO., No. 250 MARKET ST. PATENT AGENTS.
Elevator 12 Front St.

HAY PRESSES.



THE HURRICANE,

A Mounted Double-Ender Baling Machine,
capable of baling 40 tons per day.

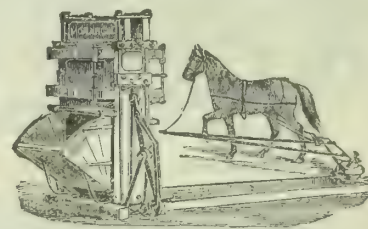
ITS RECORD

For the first year of its existence is as follows: Four tons in one hour, nineteen and three-quarters tons in a half day, thirty-seven and one-quarter tons in one day, and 1800 bales in six successive days.

Two sizes: Compressed bales and common bales. Improved this year so that it is nearly one-quarter faster than before, and the back-and-forth movement of the horse lever is made to bring the hay across the stack and hoist the bales into a pile.

Has three or four times the capacity of Eastern-made presses, with the same number of men and horses.

Price, at factory, San Leandro, Cal., \$1000.



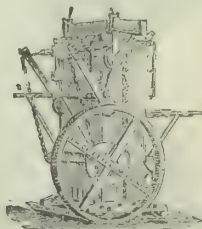
THE JUNIOR MONARCH

Does its own Tramping. Feeds at Side,
near the Bottom.

HAS THE FOLLOWING RECORD:

33 tons in one day; 105 tons in 3 1/2 days; 20 tons, and over, daily average for the season; 2350 tons with one press in one season; 23 sold in one valley last season.

Price, at factory, San Leandro, Cal., \$500.



Genuine Price Petaluma,

With Latest Improvements.

Made under the supervision of the inventor, JACOB PRICE. Too well known to need further description. First-class material and workmanship. Capacity, from 10 to 18 tons per day. Hay must be tramped in press.

Price, at factory, San Leandro, Cal., \$350.

Send for large illustrated Catalogue of above presses. Office and Factory, SAN LEANDRO, CAL. Address

PRICE HAY PRESS CO.

LIGHTNING WELL SINKING MACHINERY. Our Artesian Well Encyclopedia contains near 700 engravings, illustrating and describing all the practical tools and appliances used in the art of well sinking; diamond prospecting machinery, windmills, artesian engines, pumps, etc. Edited by the "American Well Works," the largest manufacturers in the world of this class of machinery. We will send this book to any party on receipt of 25 cents for mailing. Expert well drillers and agents wanted. Address, The American Well Works, Aurora, Ill., U. S. A.



HORSE POWERS, WINDMILLS, TANKS and all kinds of Pumping Machinery built to order. Awarded Diploma for Windmills at Mechanics' Fair, 1885. Windmills from \$65. Horse Powers from \$50. P. W. KROGH & CO., 51 Beale Street, San Francisco.

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227 & 229 Wabash Avenue, Chicago, Ill.

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Quickly and Permanently Cured by the Celebrated DR. PIERCE'S PATENT MAGNETIC ELASTIC TRUSS. Original and ONLY GENUINE Electric Truss. Perfect Retainer. Easy to wear. Instantly relieves every case. Has cured thousands. Estab. 1876. Send for Free Illustrated Pamphlet No. 1. **MAGNETIC ELASTIC TRUSS CO.**
304 NORTH SIXTH STREET, ST. LOUIS, MO.
704 SACRAMENTO ST., SAN FRANCISCO, CAL.

Engraving Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of this paper.

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TO SOLVE THE GREAT PROBLEM OF PROFIT AND LOSS, REMEMBER THAT

Reducing Cost of Production Equals Increasing Market Prices,

AND THIS IS ACCOMPLISHED ON THE FARM BY

Utilizing Your Farm Help and Stock to Thresh and Grind Your Grain and Feed.

ST. ALBANS' GRAIN THRESHING OUTFIT.

Complete in Every Particular.

CONVENIENT, ECONOMICAL, RELIABLE.



Thresher and Cleaner Loaded Inside of Power on the Road.



Outfit Attached. Ready for Service.

Reduced Price List, delivered in San Francisco ready for shipment.

The following prices are fully 25 per cent less than the same quality of goods were ever offered in this market before:

One Horse Thresher, Separator and Cleaner, small belts, wrenches, etc. (23x16 inch All Iron Cylinder).....	\$175 00
One-Horse Tread St. Albans' Power for driving the above.....	175 00
Two-Horse Thresher, Separator and Cleaner, small belts, wrenches, etc. (28x18 inch All Iron Cylinder).....	200 00
Two-Horse Tread St. Albans' Power for driving the above.....	200 00
Three-Horse Thresher, Separator and Cleaner, small belts, wrenches, etc. (32x18 inch All Iron Cylinder).....	285 00
Three-Horse Tread St. Albans' Power for driving the above.....	285 00

One of these popular outfits will enable small farmers, and even large ones, who have long suffered in various ways by entrusting their threshing to other parties, to accomplish the same work and in a much more satisfactory manner, without any special yearly outlay, besides doing it when most convenient to themselves, instead of at some one else's pleasure.

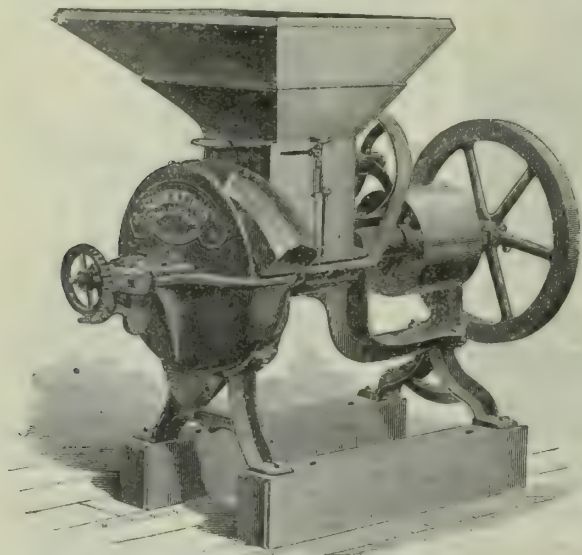
The "St. Albans" are the most powerful Powers and reliable Threshers made; have the greatest separating capacity, most perfect cleaning facilities and are the most popular in the market, costing less, although accomplishing more than any other make. Write for prices of complete outfits.

THE SCIENTIFIC MILL.

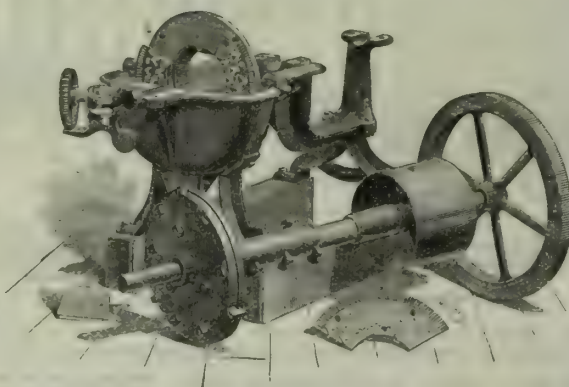
FOR GRINDING BARLEY, EAR or SHELLED CORN,

AND ALL KINDS OF

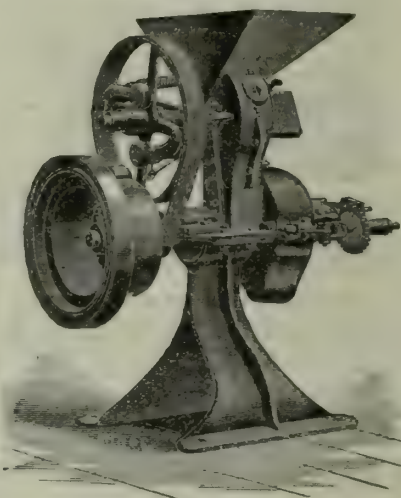
Grain for Feed.



No. 4 MILL SET UP.



No. 4 MILL TAKEN APART.



No. 0 JUNIOR MILL.

FOR SUCH WORK IT HAS NO EQUAL!

The Grinding Plates are a Special Metal, Hard as Steel, Guaranteed to Grind 5000 to 8000 Bushels before Wearing Out.

THE BEARINGS are in one casting, consequently are always in line and cannot get out of true.
THE JOURNALS are in half boxes babbitted with the best metal and can be adjusted to take up all wear.
THE SHAFT is of the finest cold rolled steel of ample size and perfectly true.
THE FLY-WHEEL AND PULLEY are turned, and, with the Running Plate, are put on shaft and balanced accurately, so when in mill they run perfectly true, without any shaking or undue strain on it.
THE VIBRATOR keeps moving constantly when grinding ear corn, so that it cannot clog in the hopper.
THE "SCIENTIFIC" IS THE ONLY MILL MADE HAVING SUCH PROVISION.
THE HIGH DISCHARGE is most convenient for delivering the feed, and as it draws a current of air through, it prevents heating, as is frequently the case with Iron Mills.
THE PIN BREAKER provides against damage to mill should iron, steel or any hard substance accidentally go between the plates.
THE MOST PRACTICAL THING OF THE KIND EVER INVENTED.

THE FEEDER provides a successful means of regulating the feed when grinding small grain and cotton seed.
NO OTHER COB MILL has any such provision. In fact the "Scientific" is superior to other mills of this class.
THE SIMPLEST. Can be taken apart and put together in a short time without the aid of a mechanic.
THE STRONGEST. All parts are heavy and well braced, and especially adapted to the work.
THE LIGHTEST RUNNING. Having but one shaft, running in bearings, which are always in line, with Fly Wheel, Pulley and Plates accurately balanced, it follows it must run with least possible friction.
THE MOST DURABLE. Can be run in either direction by simply changing the spout and crossing the belt. This gives double wearing capacity to the plates, as they sharpen themselves each time they are reversed.
THE BEST MILL ON EARTH. of the best material throughout, and every part made especially for its place.
EACH MILL GUARANTEED TO DO ALL WE CLAIM FOR IT.
 SEND FOR PRICE LIST.

PRACTICE TRUE ECONOMY AT HOME AND SUCCESS IS ASSURED.

It is much easier to REDUCE EXPENSES by these means than increase profits by any known rule.

SEND FOR CATALOGUE OF DAIRY AND FARM IMPLEMENTS.

G. G. WICKSON & CO.,

REMOVED TO 3 and 5 Front St., near Market,

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Southern Branch Store, 517 N. Main St., LOS ANGELES, CAL.



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SAN FRANCISCO, SATURDAY, JULY 9, 1887.

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SINGLE COPIES, 10 CTS.

The Long and Short Haul.

The Interstate Commerce Commission took the ground recently that competition existing between any road and any outside carrier not amenable to the law constituted dissimilar circumstances, and therefore allowed such a road to charge less for a long haul than a short one if it were necessary to secure a share of the business. Now Judge Deady of Oregon has given a decision to the same effect and in harmony with a judgment which he pronounced two years ago when a case came before him under the Oregon law to regulate railway tariffs.

Judge Deady takes this ground: The railway manager "is instructed that he is authorized to make a less rate for a long haul than a short one, in conjunction with connecting lines or otherwise, whenever, by reason of competition with other lines or means of transportation, the same is necessary to enable the Oregon & California road to retain or acquire business." In his decision two years ago, Judge Deady laid down the principle that a railroad corporation has the right to live, and in his recent decision says: "This opinion has been before the world for more than two years, and on account of the importance of the subject it has attracted some attention, but, so far as I am aware, it has received no unfavorable criticism, and time and reflection have fully satisfied me of the correctness of the ruling."

The deduction from this, on the face of it at least, seems to be that transportation companies are not to be restrained from entering into competition, and that to get a share of the business, may charge low rates for competing points, irrespective of distance. Few would contest this proposition, because to permanently restrain from competition until one party thereto was ruined would in itself destroy competition and leave the public at the mercy of the surviving carrier. This would not be desirable to the public, and it would work injustice to the party whose business should be ruined and capital idle. Competition is the cure of high tariffs and competition should be preserved, not destroyed.

But there is another side to the question, and that is the injustice done to shippers from or to non-competing points by charging them enough to cover the loss of profit on business done to competing points. This is the evil which has been complained of, and it should certainly be

looked to. The interests of interior points should be guarded. It is wrong to carry at a nominal rate to a competing point and make up the loss by charging "all the traffic will bear" at non-competing points. The only way to reach this is the adoption of a maximum rate which shall be fair to carriers and shippers, either for short or long distances, and then allow competition to adjust rates at any figure below this limit.

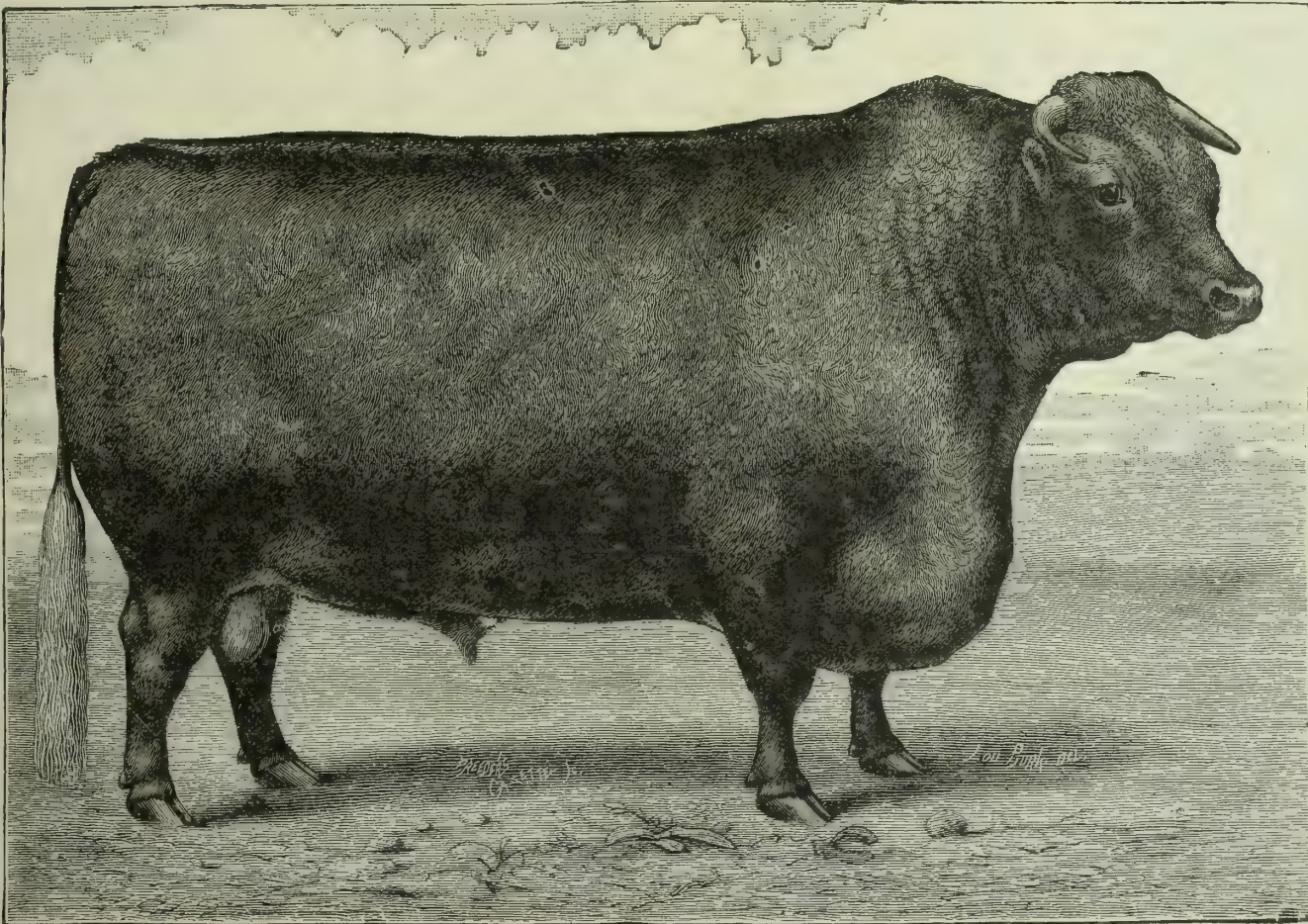
HERBACEOUS GRAFTING.—A very interesting

The King Orange.

Among the curiosities at the Riverside Citrus Fair of 1880, our special correspondent noted a trio of the "King orange from Imperial Gardens, Saigon, Cochin China," obtained through Hon. John A. Bingham, our Minister to Japan. Those specimens had a thickly wrinkled and dark brownish-yellow skin. On being cut, they proved to have uncommonly large juice-bags and to be very sweet, though quite lacking in "character," which latter fact might have been

A Grand Animal.

It is some time since we have given our first page to something massive in the way of horned stock, and lest the growers of such animals might think us negligent of their favorites, we give a portrait of a famous imported Shorthorn bull Von Tromp, brought from Scotland by a Canadian importer, and now owned by Wilcox & Liggett of Benson, Minn. Von Tromp was bred by Mr. Amos Cruickshank at the famous Sittyton farm in Scotland, and traces through a pedigree of blue blood. He was calved December 11, 1881; sire Barmpton, one of the most famous bulls at Sittyton, of the justly celebrated Townley Butterfly family of prize-winning fame; his sire, the Royal Duke of Gloster (29,864); dam Barmpton's Flower by Allen (31,172). Von Tromp is a half brother to Col. W. A. Harris' famous Cruickshank bull, Baron Victor, and his dam, Victoria 45th, was also dam of Victoria 63d, whose daughter, Linwood Victoria brought at a public sale in Kansas City the handsome sum of \$1000; Caesar Augustus, the sire of Victoria 45th, was got by Champion of England, whose fame has become world-known. With such a pedigree, we may well say that Von Tromp is the inheritor of blue blood. Like his sire, he is of a deep red color, of great substance, and a sire that places his



IMPORTED CRUICKSHANK SHORTHORN BULL, VON TROMP.

article by Mr. Wheeler, Chief Executive Viti-cultural Officer, may be found upon another page of this issue. It gives a detailed description of the Hungarian method of setting grafts in growing canes, or herbaceous grafting as it is called. It must, of course, be understood that Mr. Wheeler does not advance this method as one to be adopted by our vine-growers, but merely for experimental purposes, to determine if it be applicable and valuable here. It is probably late in the season to make much use of the suggestion, but it is possible that enough can be done in an experimental way to gain some points which may be of use at least in shaping future experiments. It seems to us that Mr. Wheeler's suggestions, if used as they are intended, can hardly fail to draw attention to methods of propagation, and perhaps draw out some original methods of working which will be of especial local value.

Efforts are being made to complete the Pacific Coast railway in San Luis Obispo county in time to handle this year's crops.

due to the length of time that had elapsed since they were picked. Dr. Magee, the exhibitor, then intended to plant their seeds, and if they came true thereto to propagate the exotic.

Mr. J. E. Cutter—who we understand has now three bearing trees of this variety, and several hundred young budded trees—has just sent us several samples of the fruit. His accompanying note says it is "of strong acid, late (June) maturity, high flavor and remarkably refreshing quality, all of which fit it for a summer orange."

The specimens at hand are shaped somewhat like a Rhode Island greening apple—slightly flattened at the poles. The skin is thickish and has rather a lumpy surface; the pulp is of deep hue, with very delicate membranes, juicy and highly piquant in flavor.

SOUTHERN CALIFORNIA.—We have received from the *Expositor* of Fresno a reprint of Mr. B. Marks' letters to that journal concerning his recent visit to Southern California. Mr. Marks' writing is never dull, and in these letters he has reached a high mark for raciness.

characteristics upon his progeny. Von Tromp's laurels in the prize ring during his career in this country show the value placed upon him by judges. The Grandview herd of Shorthorns, owned by Messrs. Wilcox & Liggett, contains blood of such noted families as Young Mary, Rose of Sharon, Lady Bates, Helpa, Victoria, Comilla, Bloom and Dewdrop.

THE PURE-WINE LAW.—Mr. Henry Kohler is now under arrest for violation of the Pure-Wine bill, in not stamping his wine when no demand had been made by the purchaser and complainant for wine bearing the stamp. The Wine-dealers' Association will test the constitutionality of the law in this case, and if it is decided to be constitutional, will force the growers to carry it out to the letter, thus hoping to make it unpopular.

THE DISTRICT LAND OFFICE of Washington Territory is to be removed from Olympia to Seattle, where it will be more accessible to most of the people of the Territory.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Butte County Notes.

EDITORS PRESS:—Having seen but little of late in your valuable paper relative to this part of the State, I take the liberty of sending you a few items which may be of some little interest, not only to yourselves but to your many readers.

The ingathering season is upon us, both in the matter of fruits and cereals, and our city and its environment present one continual scene of activity.

The barley crop is being rapidly harvested, and so far as we can learn farmers are quite well satisfied with yields and quality. The oracles of the community say that this article is in larger supply than usual this year, and that, locally, prices will rule lower than previous seasons.

The wheat yield promises well, and while perhaps, owing to a smaller rainfall than usual, there will not be a large crop, yet there will be a good average and the lack in quantity will be made up in quality. Butte is one of the banner counties of the State in that line, and has not forgotten her cunning.

But while agriculture is the principal resource of this part of the county, it is not the only one; and Chico, "loveliest city of the plain," is surrounded by orchards and vineyards, large and small, which are but promises of the fruition that is to come.

The largest of these, of course, and the most noted of all, are those of General John Bidwell, which, together with his mansion and beautiful grounds, form a paradisaical suburb to the town. On this magnificent place fruits in their season are ripening and being marketed in numerous ways.

Large quantities are being shipped into the mountains and interior in all directions; carloads are being shipped to Chicago and other Eastern cities; quantities are being dried; and last, but not least by any means, the cannery is being run to its fullest capacity, and is daily absorbing tons of luscious fruit.

This cannery is a veritable model, and we venture to say has scarcely a compeer in the State. It is a valuable adjunct to the orchards, and the quality of fruit that issues from its doors is unsurpassed. About 150 men, women, girls and boys are at present employed in this department, and the greatest of care is exercised that everything shall be neat and clean.

Chico is at present experiencing the incipency of a "boom," which will, we trust, ere another year has passed develop into full-fledged prosperity.

The Branch Normal school has been adjudged to us, which when completed will, together with our numerous other school buildings, furnish an abundance of galleries wherein "the young idea" may be taught how "to shoot." For our success in getting this school we are largely indebted to General Bidwell, who made a princely donation in the way of a site, as has already been mentioned in the RURAL.

In anticipation of the hosts that are to come seeking for homes, etc., some of our large farms are to be cut up this coming fall and winter into 5, 10 and 20 acre lots; which segregation will become the genesis of a new era, we hope. The fact has become public property that General Bidwell will put about 1200 acres of his best land upon the market this winter in small tracts. This land is only half a mile from town at its nearest point; and those desiring beautiful spots for homes upon the best land in California, where everything grows without irrigation, have only to seek and they shall find.

CHICO.

A Visit to the Chabot Observatory.

EDITORS PRESS:—A friend having arranged for us to visit the Chabot Observatory on the evening of the 30th ult., we set out, though the night was most inauspicious for star-gazing. In the city here it was cold and windy, and one of our characteristic fogs hung thick and wet over everything. Not a star was to be seen, but the moon was in its first quarter—the best time to observe it—so we concluded to go, especially as we had been told to come even though the evening was not clear in the city, for we could see the instruments and learn something about them.

So across the bay we journeyed, and right glad were we all that we went. Mr. Chas. Burckhalter, one of the gentlemen in charge of the observatory, received us, and was indefatigable in trying to make things as pleasant and instructive as possible. It was not so cloudy in Oakland, still it was no night to look at the stars. We got a sight, however, of the moon through the telescope, and of the large mountain on it, Copernicus. This immense crater, which is 55 miles across, looked like a small ant-hill. On one side there are a number of irregular streaks which look like tracings on sand; these, we learned, are supposed to be large canyons. When we consider the distance of the moon from us, about 240,000 miles, we wonder that we can see objects on it even as well as we do. Because of the bad weather on this evening, Mr. Burckhalter could only magnify 200 diameters. We

wanted to see Saturn and his brilliant sister Venus, but they were not in a favorable position for telescopic observation. We saw Jupiter, though, with his moons, and were much impressed with his appearance. I shall never look at the planet again with the naked eye but in imagination I will see his satellites grouped about him. After this we looked at the telescope and transit instruments, but the short time we stayed was not enough to fully acquaint us with the working of both. We did a good deal of talking on astronomy, and Mr. Burckhalter pointed out the position of some of the stars for us. All he said was very interesting. While feeling strongly the fascination and sublimity of the science of astronomy, he is nevertheless very practical. He told us an amazing story about the star Vega, which is supposed to be a young, vigorous sun. To him it is one of the most beautiful objects in the heavens; what was his indignation on being told once by a "smart young man," whose hair was plastered in a curve down on his forehead, that Vega—lovely Vega—looked like a ham sandwich as seen through a telescope! It was too much for Mr. Burckhalter's equanimity; he exploded, to the utter discomfiture of the smart young fellow.

Astronomy has always been a fascinating study to me. But until I looked with the aid of the telescope's powerful eye at some of the objects in the heavens, I never fully realized the majesty and beauty of the science. I do not wonder that astronomers are content

"Through the long night hours while we rest
To read the history of the skies."

I can understand how one could forget for a time all about earthly things while contemplating the sublime spectacle that night discloses to us.

"The heavens bend to us as the night comes down."
S. F., June 23, 1887. F. H. A.

Beardless Barley.

EDITORS PRESS:—In your issue of May 21st, I find a short article in regard to "Beardless Barley," and wishing to have a clearer understanding myself, as well as for others, in regard to the two barleys that resemble each other so closely, I will forward to you today, by Wells, Fargo & Co.'s express, a small bunch of each. The "beardless," as we call it here, is a fine barley for farmers to raise for hay, equally as good as the "bald," and one great advantage it has over "bald" is this: that if you do not wish it for hay or only a portion of it, the remainder can be harvested for grain. It cannot be distinguished from bearded barley when thrashed and cleaned, and we have no beads to contend with. Another great advantage, it does not curl or crumple down as does the bearded barley. The seed we have come from the South here, and I do not think the Agricultural Department ever distributed any of the seed on this coast, or not to my knowledge, as it did the "bald barley." On examining them closely you will find the "bald" barley will hull clear of any covering as does wheat; the "beardless" does not, but is just the same as bearded barley. I hope the bunches will arrive in good condition, and that you will give us some more light on the subject.

Lathrop, Cal.

C. LITCHFIELD.

[Our correspondent is correct in his statements and we are not sure but some confusion has crept into the mentions which the subject has had in the RURAL. There are beardless or awnless barleys which have a kernel covered, as common barley is, and there are beardless or awnless barleys which have a naked kernel. The latter is the one usually known as "bald barley," which is now quite widely known as a good hay grain, and which was distributed by the University several years ago. The University collection has beardless barleys with covered kernels, and one two-rowed variety, named by Mr. Klee "Berkeley hybrid barley," originated on the University grounds, and is very promising. The sample sent by Mr. Litchfield is a handsome six-rowed beardless variety which must prove very valuable in the way he describes. We would like to hear from him fully as to its origin, growth, bearing quality, etc.—EDS. PRESS.]

"Simple Truth His Highest Skill."

EDITORS PRESS:—I think it would be well to suggest to some, who are writing up favorable descriptions of California, that there is danger of doing harm by exaggeration. It is a fault altogether too common, and I know that confidence is often forfeited thereby. Beside the exaggeration that consists in statements which are partly true and partly false, there is a way of so weaving together certain favorable facts as to leave out of sight other equally pertinent but unfavorable ones, and doing it so skillfully as to leave the impression that what is given covers the whole ground. Some descriptions of the climate, soil and productions of California are the most perfect specimens of this form of misrepresentation that I have ever noticed. I could admire the talent were it rightly used,

but I do not believe in using the truth to make false impressions.

Beside these I have seen statements in reference to my own section, touching its most important interests, that I know to be thoroughly false. Whether made through ignorance or intention I cannot say. While I would like to see our State reap all the benefits of a deserved good reputation, I would not like to see it stand upon a fictitious one.

Some of the efforts to secure the attention of Eastern land-seekers remind me of the story of the man who, in trying to accustom his saddle-horse to meet surprises properly, directed his boy to go and secrete himself by the roadside till he should ride along, and then jump up and shout "Boo!" The program was carried out, but the rider was thrown; whereupon, gathering himself out of the dust and getting his breath, he exclaimed: "My son, you said 'boo' too much!"

I think some of these writers say "boo" too much.

THOUGHTOGRAPH.

THE DAIRY.

Cleanliness in Dairy Utensils, Food and Surroundings.

EDITORS PRESS:—Can you inform me of the best article to wash milkcans with, so as to have them sweet and clean and keep milk a reasonable time? Some say, "Sal-soda is best;" others say, "Don't use sal-soda, as it will leave a sediment on the tin which will sour milk every time." A reply through your paper will very much oblige—A BEGINNER, Los Angeles.

Sal-soda or any strong alkali will cut the grease or oil in milk and cleanse the can, but it is very important to thoroughly rinse the can in clean water, in order that all of the soda is removed. The effect of soda left in the can, as a sediment or fine powder, is that it unites with the fatty portion of the milk and forms a soap which is highly obnoxious to the taste and smell, though not sour.

Soap, both hard and soft, is mainly used for can-washing; while soft soap is used principally by the largest milkmen, for the reason that they make it themselves, from the refuse grease of their places, and because it is more convenient to work into a strong suds and its strength and effectiveness are better gauged by the maker, as well as being less expensive.

If milk curdles and is yet sweet, it is a sure sign that the leaven of old decaying milk has not been thoroughly washed from the can, and it will sour very soon after curdling.

It is claimed that milk from alfalfa—hay or grass—will not keep nearly so long as that made from other feed, excepting, of course, milk made from brewers' and distillery slops, or the refuse from the kitchens and wharves of the city. In a city like San Francisco there is always a large quantity of decaying hay, potatoes, turnips, beets, pumpkins and grain damaged by water, as well as much other vegetable matter, that either goes to the cows or hogs, which will naturally keep the stomach of a cow in a state of ferment. So much cheap food of this nature is the reason why so many cows are kept within the city limits. One would naturally suppose that it would cost more to keep a cow in the city than in the country, but the reverse is true. The city assessors' returns for the present year show over 7000 cows, while perhaps 10,000 would be nearer the mark if all were found. The milk from these cows must be in many cases unwholesome, considering their feed, water, want of exercise and foul air. This milk will not keep nearly so long as good, sound country milk; but this is not important, as the milk is only a short distance from the consumer, and the cows are milked at an hour that will insure sweet milk, no matter how filthy the yards, utensils, water and food from which it comes.

From a late examination made into the matter of the milk supply of San Francisco, it was found that a large number of the cows were using the water from wells sunk in the lowest portion of the milkyards, where the drainage from the filth of the whole yard concentrated into the wells, and where the same water was used for washing the utensils, watering the milk, and for cooking purposes. These places were generally conducted by ignorant foreigners that leased small places between the sandhills, and with a few dollars' worth of improvements, were enabled, in their squalid filth and brutal economy, to compete for the milk trade of the city successfully.

All the animal heat must be driven from milk as soon as possible after drawing it, to have it keep well. Milk should not be exposed to the atmosphere more than absolutely necessary, as the floating bacteria find it the very best material in which to propagate their kind.

Cleaning Appliances.

The main essentials for cleaning milk-vessels are strong, hot soapsuds (kept hot until through with the work), and enough of it, so that the suds do not become foul. Then hot, clean rinsing water to carry off the soap and dirt; and then boiling hot water to scald with, in a receptacle deep enough to cover the entire can, which should then be hung up and exposed to the sun for 24 hours before using again.

Uncleanly Milk Again.

We have touched on this city's milk supply more, perhaps, than the query at the opening of this article justifies, but we do not consider an apology necessary in trying to abate one of the

most grievous and serious evils existing now as a constant menace to the lives and health of our citizens.

Much depends upon the press of the country as well as city, in preventing illegitimate and fraudulent methods of gain from being successful. Our work is largely with the agriculturist whose dairy interest is assailed by a fraudulent imposition upon the public of a cheap, unwholesome, and nasty article sold as milk, to the great detriment of a large city; and if we can transfer those 10,000 unhealthy cows from the filthy slums of the city to green pastures and wholesome feed in the country, we shall feel that we have not only saved the lives of thousands of innocent and helpless children, but have placed the production of milk where the Creator intended it, and where our friends, the agriculturists, will have a good market for all their produce at home, in the production of a health-giving milk.

This business of supplying the city with milk belongs to the country farmers within, say, 30 miles of San Francisco, and not a drop of it should be made in San Francisco. The milk of 10,000 cows, say two gallons each or 20,000 gallons now made in the city daily, if in country milk would be worth about 15 cents per gallon on the farm, or a total value to the farmers of \$1,095,000 annually—a sum that would give employment to a large number of respectable families and build up the surrounding country with respectable homes, in the interest of good society.

The best appliance for washing is a range of square tubs made of boiler iron, say 10 feet long, 3 feet wide and 20 inches deep, made into three or four compartments and located over a furnace with the flue running underneath lengthwise. The water directly over the furnace would be boiling while at the other extremity it would not be too hot to handle. Nothing but stiff brushes should be used in washing; cloths or sponges become foul and cannot be cleansed readily.

Most milkmen use but one large round kettle over a stove frame in which all the water used is heated, and that used for washing transferred to tubs from time to time, while the scalding is done in the large kettle in the remaining hot water. This process is faulty, because the water in the tubs gets cold and greasy before the cans are all washed.

A good can-washer gets much higher wages than the ordinary milkster, for the reason that the business requires very thorough, regular and honest work.

Such large dairies as the Jersey Farm Dairy and a few others do all their washing with brushes revolved by machinery, which is at all times thorough and quite economical in a large business, where many hundreds of cans are washed daily.

An income of, say, \$1,000,000 annually to the farmers means a good living to 400 farmers with their families, or \$2500 each, for the produce of 25 cows in milk all the time; which means, also, that they will require at least four animals, young and old, to each cow in milk, or 100 head. These will require again about 300 acres of good land, or 400 to 600 of ordinary land; or, in other words, the 400 farmers required to furnish 20,000 gallons of milk daily would need, say, 300 acres each, or 120,000 acres of fair land, upon which their hay, grain and grass could all be raised, besides some horses, hogs, chickens and family supplies. Quite likely, too, they would grow some high-bred horned stock, which could be turned off annually and by which the revenue could be raised to perhaps \$4000 yearly. Taking the average family to be five persons, and the help of three farm hands in addition, and you have ample provision for 3200 persons respectably paid, housed and fed, by transferring the milk business from the slums of the city to the country.

We are pleased that this inquiry about milk has called up the points we have made. We desire to speak on this question, especially in relation to the city supply, as often as we can, and the country as well as the city press cannot put their columns to better use than in agitating this question energetically until a reform is brought about, by driving out the city milk and introducing a wholesome article from the country. Spurious butter has gone; spurious wine is going, and why not save our children by driving out spurious milk?

SHEEP AND WOOL.

The Mohair Industry.

EDITORS PRESS:—During the season of 1886 this industry has been depressed, mohair was low; the growers had reason to be discouraged, as the industry has been very uncertain. Now let us look at the past and the present, and may be we can learn therefrom what the future will be.

We have added in the United States to the few establishments of former years until we now have 39 factories using mohair in different ways, but the domestic mohair only furnished about one-sixth, while Turkey mohair furnished all the balance of our consumption. The low tariff on Turkish and Cape mohair is against us; besides that, the unprecedented clips of 1886, both from Turkey and the Cape, as shown hereafter, reduced prices considerably.

If our tariff should be fixed permanently to

THE VINEYARD.

Herbaceous Grafting.

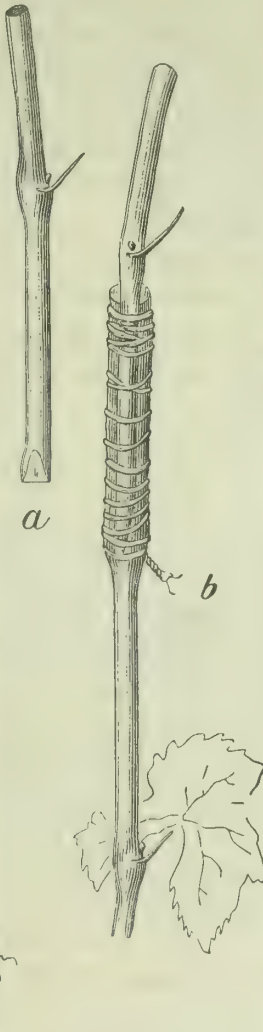
The following circular of instructions to the inspectors and officers of the Board of State Viticultural Commissioners has just been issued:

Herbaceous grafting, as applied to the vine,

opened a new and short way to the establishment of resistant vineyards, as well as affording improved facilities for changing objectionable varieties to others of better quality.

The many novel methods of grafting the vine which have been proposed of late years, and their common failure in practice, have led me to believe that such announcements as that of our esteemed contemporary, Hermann Goethe, must undergo a certain practical test in the vineyards of this State before being generally accepted as fully adapted to our climate.

Fig. 2.



growers as they proceed; advantages which, if the method prove successful in California, our vineyardists cannot afford to be long without.

Believing that the method must depend to a large extent on the care and accuracy with which such delicate work is executed, I have illustrated fully the operation in Figs. 1, 2 and 3; these, if followed closely with a careful study of the following text, will, according to our friend Hermann Goethe, lead to success.

The period chosen for performing the operations is of the greatest importance. The most propitious epoch found in Hungary ends about the middle of July. As our vines put forth earlier and are now further advanced, it may be plainly seen that there is no time to lose. The information here reproduced came to me so late that instructions could not be issued sooner. In consideration of this fact it is to be hoped that the experiments will be performed immediately and that our experimenters may be particularly careful to use only delicate and rapidly growing shoots for both scion and subject. (The term "subject" is applied to the cane into which the scion is inserted.)

Experiments in this work have already been begun by me with fair indications of success, but it is still too early to judge their value.

To operate, choose that period in the growth of the vine when the shoots show daily advancement, selecting the most vigorous canes for the purpose. The union should be made at a point on the green shoot, so near to the growing end as to exhibit no white pith when cut. In fact, that part of the cane in which the pith is scarcely distinguishable from the wood and bark is the surest to unite with the scion. It must, however, be strong enough when wound to maintain the scion well in position.

Fig. 2 exhibits the graft when complete—natural size. Fig. 1 shows the parts enlarged. The last of June has been generally selected for the work, although some work performed the 1st of July has shown a loss of only two per cent. When late spring frosts prevail a later period is chosen, as the rapid growth then comes later. This graft cannot be made to succeed on canes attaining a woody appearance, but both scion and subject must be elastic and yet not too soft.

The bud on the scion at *b*, Fig. 1, must be examined and found good, and in selecting the scion it is generally safe to choose that bud at the base of the first well-opened leaf found on the growing cane. Lower and more woody scions will not answer. Laterals which show slow growth will not answer for the subject, but may be selected if still growing vigorously. The original canes proceeding direct from old spurs are most commonly selected for the subjects, particularly those which show a bright, sappy appearance.

Warm growing weather favors much herbaceous grafting. A cold wind is harmful in checking growth, likewise a dry hot wind, and it is well in hot weather to suspend operations during a few hours in the middle of the day.

Do not graft vines showing a sickly appearance.

The preparation of the scion is clearly shown in the cuts, only be careful to preserve the scions fresh. If necessary to keep them some time, place them in water, thoroughly shaking off the water at time of grafting. Let the cut of the lower end of the scion (*a*, Fig. 1) be made through the bud that the point of the wedge may possess the enlargement necessary to fit the base of the cut in the subject as shown at *c*. The knife in entering the subject should split it just through the middle and descend half-way through the center of the enlarged part *c*, Fig. 1. Let the size of the scion be near that of the subject, never larger. The leaf joining the bud of the scion at *b*, Fig. 1, should be cut off, leaving the stem as shown in the cut.

In inserting the scion, see that the bark of the two parts come smoothly at the points and that the tender bark is not broken or slipped. A safe precaution is to spread apart the subject when pushing home the scion.

To tie the graft, use a cotton string; begin to wind at the top, and, by drawing it close and tight at the bottom near the bud, you will prevent the scions being forced from place.

This done, six or eight days will determine the measure of your success. By this time the scion bud should have begun to grow, following which all suckers and laterals drawing from the cane on which the graft is placed should be carefully removed, and this latter operation repeated as often as may be required to force all growth to the new part.

The success of the graft is early indicated by the falling off the leaf-stem which was allowed to remain on the scion. As the union grows the string must be loosened. The short time necessary to determine the success of this method gives ample opportunity to repeat the operation several times during the season, if success does not attend the first efforts.

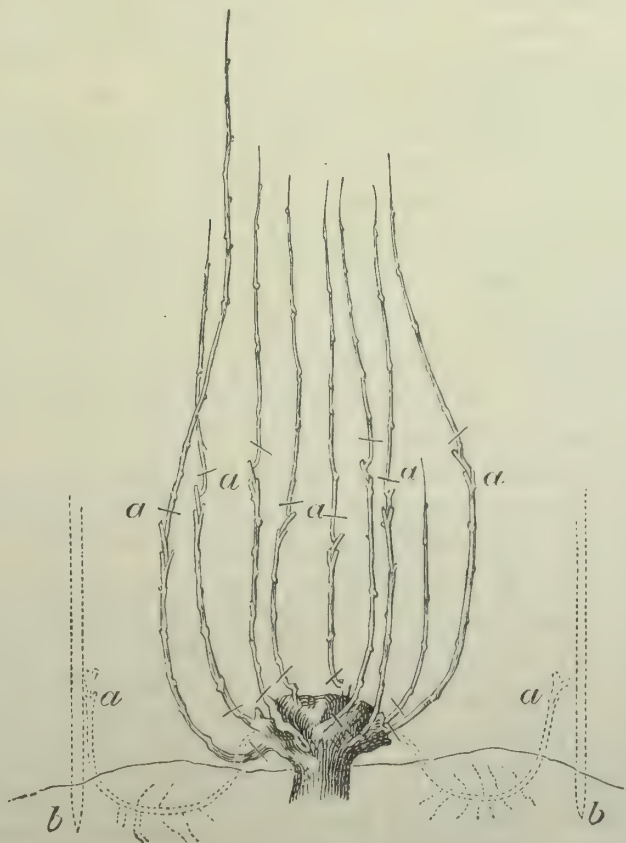
Grafts made on growing canes of riparia vines two years old have shown good results, though older vines are equally good. Fig. 3 shows an old riparia vine grafted on its growing parts at *a*, thus producing resistant grafted cuttings well united above to a better variety, which may be planted in the new vineyard the following spring or layered and rooted as shown by the dotted line.

Many other advantages growing out of this method will be explained later if we can determine the success promised by Prof. Goethe. In the meantime we call upon you to experiment carefully and forward your results as early as possible. JOHN H. WHEELER, Chief Executive Viticultural Officer.

Fig. 1.



Fig. 3.



HUNGARIAN METHOD OF HERBACEOUS VINE GRAFTING ILLUSTRATED.

consists in grafting on the growing wood in midsummer. It is a method which has been known for 50 years past in Central and Eastern Europe, and has recently become common in the region of Hungary. So valuable has the method here described been found, that during the past year Von Hermann Goethe, director of the Royal School of Viticulture at Marburg, has issued a work largely devoted to the subject. Other and more common systems are treated by Professor Goethe, but preference is given to the above-named method in that it has

Before, therefore, proceeding to announce to our vine-growers the value of herbaceous grafting, I have thought proper to ask our inspectors and others working with us to this year make a test of the method described in the following—so far, at least, as the lateness of the season may permit—and transmit to this board the results of their experiments, that another season may find us able to adopt or discard the system altogether.

The many advantages obtained from its use, if successful, will become evident to our vine-

foster, uphold and protect our home product, it would also encourage our manufacturers to buy at home first all that quality of mohair suited to their wants and purposes, therefore benefit both classes of producers and manufacturers. The uncertain condition of tariff keeps our own mill-owners out of the markets, except for immediate use upon orders or standard goods in constant demand.

The reports show the Turkish and Cape mohair imported into England during six years preceding and up to 1885 was 55,802 bales per year. In 1886 the import reached 76,690 bales, being an increase of 20,888 bales, equal at 220 pounds per bale, of 4,595,360 pounds over the yearly average of the past six years; this increase alone is 12 times the quantity of the domestic mohair of 1886 consumed in the United States.

The consumption of mohair in this country in 1886 is reported as follows: Foreign, 1,915,694 pounds; domestic, 355,373; total, 2,271,067 pounds.

Now as to the English trade and consumption of mohair in 1886, the reports say: The prices ruling low, manufacturers have been using mohair for new purposes to such an extent that at the end of the year the quantity on hand was considerably less than at the end of 1885.

This together shows clearly, and it must be admitted, that the consumption of mohair in different ways of manufacturing in the United States and England is increasing faster than the production of the raw fiber in the different parts of the world. If the Government will protect our industry, we can use a large territory now valueless for profitable business in raising Angora goats and build up our country. We can spread out here while Asia Minor cannot, and the only real competitor in the future of mohair growing will be Cape Colony.

It is claimed that some flocks at the Cape are comparing well to the best in the world, and that those engaged in the business are prospering. According to report of U. S. Consul-General G. H. Heap, published by Fink & Co. at Leon Springs, Texas, last fall, there were paid at auction at the Cape, for bucks, average price of \$447 50 per head; for ewes, average price of \$267 per head, showing their faith in the business.

Wm. Macnaughtan's Sons, under date of April 5th last, stated in their circular to mohair-growers that, owing to severity of the winter and the scarcity of water, Angora goats were suffering in Asia Minor, and the report goes on to state that the clip this season will not be up to the average of quality or quantity.

This report is in part confirmed by the fact of a famine now reported in Asia Minor, the Sultan having provided for measures of relief to the sufferers on June 22. As the Turkey-Russian war has been in progress, and an extremely severe winter has followed, the goats have probably become reduced or perished, and in that case mohair will again advance to correspond to the demand, and the outlook for this industry, therefore, is at present more hopeful than ever before.

The Registry.

To advance the material interests of goat-breeders, the matter of establishing a registry demands our consideration. The American Mohair-Growers' Association at San Antonio, Texas, organized and adopted rules and regulations for establishment of a register of Angora goats pure bred as Class 1, and graded as Class 2. The standard excellence is 50 points. Those entitled to registry shall score 30 to 40 points for Class 2, and 40 to 50 points for Class 1. Class 1 shall be the pure blood, Class 2 the grades.

The aim of the 2d Class or grade register is based upon the opinion held by many breeders that in proper localities, and by proper care, our grades are advancing very fast, in producing long, fine and lustrous mohair, and that under continuous good management the time will soon be that there will be no visible difference in the mohair product of pure bloods and grades.

For the benefit of grade-breeders who have the faith and the energy to advance their stock, the registry of Class 2 provides the system by which their labors can be fully tested and proven, and the cause of the industry be helped along.

No one can deny that the breeding of any stock to registered males gives better satisfaction than to those not registered, because certain points of excellence in the young can be established only by the use of selected males having those points of excellence bred into them, and a warranty for excellence can only be based upon a record and a registry. For the best of the industry, this question of registry should be discussed at the next annual meeting of the California Angora Goat-Breeders' Association on the last Thursday of the State Fair at Sacramento, and it will be of importance that the members all attend. All other breeders are hereby invited to join us, and be with us at Sacramento, hoping that the plans determined upon will be for the benefit of all concerned and the State at large.

JULIUS WEYAND,

Sec. Angora Goat Breeders' Association.
Colusa, June 25, 1887.

It has hitherto been supposed that the highest mountain in the world was Mount Everest, one of the Himalayan range, 29,000 feet high; but this honor is now claimed for Mount Hercules in New Guinea, which soars to the tremendous altitude of 32,786 feet, or five times that of Mount Washington in New Hampshire.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

In and About Sacramento.

EDITORS PRESS:—A visitor passing through our city can always find some general improvements to note. A stroll from Front street up the R-street railroad to the outer limits of the city shows the boom has advanced.

Passing up on the south side of the levee, we notice extensive vegetable gardens, run by Portuguese mainly, which supply the wholesale merchants at various points eastward, and ship direct to Eastern firms, especially potatoes. The soil is a dark, rich loam, which is kept composted with material drawn daily from the city, and irrigated by steam-power.

Along the eastern side, within the limits, property has gone up and nice cottages of latest style and suitable for family use are being erected, gardens and green plats surrounding.

At Twentieth street is the old Richmond park, fitted up for pleasure-parties and recreation. At Twenty-second street Mr. M. S. Nevis' new winery is drawing to completion upon the ground where the former was destroyed by fire some years ago. The building is of brick, large and commodious, with a number of wings, and well ventilated. His present winery, on Twentieth, P and Q streets, also of brick, is full of last year's wine, and not sufficiently roomy for his business. Sales are good here and East.

At Twenty-eighth street there is being erected, on the block known as Snow-Flake park, a large stand for the use of the Sacramento base-ball club. This widespread national craze will have its run among the younger class of humanity similar to the skating-rink; then something new will be developed and run its length.

Sunday was a general christening of the park. Trains came in from different points, making the day appear like some legal holiday, rather than the quiet sabbath of New England times. It draws from the church, Sunday schools and Y. M. C. A. with corrupting influences. The wine and beer is passed from hand to hand, and profane language uttered in the busy competition with opponents, bringing shame on the heads of families who allow their sons to be drawn into the paths of sin and vice in this Christian and enlightened land.

Above Thirty-first near Gatheries street is Kohler & Van Bergen's winery, also a building erected especially for the making of concentrated grape must. They use grapes from the Natoma vineyard at Folsom and other points.

On the line of rail above the Homestead is the new fine edifice of Robert Williamson, of the firm of Strong & Williamson. At present that gentleman is at the South enjoying recreation as well as pursuing business in his line. The firm at this point has a fine orchard and nursery interspersed with small fruits.

He irrigates by steam-power, running four pumps in reservoir, whence water is carried by pipes underground to various points. He cultivates after irrigating, keeping the ground loose and free from weeds.

Real estate from here to Brighton will be cut up into small parcels, and, under the management of the Sacramento Improvement Association, sold for country homes, whence business men may take the local train daily for their business center.

Along the line from Brighton to Folsom, fine orchards and grain lands lie on both sides. Among the fruitists are Dr. W. S. Manlove, R. D. Stevens, Lubin, Russell, Routier, and many others whose orchards, grown without irrigation, lie along the American river.

Then comes the large Natoma vineyard in the vicinity of Folsom. Throughout this region way stations are built for the accommodation of fruit-shippers and wayside passengers. The morning and evening local trains—a new feature—are very acceptable to the traveling public.

Farmers coming in at the Grange quarters are feeling in better spirits since their grain has been thrashed and hay baled. The grain yields far better than at first expected, and at some points where the land is heavier and holds moisture the kernels are not so shrunken. The millers had previously engaged the crop in the field at a certain price, and may get cinched at present rates. Some think it will be better to hold on to the grain till fall, when better prices may rule the market.

As a larger acreage than usual was sown to grain, the hay crop will be short, and the demand and price are advancing, and all the hay brought into market is quickly taken up. The alfalfa stands are reported good and command a good price. Those who raise stock, pasture from it, and as the animals become marketable, they are brought in and sold. Some fine pastures are found along the Cosumnes river, following up the stream within the foothills; and owners are making money in the sale of stock.

When the farmers, fruit and stock-raisers do well, the merchant, mechanic and tradesman receive the benefit, and encouragement is felt in all branches, for their success lies in the hands of the producer.

Grange teachers have brought the tillers to a

higher standard than in former years, and they have become more advanced in the line of trade and business fact.

I learn from the Grange house that the trade for the past month is good. June trade is apt to be slack, as farmers generally are busy securing their crops, and but few come into the city. Other houses no doubt felt the pressure, but shipping orders in the interior of the State, Nevada and Utah are kept up as usual.

The grape outlook from various points is fair. Vineyards lying along the river-borders, with deep, loamy soils, are not so much hurt as on the red lands of the plains. The second crop of the Muscat is forming well and may make up to some extent for the first. On the plains some are taking the precaution of capping their vines with cloth or sacks, the cost of which will be well repaid in saving the crop from the heat, which may come in spells during this month and next. Where the vines grow long it is well to curl them round the sunny side, making a protection. Some trim early, then the side branches and leaves grow out, forming a closer shade. Still, if not well protected, better cap them.

The hop crop is advancing. Early in the season growers complained of the cold snap; but since the weather has become more genial the prospect is good, both as to quality and price.

The managers of the State Agricultural Society are moving in all directions to make the approaching fair a success. Supervisors of the various counties are interviewed to get their aid, and all classes who feel the importance of supporting so good a cause, and showing up the products of the land, will come prepared to fill up the space set aside for them.

Our county has a committee of three from the Grange to work up the interest of Pomona's department. Aid them, all who can. Do it to the extent of your ability, in what you have.

The upper Stockton road took the initiative last year in sprinkling, and the lower Stockton has taken steps of late to go and do likewise. All who market fruit find it a great improvement over its former state, and fruiterers residing at Florin come forward and help to cover the expenses. Both roads will find a great benefit from the outlay. Sacramento county should not be behind in having good roads.

Let the boom extend throughout the State, taking in all points that will build up, and increase our population from the large immigration coming, and success will be ours ultimately.

To-day patriotism is at a fervent heat. The city is gaily dressed and its streets filled with America's sons and daughters, and comers from all lands, commemorating the sires of '76.

Sacramento, Cal., July 4th.

G. T. R.

Why a Farmer Should be a Patron.

The *American Grange Bulletin* has been publishing a series of short articles under the above title to assist its readers in securing new members. Here are some of the reasons advanced why a farmer should be a Patron:

Because if merchants, lawyers, doctors, preachers, teachers, workmen, and all other classes, can be benefited through an organization in their own interests, so can the farmer. If they thus become better posted about their own business, so can the farmer. If they thus are better able to protect all their rights and interests, so can the farmer. If they can thus secure legislation in their own behalf, so can the farmer. If they can thus receive benefits—educational, social and financial—so can the farmer. An individual farmer is able, to a certain extent, to advance and protect his own interests, but "strength united is made stronger." A farmer can "paddle his own canoe," but it is a slow way of traveling in these days of floating palaces and ocean steamers. A farmer can, with axe, spade and pick, cut his own road to market, but united strength builds the railroad. A farmer can worship God or educate his children in his own house, but united strength builds the church and schoolhouse. A farmer can, like the barons of old, protect his own castle from those who would pillage and destroy, but united strength raises the strong arm of the law in his defense. Everything of any importance, every great undertaking, in these days, is accomplished through united strength. Let the farmer, then, who in numbers exceed all other classes combined, adopt this long-tried and proven plan; let him no longer fight his battles single-handed and alone; let him unite his strength with his neighbors', and they with the other farmers of the county, then with those of the State and Nation; and this great class, that feeds and sustains all other classes and callings, will not only protect and advance its own interests, but build up all others, even the Nation itself; for all history teaches that just in the proportion that agriculture is protected or depressed does the Nation advance or decline.

YUBA CITY GRANGE was sued some time ago, by Milton McWhorter of the Marysville Democrat, for an alleged libel contained in a resolution adopted by the Grange. The case was recently dismissed, and costs assessed to plaintiff, and on the 30th ult. the Grange levied an attachment for \$125, the amount of costs, and a creditor also attached for the amount of a judgment, \$300. A mortgage for \$1700 was also unsatisfied, and the paper has suspended publication.

The Order in New England.

The Worthy Lecturer of the National Grange makes a mission leaflet out of the following extract from "one of the largest city papers out West." It shows how the Grange has won respect and appreciation all over the country:

The New England farmers are undoubtedly the most enterprising and energetic of the Granger fraternity on this continent, comparing well in progressive spirit and action with their ingenious brethren in other respects. They cultivate the least productive natural soils, combat with the most rigorous climate, and yet by dint of industry and skill their labors annually produce the most liberal returns. The science of farming is well respected and followed in "Yankee Land" from Nova Scotia to New York. Agricultural societies and institutes and Granges are well distributed and generously supported. The local press of Maine, Massachusetts and other New England States bears evidence of the earnest zeal with which the farmer and horticulturist pursue their honorable calling. They look into the rationale of every department of their industry, whether they are devoted to vegetable production or animal thrift. There are now about 40,000 members of the Grange organization in the New England States alone, and these are earnestly devoted to agricultural improvement and not merely to factional advancement. More progress was made by them in 1886 than during several preceding years. They favor tariff reform, but believe in dividing the "reform" among other fraternities as well as the farmers. They have 750 reading circles who are studying political economy and other kindred subjects, and can give a reason for the faith within them. They repudiate the theories of Henry George about land, and win the rights due to labor by manual exertion. In fact, New Englanders have demonstrated themselves "the salt of the earth" in all that pertains to essential progress.

Eden Grange.

The *Haywards Journal* of last week mentions that Eden Grange is rapidly increasing in membership, and applications to join are pouring in from all sides. Saturday, June 25th, the fourth degree was conferred on three young people—Fred Russell, Amelia Gading and Miss Cowing. There were a number of distinguished Patrons present from outside Granges, and the meeting was one of the largest yet held by this Grange. Then followed a feast, and afterward the orators had the floor; but the most exciting part of the proceedings was a renewal of the debate on "Woman Suffrage."

The benefit concert tendered the Grange in Oakes' hall the same evening by Miss Roxie Dennis of Mount Eden, assisted by Miss Ellen Coursen and others of S. F., was well attended. All of the selections rendered were highly enjoyed. The audience appeared to be in an applauding mood, and every warbler received an enthusiastic recall. At the close of the concert the floor was cleared and dancing indulged in until midnight.

A PATRON AT HOME.—The Creston correspondent of the San Luis Obispo *Tribune* begins to speak of Brother Webster, and then goes off about the g. c. as follows: Hon. J. V. Webster is here on his sweet home ranch. He has laid aside the purple and fine linen and donned the rancher's garb of shirt and overalls. He is busy at work in his young orchard shortening the monstrous growth of limb that the trees were developing. He was fearful if they were not taken in hand right off, that they would attain such a height by another season that he would have to send to France for the flying balloon, and thereby have a vehicle wherewith to gather the fruits. There is no doubt that in the course of time, if trees and vines continue to make such rapid growth as they are doing in this wonderful climate of ours, there will have to be a line of fruit-packing establishments built between here and the moon, and a line of aerial ships run between the two points, to supply the Moonites with the delicious fruits of California.

PREPARING FOR STATE GRANGE.—At the last meeting of the fruit-growers at Santa Rosa, President Whitaker expressed the opinion that it was a reasonable time to take into consideration the State Grange meeting to be held in that city in October. He thought it would be proper for the association to assist the local Grange in making a display of the products of the county. The suggestion was approved by the association, and on motion of Mr. Roberts a committee, consisting of L. F. Chinn, N. G. Finley, A. F. White, E. H. Smith and J. Roberts, was appointed to make arrangements for the occasion.

THE Grangers about Placerville. The *Republican* says, are astir to get all the El Dorado people united in making a county exhibit at the State Fair this fall. It is proposed to appoint committees in different parts of the county to secure exhibits and stir up interest. The plan will be of general benefit to everybody in the county, and there should be no lack of contributions to aid it.

DANVILLE GRANGE lately conferred the fourth degree upon a class of 12, and at last accounts was preparing to initiate a class of five.

Grange Work and Progress.

(Prepared Weekly by M. WHITEHEAD, National Lecturer.)

The recent decision of the Supreme Court of the United States, pronouncing valid the famous driven-well patent of Nelson W. Green, is attracting much attention, and farmers, who most of all are interested in the matter, where literally, millions to be paid by them are at stake, should study the subject, and then unite with their brother farmers in securing the just amendments to the patent laws that have been asked for by the Grange these many years. It is hinted also that these late decisions, which reverse those of the lower courts, have not been fairly obtained. One good authority says: "It is to be feared that these decisions have been made without full knowledge by the court of the facts in the case, and that in the case upon which the decision was rendered, the opponents of the driven-well patent either neglected, or were not permitted to present the full evidence which exists."

Again this charge is made and should be thought about: "The Supreme Court decision which has just been rendered suggests the possibility of a prearranged case, from the fact that W. D. Andrews, a respondent in the case under which the decision was rendered—Harris Eames vs. W. D. Andrews et al.—was the complainant with Col. Green in the case decided adversely to the validity of the patent in 1883 by Judge Shiras of the United States Circuit Court in Iowa. The full testimony in this latter case—Andrews et al. vs. George Hovey—constitutes the evidence upon which farmers and other users of driven wells must rely for protection against the exactions of agents of the Green combination. The practice of making arrangements for half-way defenses in cases of alleged infringement, which operated with such notable results in favor of the Bell Telephone Co. in its manifold litigations, has not been lost sight of by the driven-well patentees. In numerous instances, and largely through a United States Judge in Southern New York, they have secured favorable decisions upon evidence that must be regarded as evasive and incomplete. Coming thus fortified before the Supreme Court, the way to a driven-well monopoly has been quickly cleared for these schemers."

"The Iowa case, with its mass of conclusive and uncontradicted testimony against the right of patent in driven wells, and the lucid opinion of Judge Shiras, must have been sedulously concealed from the notice of the Supreme Court Judges. It is difficult to imagine how otherwise a decision could have been rendered which gives to a few men power to harass and annoy the farmers of those large sections of the country where driven wells furnish almost the only source of water supply for domestic use."

THOUGHTS ON ORGANIZATIONS.—Farmers are going into some kind of an organization, and Patrons of Husbandry should make strong efforts to have them organize upon the immovable foundation of the true principles of the Grange, with the righteous, laudable purposes of the Order as the end to be accomplished. There are other organizations of farmers besides the Grange; and while we would not attempt to detract in the least from their value to the agricultural interests of our country, yet we, as Patrons, believe that there is none so good as the Order to which we belong; and believing thus, we should show our faith by our efforts to get those farmers, who are ready for organization, to come into the Grange. Farmers are engaged in the same ancient, honorable, honest occupation; their interests are one and the same; their enemies are united, cunning, strong and common; then it is plainly evident that farmers should guard their interests by organizing into one compact body, and concentrate their efforts to accomplish the same grand purpose. There is no need of or room for division, even in name.—*Roanoke Patron*.

FOR awakening thought and arousing the farmers to action upon the great questions of the day—those which never could have been reached in any other way—the Grange has made additional proof of the idea that our education is by no means entirely a product of organized schools, or employed teachers and printed books. While they occupy a very important part, they are not all that act on our powers to develop them. "Life is one grand school, and its every circumstance a teacher." The Grange, with its beautiful and practical lessons, has power to raise men and women from the humblest walks of life to positions of influence and power.—*A. J. Rose, Master Texas State Grange*.

MANY pass through life without a consciousness of where there are, and what they are doing. They gaze on whatever lies directly before them, "in fond amusement lost." Human life is a watch-tower. It is the clear purpose of God that every one—the young especially—should take their stand on this tower. Look, listen, learn, wherever you go; wherever you tarry, something is always transpiring to reward your attention. The Grange is a great educator, and teaches us to see new beauties in nature and to take a broader and better view of life.

SUGGESTION FOR THE GOOD OF THE ORDER.—I think that a carefully arranged literary program, with a diversity of subjects in the course of the year, is productive of about as much real good as anything, as in this way all are encouraged to speak and think more upon such things as they are personally interested in and receive new ideas from each other.—*Nellie Hussey, Sandy Stream, Unity, Maine*.

PROGRESS.—We have reorganized forty Granges this year. I think our next State Grange meeting in October will be the most interesting and instructive ever held in the State.—*Ava E. Page, Secretary Missouri State Grange*.

COUNTY DEPUTY-HOLWAY of Me. writes: "Skowhegan is taking in numbers, two to five each meeting. Athens 15 new applications last meeting, and more coming. Bingham 13 last meeting and more coming. Solon, or, North Somerset, is much

strengthened. East Madison and St. Albans doing some good work. I am now trying my luck with some of the dormant Granges. I have a petition for names at Pittsfield and Madison Bridge, and for a new Grange at Carratunk and Moose River."

"MANY of the Granges in the State are live, active, working Granges, and are advancing the interests, elevating the characters of their membership, and practicing the precepts of the Order, thereby accomplishing good."—*J. D. Clardy, Master Kentucky State Grange.*

If the souls of Patrons overflowed with tolerance, sympathy, charity and brotherly love, there would be no dormant Granges in this Union.

The prospects of the Grange in Indiana are brightening and a number of reorganizations are reported.

"CREEKVILLE, North Carolina, is in a very good farming section, and since the organization of the Grange it has added to the cultivation of both mind and soil. If the improvement continues for the next seven years as it has in the past seven, or people will not have to go elsewhere to find a good place to live."

"This is the age when thought is growing,
Fires of noble purpose glowing,
Streams of knowledge strongly flowing."

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

A LION IN THE WAY.—*Livermore Herald*, June 30: It has been supposed that the sport of hunting California lions had ceased to be one of the attractions of Livermore valley. Only last Saturday, however, one of these ferocious beasts of large size was shot on the Dublin road about four miles west of Livermore. Some one was driving along near the Devaney place, when he saw a large beast in the road in front of him. The animal trotted along in front of the wagon for half a mile, stopped and lay down beside the road. The team also stopped—people didn't care to drive by. Finally, Wm. Galway, with a shotgun, started after the lion on horseback. The beast started off on a sharp trot, turned into the grain, and squatted down. Galway rode up to within five paces and gave him both barrels. The animal was instantly killed.

Fresno.

EDITORS PRESS:—Most other sections have had their boom, and it is about time we were having ours. A number of real estate men have been visiting this section lately. Their report is very favorable. They think our county compares favorably with Los Angeles and other well-known districts. Several companies are endeavoring to buy large tracts of land in our immediate vicinity. The grain crop is good for the year—better than was expected. The fruit crop is very good. Our town has about 750 inhabitants and is rapidly increasing. Since the disastrous fire here last July, new brick buildings have taken the place of the frame ones that were destroyed, and it has now assumed quite a business-like aspect. It commands the major part of the mountain trade. The lumber yards of the Madera Flume and Trading Co. are connected with their mills in the mountains by a flume some 60 miles long. The mountain mill averages about 100,000 feet a day. A fine Masonic Temple will soon be erected. It has been very warm here for the last few days, the thermometer marking over 100° several times. Large fires have been raging in the mountains near by, doing some damage.—*J. R., Madera, July 1, 1887.*

CUTTING 'COTS.—*Expositor*, June 29: Some idea may be formed of the quantity of apricots raised in this section, when it is known that one firm alone has employed an average of 75 hands for the past two weeks simply splitting open the fruit and laying it on trays to dry. Each employe cuts from 8 to 12 boxes, of 50 lbs. each, per day.

Kern.

PROGRESS IN ANTELOPE VALLEY.—*Rosamond Cor. L. A. Herald*: Ernest Schrader, from Iowa, put in 10 acres of trees, vines, bulbs and garden stuff, to satisfy himself as to the productiveness and adaptability of the soil. He joined J. B. Titus, who also put in 10 acres just below him on the mesa half a mile east of this station, in sinking two wells, 24 feet deep, from which they pump by horse-power a three-inch stream for domestic and irrigation purposes. As they plowed and put in their land since the last rain, and were delayed in getting their pumps to work, they were fearful their entire plant would perish before the water could be got on. To their astonishment, however, not eight per cent of their plant failed to come up in good shape and is now doing handsomely, notwithstanding they have not yet irrigated one-fourth of the area planted. The figs on Mr. Titus' place are as large as an English walnut, while the trees are no larger than an ordinary cane. Both gentlemen are enthusiastic over their success. Their alfalfa has come up in good shape without any irrigation. The stand is thin, as is always the case the first year, but the stalks are from 6 to 12 inches in height, while the tap-root has a firm hold.

IRRIGATION SCHEME.—*Bakersfield Cor. Chronicle*, July 5: Parties owning about 30 sections in what is known as the "weed patch," lying east and north of Bakersfield, have just completed surveys for canals by which the flood waters of Kern river and Walker basin creek can be made serviceable for irrigating this large body of really fine land. Estimates based on

the surveys just completed show that the work will be much less expensive than originally supposed. There are two or more natural reservoirs, which can be made to hold flood water sufficient, and the water is had free of cost from Kern canyon. It will be piped high enough to cover the foothills between the river and the main body of land mentioned, and thence by canal. Under late decisions the flood waters of a stream are public property, and the proprietors of the lands have secured their claim to a share of the surplus water, and the land can be irrigated. The "weed patch" is in the thermal belt, and will produce all kinds of citrus fruits. The company is backed by Los Angeles capital, and proposes to commence work at once.

Los Angeles.

HONEY SHORT.—*Anaheim Gazette*: Herman Koster, who has a bee ranch in the canyon above the oil wells, reports that the honey crop will be small this year. The wild flowers and clover blossoms withered early, owing to the heat that has prevailed.

THE OSTRICHES AT WASHINGTON GARDEN.—*Los Angeles Herald*: One of the birds was plucked yesterday and another will probably undergo the ordeal to-day. It will be two months, however, before the majority of the feathers are in the required stage of fitness, and then the proprietors expect to reap a handsome revenue for their enterprise. The average gross receipts from each bird is \$300 every seven months, about 50 large plumes being obtained from the wings and about 12 ounces of body feathers. The incubator, manufactured at Petaluma, is in full blast, and in six weeks more a brood of chicks is expected. It is kept at a uniform temperature of 103 degrees, and as each fullgrown bird is worth about \$1000 there is no doubt that all possible vigilance is observed. As a curious fact about the ostrich's powers of abstemiousness, it is stated that one of the birds, at present on view, went without food during six weeks of its transit from Africa here.

THE GRAIN FIELDS.—*Los Angeles Express*, July 2: J. B. Lankershim of the L. A. Farming and Milling Co. says: So far as I know, Los Angeles county will do as well this year as any in the State, both as regards the quality and the quantity of its yield. Samples from the San Fernando ranch are very promising, but it is a little early to judge of the crop. . . . J. Loew of the Capitol Milling Co. remarks: I should estimate that the barley produced this year in Los Angeles county will be about 60 per cent of last year's crop, and wheat about the same ratio. Home consumption is just about double what it was a year ago, therefore the export will diminish in the same proportion. The quality of barley and wheat will be much better this year, both as regards weight and color; consequently better prices may be expected.

Modoc.

NOMADIC NUISANCES.—*Adin Argus*: Migratory stock is becoming a great annoyance to our stockmen and in fact to all the farmers of our county. It is an outrage to have the cattle, sheep, etc., of other counties feed on the ranges of our county and rob our taxpayers of the ranges they are beginning to greatly need. But how are we to get redress? Since the late decision of the Supreme Court it seems that all counties which have imposed migratory stock licenses did so illegally, and now we can feed foreign stock free of charge, save the owners the tax on their stock, and suffer the damages thus occurring without the interference of a migratory stock license.

SAGEBRUSH RYE.—*Elias Fletcher*, who owns a sagebrush ranch a few miles north of Alturas, brought to the *Independent* office, Saturday, some samples of rye, merely to show what can be done without irrigation. There were two stools of the grain, one of which contained 45 and the other 32 stalks—87 stalks from two kernels of grain. The rye was about four feet high and well headed. Mr. Fletcher sowed his grain last fall, and it has never had a drop of water except that which fell on it from the clouds.

Sacramento.

ALFALFA.—*Galt Gazette*: John Bandeen, five miles east of Galt, has a 20 acre field, bordering on Dry creek, seeded to alfalfa. The past year he has kept 200 head of hogs, 11 head of cattle and 5 horses on the product of this field alone. As proof that his stock has thriven, he takes pride in showing a fine two-year-old filly that weighs 1325 pounds. Alfalfa is a profitable crop, and can be raised in this section without irrigation.

San Bernardino.

APRICOTS.—*Riverside Press*, July 2: Dr. J. Jarvis has commenced harvesting his apricot crop, which will amount to 150 or 200 tons, from about 40 acres of orchard. The doctor will have about 30 tons of dried apricots, which, at 20 cents per pound, will give an income of \$12,000—or \$300 per acre, from which the cost of drying must of course be deducted. The doctor is taking out his Moorpark trees, as they do not bear satisfactory crops.

ORANGE AND RAISIN SHIPMENTS.—*Riverside Cor. Los Angeles Times*, June 29: The orange shipments for the season of 1887 are ended, and aggregate 376 carloads. The raisin shipments of the year ending June let will amount to 175 carloads, making the total of these two productions shipped from Riverside 551 carloads. Prices have ranged exceptionally high, and the total receipts are very satisfactory, notwithstanding the orange crop was not much

over two-thirds of what was anticipated early in the fall.

LIVELY TIMES AT THE CANNERY.—*Semi-Tropic*, June 30: Fruit continues to pour into the Colton cannery. This morning there was a large addition to the working force of the establishment. But fruit is coming in so rapidly and in such quantities that more help is wanted to care for it. It must be handled at once. The proprietors of the canneries are, therefore, anxious to have all who are in need of employment come to the factory to-morrow morning prepared for work.

San Joaquin.

NEW WHEAT.—*Independent*, July 3: New wheat is coming into the Stockton market in large quantities and of varying quality. Much of the new crop appears to be shrunken, which will make it No. 2 quality. The New Hope grain, however, is above the standard and some of it averages 62 pounds per bushel, but the general county average is said to be about 58 pounds. Smith & Wright bought a few weeks ago from Powell, Jordan & Hurd 700 tons of New Hope wheat, to be delivered as harvested. Yesterday 2000 bags of this crop were shipped from New Hope landing to S. F., and it is expected that the wheat will attract considerable attention at the bay, as it is large, plump and far better than average No. 1 grain. It is said to be a fair sample of the crop of the "Pocket."

Santa Barbara.

MUSTARD.—*Lompoc Record*, June 25: Mustard thrashing has begun on the Jonato rancho. There will be thrashed between 1500 and 2000 sacks from the present crop. The yield is estimated to be about eight sacks per acre. Mustard yields much better nearer the coast in the region of the fog belt.

Shasta.

THEY MEANT BUSINESS.—*Cor. Redding Free Press*: A few miles from where I write, some 30 months ago a new settler with a family of six and a couple of jaded nags, arrived and pitched his camp on a piece of as rough-looking, bushy red-land as could be found in the whole region. He simply knew it was vacant—vacant because nobody would have it. Strangers in a strange land, with no friend to counsel or aid them, they paid freight at the depot on a little miserable dunnage, hauled it out to their spot in the wilderness, and had just 60 cents left and nothing coming. What now? The saw came out of the wagon first, next the ax, and a load of wood is cut and hauled to town, and means raised to buy flour. Soon the brush came up, the trees fell, a field was inclosed, a cabin and barn, rude but serviceable, appear, and on that spot there is a handsome orchard of 25 acres, cleared and inclosed, two years old, beginning to bear fruit, and in two years more it will yield the family a handsome support.

Solano.

GOOD BARLEY.—*Suisun Republican*, July 1: The most prolific crop of barley we have heard of was grown upon the Hidden ranch by A. L. Reed. There were 100 acres in the field which averaged 26 sacks, and Hale & Danielson say it is the finest and heaviest barley they ever thrashed.

Stanislaus.

ALFALFA PASTURES.—*Modesto Herald*, June 30: J. H. Carpenter, a well known stock-raiser on the San Joaquin river, informs us that he has been compelled to remove 150 head of cattle to the alfalfa fields on the west side of the river, where the supply of feed is equal to all demands. Mr. Carpenter owns on the east bank of the San Joaquin river about 2500 acres of pasture land, the average quality of which is probably as good as any in the county in a state of nature. On this land, he informs us, he makes an allowance of six acres of pasture to each head of kine; but this year, owing to drought, that allowance is not sufficient, hence the necessity of removing a portion of his stock. On the irrigated alfalfa fields the allowance for pasture is one-fourth of an acre to each head of kine, or four head to the acre. Therefore one acre of irrigated land planted to alfalfa will furnish as much pasturage as 24 acres in natural grasses without irrigation.

Sutter.

THE CANNERY.—*Farmer*, July 1: Tuesday morning we made a call on this splendid Sutter county institution. We cannot give a detailed account of what we saw—the reader should go and see, and he will be greeted with one of the pleasantest sights he ever beheld. There were about 135 operatives at work, chiefly women, both young and old, and boys and girls of tender age, all busy as bees, and earning \$1 to \$1.65 a day. The cannery is running on apricots and has more than it can do; but this fruit will soon disappear, then peaches and other fruit will receive attention. The complete success attending this venture has stimulated the production of choice fruits and been the means of starting any number of new orchards; some of these coming into bearing this year has already demonstrated the lack of capacity of the cannery to handle the fruit. If the cannery pays expenses, it is to many of the operatives a positive blessing, as it utilizes all the available labor, teaches the young business habits, disburses annually several thousand dollars to our own people, and last, but not least, furnishes a ready market for our fruit. We say, enlarge the cannery.

COMBINED HARVESTERS.—There are now 18 combined harvesters in operation in Sutter county. The Shippee—Berg Bros., A. H. Wilbur, S. H. Graves, J. E. Plaskett, Eli

Davis, W. H. Parks, I. N. Brock and C. A. Glidden. The Houser—Hedger & Sons, Mar-cuse Bros., W. T. Wilson. The Beat—B. F. Walton, H. Walton, Jr., and Suel Harris. The Myer—W. T. Bevin. The Holt—Stafford Bros. All are working well and giving satisfaction, and cut, thrash and sack about 25 acres daily upon an average.

Tehama.

ORANGE ORCHARDS.—*Record-Union*, July 4: G. W. Hancock, who has just returned from the upper Sacramento valley, says that the results of planting citrus trees during the last year or two are most gratifying and successful. At General Cadwalader's, Red Bluff, there is a grove of 50 or 60 orange trees, set out since the first Citrus Fair was held here, and every tree has made a strong growth. There are shoots on all of them, of the present year's growth, from 1½ to 3 feet in length, and dark and thrifty in appearance. At Joseph Cones', about four miles east of Red Bluff in the edge of the foothills, can be seen about 75 orange trees, some of which are seven or eight years old, and are now loaded with young fruit. The trees look very fine.

Tulare.

JACK-RABBITS.—*Visalia Times*, June 30: R. T. Priest, a large farmer near Pixley, estimates that jack-rabbits are now destroying 1000 pounds of wheat per day for him. He keeps several greyhounds that kill from 20 to 50 rabbits per day, yet he sees no decrease in the pest. . . . Ranchers living along the Lakeside ditch and at the sink of Cross creek are rejoicing over the fact that an epidemic has broken out among the jack-rabbits in that section. The disease appears to affect them suddenly, when they fall over, make a few struggles and die. The banks of Cross creek and the Lakeside ditch are lined with thousands of dead rabbits. It is hoped the epidemic may spread over the entire country, as they are ravenous destroyers of grain.

A BIG RUNAWAY.—Twenty-two horses attached to the combined harvester of T. W. Johnson indulged in a runaway Monday, at the ranch of E. D. Maxon. The machine, which had been in use on Mr. Maxon's farm, was being removed. In crossing the road, just after leaving the ranch, the horses became frightened, and, being on hard ground, were enabled to pull the harvester at a rapid rate. The driver was thrown from his seat, but escaped uninjured; two of the animals were run over and killed, and five or six more were seriously injured. The harvester was not damaged to any great extent.

Yuba.

NICE LEMONS.—*Sutter Farmer*, July 1: While we were at the Immigration rooms in Marysville the other day, W. G. Murphy brought in about two dozen lemons grown in his yard near the Episcopal church. They were Sicily budded on orange stock, and seedlings, both of extraordinary size and quality and very thin rind compared to any lemons we have ever seen. Two of them measured 1½x12½ inches and 10x12 in circumference. Mr. M. cut one and squeezed the juice by hand into a measured druggist's glass, when it measured three and one-half ounces—a bulk almost as large as the fruit before it was cut—thus proving the thinness of the rind. Mr. Flint converted the same into delicious lemonade, which was tested and eulogized by a number of gentlemen present. The samples were all large, of a beautiful yellow, and almost transparent in their purity. The trees are excellent bearers, and the fruit keeps coming and going the year round.

ARIZONA.

EGYPTIAN WHEAT.—*Florence Enterprise*: There is on exhibition in our sanctuary a specimen gathered at random from the field of Mr. John Guiliani, a short distance above Florence, on the Alamo Amarilla canal. The sample, grown from a single seed, has 52 distinct stalks, each bearing full heads of grain, while more than one-half the number of heads are double or triple, the auxiliary heads having sprouted from the base of the main head. A few years ago Mr. Guiliani found a stray plant of this grain growing in his fields, and he carefully watched its growth and protected it from harm. The yield is simply enormous, and the grain is heavy and produces good flour. It grows to a height of five feet, with strong straw that is not easily broken down by wind or rain.

LUXURIANT ALFALFA.—Mr. Fuller has presented the *Enterprise* with a bunch of alfalfa, cut on his ranch above Florence. It measures from seven to nine feet in length, and is but a sample of the growth in his entire field. Much difficulty is experienced in cutting such heavy grass, and the mower makes slow progress notwithstanding the care taken to remove the cut grass from its path.

THE CLYMAN PLUM.—Mr. Leonard Coates of Napa sends us samples of his new seedling plum, the "Clyman." The variety ripens in Napa with the Cherry plum. It has the advantage of much greater size, though Mr. Coates writes that the specimens are below the average, as the tree is overloaded. The specimens show a roundish plum of about 4½ by 4½ inches in circumference; light red, shading to dark, with occasional yellowish blotches, the whole covered with a delicate violet bloom; flesh, light greenish-yellow; flavor, rather pleasant acid—not rich. For so early a fruit its size and general appearance bid fair to make it desirable. As a new fruit we may have an engraving of it later.



"Two Sinners."

There was a man, it was said one time,
Who went astray in his youthful prime.
Can the brain keep cool and the heart keep quiet
When the blood is a river that's running riot?
And the boys will be boys, the old folks say,
And a man's the better who's had his day.

The sinner reformed, and the preacher told
Of the prodigal son who came back to the fold,
And the Christian people threw open the door
With a warmer welcome than ever before.
Wealth and honor were his to command
And a spotless woman gave him her hand,
And the world strewed their pathway with flowers
A-bloom.
Crying, "God bless lady and God bless groom!"

There was a maiden went astray,
In the golden dawn of life's young day.
She had more passion and heart than need,
And she followed blindly where fond love led,
And love unchecked is a dangerous guide,
To wander at will by a fair girl's side.

The woman repented and turned from her sin,
But no door opened to let her in;
The preacher prayed that she might be forgiven,
But told her to look for mercy in heaven.
For this is the law of the
earth, we know,
That the woman is scorned,
while the man may go.
A brave man wedded her,
after all,
But the world said, frown-
ing, "We shall not call."
—Ella Wheeler Wilcox.

The Kindergartens.

(Written for the RURAL PRESS
by L. J. DAKIN.)

All the children in California will like to hear about the kindergartens of San Francisco. Every little boy and girl who lives on a big ranch or in a little mountain town, among the foothills or in the broad valleys, will like to hear about children who have teachers to learn them how to play.

Just think of it! Do you wonder that the little city children love to go to such a school as that? Quite a long time ago I went to call on a lady and found her little daughter on the doorsteps crying because she was locked out. "I've been to the tunderarten, and our dirl has locked me out 'cause mamma's gone. Wis't I could stay to the tunderarten all the time!" sobbed the poor little thing as she hid her face in her long white bonnet, refusing to be comforted.

I began to wonder what the kindergartens were like; and now, boys and girls, I have been to see them and will tell you what I saw. I went into a poor part of the city, where the streets were narrow and dirty. Such a sad place as that would be to play in! but it was all the little children had till the good people who started the kindergarten provided two large, sunny rooms, way up above the dirty street; and here were 50 happy little boys and girls learning such nice ways to play games and to play work. In one room there were broad circles painted on the floor, and the children came marching down the center and then upon the big outside circle. The piano was played and teachers and children sang:

Let your feet go tramp, tramp, tramp,
Let your hands go clap, clap, clap,
Let your finger beckon her;
My dear Lulu, dance with me—
Tra la la, tra la la.

You would have laughed to see them clap their hands or roll them one over the other as they marched, each lifting the right foot high and bringing it down with a smart tap of the little heels. They were like a long row of Kate Greenaway figures, but all alive and smiling. When they sang "My dear Lulu, dance with me," one little boy who had stood in the center walked up to one who was in the circle and they made their little bobbing bows to each other and then danced away together. After this was repeated a few times, the teacher asked what game they would have next.

"The Blacksmith," called one sturdy fellow who had two grand muscular little arms of his own.

"The Bootblack," called another.

"The Basket," said the girls.

"The Bastit, the Bastit," echoed the smaller ones. So they had the Basket, the boys standing

two by two, while the little girls joined hands and marched in and out, in and out, as though they were weaving around the sticks of a basket. One of the boys was a naughty little stick and would not stand where he ought, so he had to be taken out till he promised to be a good straight stick.

"Now what flowers shall we put in our basket?" asked the teacher.

"Roses," "Buttercups," "Heliotrope," they said, and twenty voices echoed "Heliotrope," because they thought it a hard word and were rather proud to think they knew it.

"Let us have wild flowers this morning," said the teacher, as she set a vase of buttercups and California poppies in the center of this lively little basket and asked them the real name of the poppy.

"Eschscholtzia!" cried some of them, eager to show how well they remembered what had been told them. I wonder how many country children, who have the flower growing in their fields, could have told the name.

After this they had the song and play of the "Little Worm" which suddenly turns to a butterfly.

A little worm is on the ground,
It creeps, and creeps, and creeps around,
'Tis spinning now a little nest
That it may find a place to rest.
Dear little worm, we'll say good-bye
Till you come out a butterfly.

When the song ends the children who have been hiding their heads for the worm, spring up and wave their arms like wings, and seem to feel for a minute that they are really beautiful butterflies.

We did not stop here to see the little ones commence their work, but went on to the Jackson-

We also visited the kindergarten known as Stanford No. 3, which is away out near Twenty-third and Mission. Here they have quite a large yard for out-of-doors play and a small flower-garden very well cared for. At this school we saw another kind of work, which was, molding in clay any figure they were capable of forming. Of course, such little tots could not do much; they seemed to spend their energy making balls like marbles, though a few under the teacher's guidance tried to make bowls, chairs and dog-houses. The youngest child in school, a wee sweet girl, only two and a half years old, touched clay for the first time that day, and as she was a neat little thing, she seemed quite shocked to find it daubed her hands. It was laughable to see the haste with which she got out her handkerchief to wipe her fingers. She had to be encouraged before she would touch it again; then nature showed itself she could soon make balls as fast as any of them.

I must tell you about some of the games they played here. The children sat in a circle on the floor and chose one of their number for the baker. So away he trots, puts on his white cap and apron, rolls up his sleeves, sets a little table in the center of the ring, and lays on it a molding-board and rolling-pin. The teacher then played the piano and they all sang:

Here comes the merry baker,
He makes us good sweet bread;
He wears a neat white apron,
A white cap on his head.
He rolls, he rolls, he rolls, he rolls
Good pies and cake and bread.

Here comes the merry baker,
Good flour does he use;

if they were tight, they pounded on the bottom to see if it was firm, they shook and thumped the staves till one of them decided it was not made well enough to keep meat in, so he would not take it. Then the boy who wanted it for nails offered 50 cents for it. But the cooper said that was not enough; he could not support a family if he sold barrels for 50 cents. So finally it was sold for \$1.00. They pretended to pass the money from one to the other, and the barrel was carried away.

Now is it not a grand thing to have all these children trained to methodical habits, and taught to make persistent effort every day in some direction? Why, probably some of them never had clean clothes or clean faces till they came to the kindergarten; but here are little rooms with plenty of water, soap and towels, so if any come without a wash they will be sure to get it here. They are not allowed to use bad language as they would do if left to run in the streets, but learn to have self-respect, and to feel that all honest work is honorable. Don't you think they will be happy in making real barrels some time, and being real blacksmiths? Or making real bread, and sweeping real rooms?

Blessings on the kindergartens that save dear little children from learning wicked ways, and teach them truth, charity and loving-kindness instead. And blessings on the kind, noble women who started them, and all who now work for them.

Let other cities do as well as San Francisco has done in this respect. And now if any boys and girls who live in country places, and have broad fields, or great orchards, or beautiful gardens to play in, would like to help some poor street child to go to these schools, let them tell us what they think about it in their letters to the RURAL PRESS.

THE WAY SHE CURED

HIM.—"What brings you here, Mary?" said Truesdell to his wife, as she entered the liquor-shop. "It is very lonesome at home, and your business seldom allows you to be there," replied the meek but resolute wife. "To me there is no company like yours, and as you cannot come to me, I must come to you; I have a right to share your pleasures as well as your sorrows." "But to come to such a place as this!" expostulated Tom. "No place can be improper where my husband is," said poor Mary. "Whom God hath joined together, let not man put asunder." She took up the glass of spirits which the shopkeeper had just poured out for her husband. "Surely you are not going to drink that?" said Tom in huge astonishment. "Why not? You say that you drink it to forget sorrow, and surely I have sorrows to forget." "Woman, woman, you are not going to

give that stuff to the children!" cried Tom, as she was passing the glass of liquor to them. "Why not? Can the children have a better example than their father's? Is not what is good for him good for them also? It will put them to sleep, and they will forget that they are cold and hungry. Drink, my children; this is fire and bed and food and clothing. Drink; you see how much good it does your father." With seeming reluctance Mary suffered her husband to lead her home; and that night he prayed fervently that God would help him to keep a newly-formed but firm resolution. His reformation was thorough, and Mrs. Truesdell is now one of the happiest of women, and remembers with a melancholy pleasure her first and last visit to the dramshop.—Selected.

USED TO EARTHQUAKES.—The pressman in the Martinez Item office is a man of muscle, and when the old Washington is going the building quivers like an aspen. A gentleman evidently not accustomed to printing establishments was seated in a neighboring office, the other day, just about the time it was usual to work off the outside. His reveries were suddenly disturbed by a low rumble, a quiver of the house and a tremendous thump. He sprang from his chair and ejaculated: "Jewhilkens!" Seeing the attorney, whom he was consulting, looking all serene, he got over his nervousness and settled down again, only to be again aroused by a r-r-r-r BUMP! This was more than he could endure, and in terrified tones he asked: "Have you so many earthquakes around here that you get used to them?"

ANCIENT EGYPTIAN CLOTHS.—The selvages of the ancient Egyptian cloths generally were formed with the greatest care, and were well calculated by their strength to protect the cloth from accident. Fillets of strong cloth or tape also secured the ends of the pieces from injury, showing a knowledge of all the resources of modern manufacturing.



SCENE IN A SAN FRANCISCO KINDERGARTEN—"WEAVING."

street Kindergarten. As we came into their room we saw a pretty scene like a picture. First, there was a row of boys and girls sitting in a large circle on the floor. In the center of this circle were four little girls with white work-aprons on, their sleeves rolled up, and cunning white caps on their heads. They were learning to wash clothes. They had boxes for wash-benches, and three of the girls had each a nice little tub just big enough to wash doll-clothes in; but the fourth girl had a cute little stove with a tiny wash-boiler on top of it.

"What do you do to your clothes first?" asked the teacher. "Do you rub them on the washboard?"

"Yes," said the little one who had the clothes and a rubbing board in her tub. And then she began to rub them and pretend to wring them out, for there was really no water in the tub; they were just learning how they must do when they did have water. When they were all rubbed clean they took them over to the stove and put them into the boiler.

"What do you do after the clothes are boiled?" they were asked.

"We rinse them," said the little girl who had the rinsing tub.

"And then we blue them," added the little girl who had the bluing tub.

"That is right, and now they have boiled enough, you may do your part."

So they made believe to rinse and blue them, and then the teacher gave each a little bag of tiny clothes-pins and stretched a line for them, and in a few minutes they had their dolls' washing all hung up. This finished their games, and they all marched to their seats to begin their work. One class wove red and yellow paper into pretty and even difficult patterns. Another pricked leaves and other figures on cardboard, coloring them with tinted pencils. Others formed squares, angles and triangles of bits of painted wood about the size of matches. Still another class learned to sew through holes pricked in cardboard.

He rolls it into pies and cakes,
Whichever you may choose.
He rolls, he rolls, he rolls, he rolls
Whichever you may choose.

Every one made the motion of rolling with their hands just as the baker did with his rolling-pin, and when the song was ended the teacher asked:

"What do you choose of all things the baker makes?"

"Blackberry pie!" said one, and then they all said "blackberry pie," like so many little mocking-birds. So the baker pretended to take a basket and deliver to each child a blackberry pie.

Four little maids then had a game of sweeping the room with four little brooms while a fifth little maid took up the dust with dustpan and brush. After this came a little cooper with nails in the pocket of his apron and a hammer with which he pounded the hoops on his barrel. They all seemed to like this and sang with a will:

Oh, I am a cooper and barrels I make,
Some wood and some bands of strong iron I take;
So merry and happy I always am found,
As with my big hammer I pace all around.
Rap a tap, rap a tap, rap a tap a toe.

Oh, I am a cooper and earn my own bread,
And by my hard labor my children are fed;
So merry and happy I always am found,
As with my big hammer I pace all around.
Rap a tap, rap a tap, rap a tap a toe.

When the barrel was finished the cooper said he wished to sell it because he must have money to support his family.

"How many children have you?" asked the teacher.

"Five," said the little cooper.

"Do you want to buy a barrel?" she asked of the class. "It is very useful; can you tell me what you would put in it?"

"Meat," said one; "Apples," said another; and "Nails," said a third.

Four boys now came to the cooper and examined his barrel. They pulled the hoops to see

What the Geranium Heard.

[Written for the RURAL PRESS by FANNIE H. AVERY.]

The flowers were holding a conclave,
One radiant summer day,
On a very weighty subject,
All having much to say.

'Twas on the matter of color—
Why were violets blue?
And why should the rose so stately
Be of a crimson hue?

Why was the lily snowy white,
The marguerites so fair?
How came the heliotrope's tinting
So delicate and rare?

Long they debated the question,
Instancing every flower
And pondering on its shading—
Whence came the lovely dower?

At length a tall geranium
Said, as it swayed and bowed,
"Perhaps I can tell you something
To dissipate this cloud.

"Last night our master was walking
Among us, after tea,
With a friend he called 'Professor'—
Grave, dignified was he.

"They paused for awhile beside me,
Conversing about light—
The beautiful, dear sunlight
We love, so warm and bright.

"When suddenly the Professor
Nearly took my breath away,
By saying the flowers' colors
Are due to sunbeam's ray;

"That our chemical construction
Makes each of us absorb
Particular parts of the spectrum
Of daylight's glowing orb;

"While that we cannot gather
Is thrown back to man's eye,
And makes us appear possessed of
One or another dye."

The geranium paused, unable
To add a further word,
Nor could a blossom comment on
The story it had heard.

A hush fell o'er the assembly,
Each flower was very still,
While from a tree on the roadside
Rang out a wildbird's trill.

Anti-Saloon Resolutions.

The Anti-Saloon Republican National Conference, held in Chicago, September 16, 1886, declared as follows:

1. That the liquor traffic as it exists to-day in the United States is the enemy of society, a fruitful source of corruption in politics, the ally of anarchy, a school of crime, and, with its avowed purpose of seeking to corruptly control elections and legislation, is a menace to the public welfare and deserves the condemnation of all good men.

2. That we declare war against the saloon and hold it to be the supreme duty of the Government to adopt such measures as shall restrict it and control its influence, and at the earliest possible moment extinguish it altogether.

3. That we believe the National Government should absolutely prohibit the manufacture and sale of intoxicating liquors in the District of Columbia and in all the Territories of the United States.

4. That we believe the best practical method of dealing with the liquor traffic in the several States is to let the people decide whether it shall be prohibited by the submission of constitutional amendments, and until such amendments are adopted by the passage of local option laws.

5. That inasmuch as the saloon business creates a special burden of taxation upon the people to support courts, jails and almshouses, therefore a large annual tax should be levied upon the saloons so long as they continue to exist. And that they should be made responsible for all public and private injury resulting from the traffic.

6. That the Republican party, wherever and whenever in power, should faithfully enforce whatever ordinances, statutes or constitutional amendments may be enacted for the restriction or suppression of the liquor traffic.

7. That we approve of the action of Congress and of those States that have done so, in providing for teaching the physiological effects of intoxicants in our public schools, and that we earnestly recommend to every State Legislature the enactment of such laws as shall provide for the thorough teaching of such effects to our children.

8. That we demand that the Republican party shall take a firm and decided stand as the friend of the home and the enemy of the saloon, in favor of this policy and these measures. We pledge ourselves to do our utmost to cause the temperance men and friends of humanity—of whatever party or name—to join with us in securing these objects and in support of the Republican party, so far as it shall adopt them.

A leaf of the giant water-lily (*Victoria regia*) has been known to measure 24 feet 9½ inches in circumference, its weight being nearly 14 pounds. One of the flowers was four feet two inches in circumference, with petals nine inches in length, and weighed 3½ pounds.

"Silotwor" is a new explosive ten times the strength of gunpowder, exploding without smoke or noise. A Russian invented it.

YOUNG FOLKS' COLUMN.

How S'manthu Managed.

"Yes, Patty, you're going to have them hair-ribbons, if there isn't anything else got. You deserve 'em, I'm sure." "But I'm having my new dress, mother, and it seems as if I hadn't ought to." "Never mind that. I ain't forgot how you worked side by side with Jim at the husking. Here's 30 cents I've been saving up just for them ribbons." "The last you've got?" asked Patty. "No; there's 15 cents more in case of a letter to be written, or any extra call." "You're real good, mother," said Patty, taking the money gratefully. "I'll get dark red, I think. It'll go lovely with the green stripes on my dress." "Yes," "I'll go and buy 'em this afternoon, then I can get back before S'manthu comes to loop up my dress. And then they'll both be ready for the magic lantern." "Yes."

And Patty went up the ladder to her little half-story room, to put away the three precious dimes, feeling richer than ever before in her 12 years of life. Upon a pine shelf under the rafters lay her nearly finished new dress, a cotton and wool delaine, brown, with the admired green stripe; and she turned up a corner to give it a satisfied pat before hurrying back to her work. Nothing quite so grand as this dress had ever come to Patty before. It had been bought new on purpose for her, not cut down from her mother's, and S'manthu Van Patten had been hired for half a day to cut and fit it, and was coming in again, now that Patty had made it, to put some mysterious finishing touches to it, for it was cut after a new and stylish pattern, a "Polly Nay," S'manthu called it. Patty had read of a thing in fashions called Dolly Varden, and concluded that "Polly Nay" must be some kin to her.

"I'm to speak a piece at the magic lantern!" said Jim, rushing home from school at dinner-time. "Dear me—you Jim?" Patty opened her eyes wide at hearing of such distinction. "Yes; and my neck-tie's all wore out." "Perhaps we can rub it up with turpentine," said his mother, with a troubled look. "I don't believe you can. Last time it was rubbed up it rubbed through; and it's all bare and fuzzy just under the chin."

Jim brought the article. It had done duty for a long time, and there was no denying its shabbiness. "P'raps I'd best not speak a piece, then," said Jim, in a discouraged tone. "Oh, you mustn't give it up," said Patty, very positively. "They want to make it a great success, you know, Jim." Patty's loyal little heart entertained no doubt of Jim's piece rendering the magic lantern exhibition a success. "No, it's for the missionaries, and we must do all we can," said mother. "If you could hold your chin down a little," she suggested, trying to pull the neck-bow into better shape. "How could I, and speak a piece?" asked Jim. "No, he couldn't," said Patty, shaking her head.

She knew Jim could not be relied upon for anything of the kind. She remembered well the time she had set a patch in the back of his coat which would show in spite of her best care. How she had cautioned him when he was going to spelling-school, to move a little sideways when he was chosen, so that the patch would not be seen by the audience. And now that boy had forgotten every word she had said, and had, on every opportunity, turned his back, if possible, squarer than ever before.

"I can't buy you one, my boy," said mother. "There's only enough money for Patty's hair ribbons, and she needs 'em just as bad."

In the afternoon Patty set out on her two-mile walk over the prairie to the one store in the small village. The roadways in the thinly settled country were not well tracked, and as the mud was deep, she found the walk a rough one. But her mind was too full of weightier concerns to dwell on the difficulties of the way. It was hard on Jim not to be able to have a new tie. If she could only get him one! but of course she couldn't. If it was a longer time ahead, she might contrive to get hold of a bit of money, but it was just now, so he must wear the old one. She pulled around a braid of her hair. How shabby and faded the old ribbons looked! They had been washed time and again, and were now fraying into strips. She had been looking forward for weeks to this exhibition, and her new dress was done, and she must have those ribbons. She had told all the girls about them.

Slowly she went into the store. There was no use in asking to look at the roll of ribbon. She had examined it more than once, and knew exactly its quality and width and its price—15 cents a yard. Two yards would make two generous ties, good loops and ends hanging well down. "Neck bows? Yes, Patty; some high-styled ones, just in. Look a-there now."

In a small store, containing everything from a barrel of salt to a gilt breastpin, the assortment of neckwear could not be large, but the bright satin bows were all Patty could have desired. At the last moment she cast a lingering look at the roll of ribbon; but no! Jim was to speak a piece, while she had nothing to do in the exhibition except singing with the other scholars. She trudged home, her unselfish little heart warm with the thought of Jim's surprise, but wondering within herself if nothing could be done to render her ribbons less shabby in the light of the tallow candles

with brass reflectors, which made in the school-house the finest illumination she had ever known.

"Yes, here I be a-waitin' for you," was S'manthu Van Patten's cheery greeting, as she stepped into the house. "S'pose you've got your dress done splendid, hey? Such a smart little thing as you be."

The dress was put on, and looped and draped with a painstaking which brought a look of gravity over S'manthu's broad, good-humored face, rarely seen there. "There, now," she exclaimed at length, relaxing, "I call that the stylishest 'Polly Nay' I've cut this season! Got your new ribbons, I s'pose?"

"No," said Patty, stopping short in her efforts to see herself in a looking-glass no larger than a dinner-plate, "I got a necktie for Jim instead."

Mother expostulated, but took down and displayed the old tie. "It is most fearful shabby, sure enough," said S'manthu, with a critical look. "But, bless me! the wonders I've done a-makin' over old ties! Let me see." In a twinkling her nimble scissors tore apart the old loops. "My!" exclaimed Patty, as their backs were turned. They were almost as bright as if they had been new.

S'manthu snipped, and folded, and stitched, her tongue moving as rapidly as her fingers. The loops had to be a trifle shorter, and it needed very skillful contriving to bring out the brightest streaks in the cross-piece; but in ten minutes she laid before Patty's eyes a tie which set her dancing about the room in delight. "Jim wouldn't know it from new," S'manthu declared, "if you don't let him see the new one. Now, Patty, you go back and change it for your ribbons the first thing to-morrow."

Patty put on her new ribbons before supper on the night of the magic lantern show. Jim looked admiringly at them, but could not forbear a rueful thought of his old tie. "Let me fix your neck, Jim," said Patty. She had ironed his collar with special care. "Now look!" she said, leading him to the glass. "Hello! A new one? Jolly! How did you get it, mother? And why did you get it like the old one, anyway?" In great glee, Patty told the story, ending with a hug, which Jim energetically returned. And in a glow of happiness they all set out for the exhibition, listening to a few gentle suggestions from mother. "Now you speak your very best, Jimmy, my boy. And, Patty, you be sure and sing up loud. We that's got so much to be thankful for, 'd ought to do all we can for them that has so little."

GOOD HEALTH.

Zymotic Diseases.

The S. F. Bulletin last week contained an interesting article on the causes of what are termed zymotic diseases, from which we give the following extracts:

In 1876 there was a curious outbreak of typhoid fever in the suburbs of Syracuse, N. Y. The doctor who had been called on undertook to solve the mystery. He first applied himself to the sewers as the propagating medium, but he found that houses which were not connected with the sewers had the disease just the same as those which were. At last he discovered the circumstance that all the houses that drew water from a certain well had the fever. There was a second well in the district. The houses which drew their water there were free from the complaint. Further investigation established the fact that the well which was now clearly the cause of the outbreak had been infected by a neighboring cesspool.

Dr. Klein, in a recent lecture before the Royal Institution of London, stated that the "epidemics known as milk scarlatina, milk diphtheria, and I may also add milk typhoid, have this in common—that almost simultaneously, or at any rate within a short time, in a number of houses having no direct communication by person or otherwise with one another, there occur, sometimes singly, sometimes in batches, as it were, cases of illness—scarlet fever, diphtheria, or typhoid fever, as the case may be; and it was this peculiar character which pointed to a condition which must have been common to all these households. On closer examination it was indeed found that all these households had this, and only this, in common—that they were all supplied with milk coming from the same source—that is to say, from the same dairyman. Other houses, supplied with milk from a different source, escaped; and further, it was shown that as soon as the consumption of the suspected milk ceased, the epidemic, as such, came to an end, except, of course, the cases due to secondary infection from person to person."

This statement can be assigned only to the position of circumstantial evidence. But Dr. Klein, perhaps, advanced to the citadel of the secret when he stated that it had been shown at a certain farm in England, Hendon by name, that "there existed certain cows affected with a communicable disease, which on many points of its pathology bears a great resemblance to human scarlatina; further, that the milk of these cows gave scarlet fever to human beings; and lastly, that a particular microbe was obtained from these cows which in calves produced a similar disease to the disease of these cows." The lecturer added: "It has been shown that in the blood and tissues of persons affected with scarlet fever there occurs the same micro-

coccus as was present in the cow, both being identical in microscopical and in cultural character."

But Dr. Klein is not simply destructive. Milk is a general article of food—in some cases of necessary food. If there are such dangers attending its use, there would be a disposition to abandon it altogether. There is, he says, fortunately, a simple remedy in case of suspicion—that is to say, scalding. Dr. Klein says: "I have found that heating milk to 85° C. or 185° Fahrenheit, that is considerably under the boiling point, is perfectly sufficient to completely destroy the vitality of the microbe of scarlet fever." The case cannot be said to be absolutely made out. But it is not very far from it. It stands upon infinitely higher grounds than the interested speculations that are so common. Bad sanitation is something to be avoided. The old belief ascribed stagnant pools and foul places to malignant spirits. We translate them in modern language into various diseases. There ought to be cleanliness inside and outside in all communities.

DOMESTIC ECONOMY.

POTATO BALLS WITH CREAM SAUCE.—Pare any number of potatoes, and cut balls from them with a vegetable scoop. From a dozen potatoes you should get about 60 balls. Cover them with boiling water, and cook 12 minutes without salt. Pour off the water; add to the potatoes one pint of boiling milk, into which stir two tablespoonfuls of butter, mixed with one level teaspoonful of salt, one-third of a teaspoonful of pepper, and, if liked, a teaspoonful of chopped parsley. Use white pepper altogether. This sauce is for a quart of balls.

BLACK SPICE CAKE.—The yolks of four eggs; mix 2½ teaspoonfuls of baking powder in 2½ cups of flour, one cup of brown sugar, one-half cup of syrup, one-half cup of milk, one-half cup of butter—the butter must be melted after being measured and stirred with the sugar—2½ teaspoonfuls of powdered cloves, one teaspoonful of cinnamon, the same of allspice; the spices must be put in the flour, the syrup added after the sugar and butter are stirred together, then the eggs and milk; lastly, the flour.

STRAWBERRY FRITTERS.—Beat two eggs well (the whites and yolks separately), then add to them a teaspoonful of cream and a pinch of salt, stirring in enough flour to make a thick batter. Now beat the mixture well, and when thoroughly smooth throw in a pint of strawberries. Have plenty of boiling hot fat in the frying pan and fry the same as ordinary fritters. When done to a golden brown color take them out, drain them and serve on a napkin, with sifted sugar strewn over the tops.

CITRON CAKE.—Three cups of sugar, one of butter, one of sweet milk, four cups of flour, one-half teaspoonful of soda and one of cream of tartar. Cut up one-half pound of citron fine and thin and the whites of ten eggs. Cream the butter and sugar; sift the flour and add gradually, then the citron. Beat the eggs until stiff and add last; sift the cream of tartar in the flour and dissolve the soda in a little tepid water. Beat all thoroughly before stirring in the eggs.

KIDNEYS SAUTE.—Cut three kidneys each into five pieces; put an ounce of butter into the saute pan (frying pan); when very hot put in the kidneys, stir round for a few minutes with a spoon till they are set. Add a teaspoonful of flour, a quarter of one of salt and the third part of that of pepper. Mix well; add half a gill of broth and a few mushrooms. Do not let them boil. A few minutes is enough to do them.

BAKED PIE PLANT.—Cut two pounds of pie-plant into a pudding dish, sprinkle over it half a cup of sugar and two tablespoonfuls of flour, or, what is better, half a cup of rolled bread-crumbs. Add water until the plant is two-thirds covered. Bake in a quick, warm oven 30 or 40 minutes. This method of preparing rhubarb or pie-plant removes the medicinal taste and makes an acceptable spring dish.

CHEESE CAKE.—Take two cups of cottage cheese, mash well, add three eggs, not beaten, one at a time, sugar to taste, one tablespoonful of flour, a little nutmeg, a little salt and milk enough to make a little thicker than custard. Bake with an under crust. When ready for the oven, sprinkle cinnamon on top. Make it about an inch thick.

BREAD GRIDDLE CAKES.—Soak a small bowl of bread over night in milk. In the morning mix half a cupful of flour, into which is put 1½ teaspoonfuls of baking powder, with one quart of milk, three well-beaten eggs and a little salt. Beat up the bread with this batter until it is very light and fry a delicate brown. The batter should be thick.

GINGER SNAPS.—Mix one pound of flour and three quarters of a pound of white sugar. Rub into it half a pound of butter, two eggs well beaten and an ounce of ginger ground fine. Beat all well together, roll out the dough to the third of an inch thick, cut out the cakes and bake them. These are far superior to ordinary ginger snaps.

WHITE CAKE.—One cup of milk, two cups of sugar, ½ cup of butter, two eggs, three cups of flour, 1½ teaspoonfuls of baking powder and a little nutmeg.



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The Week.

The Fourth has come and gone, but the city is still somewhat dreary over the thousands who are ensconced beside the sea, or stream, or spring, or mountain lake, reveling in rural rest and pleasure-seeking. The community recovers slowly from a great holiday, especially when the day comes as this year, in such position that it drags two others with it into the charms of idleness. Practically, the city rested from Friday night until Tuesday morning and has not yet regained its appetite for trade and labor.

Rural notes are rather pleasant. The grain crops are turning out rather better than expected, in some districts at least. Fruit is beginning to arrive in vast quantities, but is in the main disappearing from view quite satisfactorily. The canneries and drying establishments are running at their full capacity, and nearly all hands large enough to grasp a knife are "splitting 'cots" with the utmost rapidity.

Preparations for the fairs continue with vigor. The rivalry between the two great institutions, the State Agricultural Society and the Mechanics' Institute, is leading to extra efforts on the part of each to draw out counties and

individuals to do their duty. If effort will do anything we shall have two grand displays this year. Such opportunities for setting forth the resources of the State should not be passed by.

New York Auction Sales of California Fruit.

It is with no small satisfaction that we note the success of the first sales of California fruit at auction in New York City. We have a special and general satisfaction. First, because through the wise and timely effort of Capt. H. Weinstock of Sacramento, who went East as the Honorary Commissioner of the RURAL PRESS, to study the marketing of California fruits in the interest of the growers, we were enabled first to proclaim the auction method as the key to the situation. Our second and greater satisfaction is that the auction method, so far as it has been tried, bids fair to vastly widen the Eastern outlet for our green fruits and thus benefit either directly or indirectly every man who has an orchard or vineyard in the State.

As was announced last week, the first auction sale was held in New York on Tuesday, June 28th. The fruit was shipped by the California Fruit Union, and the sale was under the auspices of Sgobel & Day, the New York agents, R. B. Blowers, the Eastern manager of the Union, also being present. It was a carload of assorted fruit which left Sacramento by ordinary fruit-car attached to the regular overland passenger train. The fruit arrived in good order. The gross returns of the sale were \$1500, of which \$625 was paid for freight and a small amount for commission. The average net amount which the fruit brought per pound was 4½ cents—i. e., the growers receive 4½ cents per pound for this fruit placed on the car at Sacramento. The peaches and apricots brought the best price, selling for from \$2 to \$2.50 per crate of 20 pounds. Pears and plums did not bring so much. The cash returns for this sale are now on the way to the producers, whereas, under the old commission system, they would have had to wait a month or more. The members of the Union are naturally jubilant and declare that the auction plan of marketing is a great success.

Returns of the second sale, which was held in New York on Thursday, June 30th, were also satisfactory. The new order of things is naturally attracting much attention. A telegraphed paragraph from the New York Herald of July 1st is as follows:

How is it that fruit is so much finer and so much cheaper this summer than last year? is the question which has puzzled New York people for some days. Peaches, pears, plums and magnificent apricots are found now, even on every stand in the streets. * * * The California Fruit Union has entered into an arrangement with Sgobel & Day of New York which is likely to revolutionize the fruit trade. It will no longer take 15 days to transport the fruit, which will now come direct from California by fast express trains of 5 or 10 cars, running on trucks such as are used under passenger cars. The time from California over the Central Pacific, Union Pacific and Erie railroads will be less than seven days. The question of distribution has also been satisfactorily solved, and all fruit will hereafter be sold at auction—just as is the fruit from the Mediterranean and from Florida—through Brown & Secomb, at Broad and Beaver streets. Two such sales have already taken place, one on Tuesday last and the other yesterday. Upon the first occasion the fruit was disposed of at the following prices: Boxes pears, \$3; half-boxes peaches, \$2.50; half-boxes plums, \$2; half-crates plums, \$1.50; half-crates apricots, \$2.10. At yesterday's sales plums brought \$1.50 to \$1.95 and apricots \$2.05 to \$2.30.

The results have proved so satisfactory that the New York agents ask that fruit be sent forward as fast as possible, and cars are being dispatched as frequently as the fruit is received by the Union. The Bee says that up to July 1st five cars had been sent to the New York auction. Of these, four were from Vacaville. W. R. Strong & Co. dispatched one carload of Sacramento-grown fruit—plums, pears and peaches.

It is, of course, too soon to pronounce final judgment upon the auction plan of selling fruit, but it is eminently satisfactory at least to see it opening so well and to know that fruit is going off so satisfactorily in a market which has been cried down and hitherto had fruit doled out to it as to a colicky child. The outlook for the new order of things is certainly promising.

EMPTY. — An empty envelope postmarked Azusa has been received. Where is the rest of it?

A Political Scare-Crow.

Our mind-cure people, whatever may be thought of their philosophy of healing, teach us some very excellent truths. They tell us that fear acts both directly and indirectly upon the body, and often is the cause of disease; that fear of disease begets disease, and that a fearless person may pass unharmed through the cholera, smallpox, yellow fever, and other malignant contagions; that in short, the secret of health is to cultivate the habit of keeping clean and healthy pictures in the mind.

We thought of this yesterday morning as we came across on the Oakland boat and heard a very intelligent gentleman, speaking of the Fourth of July and the sanguine and roseate hopes indulged in by the average orator and newspaper-writer of the future greatness of the Union, say that he did not share in this feeling, as he believed that it was destined ultimately to fall to pieces from its clumsy weight and unwieldy magnitude. There must be something morbid in the patriotism that borrows trouble and conjures up such ugly specters as this. As with our own body, so it is best to think only of what is brightest, best, and most healthy in that political organism of which we all are a part. Still there is a good deal of this sort of cant and persiflage to be found in foreign journals and reviews which might serve to amuse us were it not for the fact that some of our own political writers look with pessimistic and painful apprehension upon a government founded upon the popular will expanded over so large an extent of territory. It is generally admitted that a diversity of race is produced by climate—that white, black, red, olive and copper-colored people are the children of the sun and soil. In our diversity of tastes, habits, ideas and costumes among our people that will be a good soil for planting the seeds of alienation and strife? That in the very nature of things the interests of Minnesota and Georgia, the Atlantic and Pacific States, cannot always continue identical, and that they may some day differentiate into well-defined antagonisms that may endanger the peace, if not the stability, of the Union? The aforesaid gentleman may have been one of those queer compounds that is always on the contrary side, or it may be that he is haunted by some such vague, half-shapen fear as just described.

But a moment's thought will show it to be an ugly phantom, and nothing more. Dr. Draper somewhere calls attention to the fact that the strength and durability of a nation is in the ratio of its facility of communication. History furnishes an illustrious example. The empire of ancient Rome held together over five centuries, and only passed away at last as an iceberg melts in the heat of a better civilization. It was the policy of that people as soon as they conquered a country, though as far away as Gaul or Britain, to open a good highway for travel and easy and quick transportation of armies. Many of the subjugated nations often lifted up their heads, and seeing how small and remote the empire that held them in subjection, thought to break the yoke, but before the purpose was fully organized the Roman legions were upon them.

And yet how slow were the means of communication in that age compared to what we possess. Our whole land is woven together by muscles of iron and nerves of steel. We can whisper our thoughts to a friend in New York in a few moments, and in less than a week traverse the width of the continent. It is obvious that the greater the speed of communication the more compact and strong the National Government. The 38 States of the Union today are more closely compacted than the 13 original States that hung together through the struggles of the Revolution. Indeed, had it not been for the facility with which vast masses of men could be thrown from the East to the West, and from the West back to the East again, the chances are the great rebellion would have been successful. And then the iron path of the locomotive has bound the States of the Union into a network of commercial ties and reciprocal interests, that more than anything else solidifies our nationality. It is about time we had got over scaring at that hideous old spook that so long haunted our politics and set like a nightmare upon the Government, and have faith not only in the destiny of our political idea, but in the durability of our Republic.

University Notes.

The year at the State University closed last week and upward of 40 graduates were sent out with the approval and good wishes of the Regents and Faculty. The commencement exercises were in every way satisfactory. President Holden's address to the graduates was one of the most admirable we ever listened to. A very pleasing incident of the day was the welcome extended to ex-President Gilman (now president of the Johns Hopkins university), who arrived from the East opportunely while the exercises were in progress.

A graduate of the College of Agriculture, Mr. F. C. Turner, submitted a thesis on "germination tests of commercial seeds," which was marked by many points of practical value and to which we may allude at greater length hereafter. He had made careful duplicate tests of a number of kinds of field and garden seeds procured at a San Francisco seed-store. The tabulated results were compared with seed tests reported by the Eastern Agricultural Experiment Stations and made an excellent showing for the California seeds.

Prof. Hilgard has retired for rest and for more direct contact with nature in her visible forms, to his farm in the southern part of Alameda county. He has had a hard year's work, and has applied himself to it most assiduously, as is his wont, and a season of recuperation is necessary. During the vacation the public laboratory work ceases, and all matters which can as well be postponed should be held back until the opening of the session in September. Arrangements have been made to attend as far as possible to matters of pressing importance which may be submitted, and correspondence relating to such matters will be attended to by Prof. Hilgard's assistant, who remains in Berkeley.

Mr. F. W. Morse departed on Tuesday for Los Angeles county to continue his experiments with the gas treatment for scale insects, which were recently described in the RURAL and which promise such satisfactory results.

Visitors at commencement expressed much satisfaction at the improvements in the contour of the main grounds in front of the buildings, which is now proceeding under the direction of Dr. Bonte, the secretary. The old, unsightly artificial embankment has been swept away and the whole field has been given a natural slope quite in harmony with the best principles of landscape art, and winding walks and roadways are now being put in. Other very noticeable improvements have been made during the year. The agricultural grounds, under charge of Prof. Hilgard, are in excellent shape and afford the visitor a good opportunity for the study of many important and interesting industrial growths.

The report of the College of Agriculture for 1886 is now being printed at the State office in Sacramento, and will soon be ready for distribution. It will contain much information on chemical examination of California soils, water, products, on forage plants, economic entomology, rare trees and plants, orchard fruits, etc. It will be sent free to all who apply for it.

BAD BOYS.—It is reported that Senator Routier has tried Sacramento boys at splitting apricots for drying. He had 20, and the Bee says the boys were lazy, shiftless and troublesome. He then advertised for "boys who would work and not play." He has not received a single answer. The work is easy, pleasant and clean, and the boys can make 75 cents per day and be boarded. "I am sorry to say," said ex-Senator Routier, "that the California boys don't seem to want to work. It is the fault of the parents, who do not train them properly. I am almost disgusted, but I will never allow a Chinaman around my premises if I have to tear up every tree on the place."

OLEOMARGARINE.—It is telegraphed from Washington that an effort will be made next Congress to secure the reduction of the retail dealers' tax for the sale of oleomargarine. It is claimed that there is no intention on the part of the oleomargarine men to ask for a reduction of the tax upon the article itself, but it is claimed that the retail dealers' license is excessive. The Commissioner of Internal Revenue is said to be of the opinion that there is some justice in the claim. The internal revenue receipts show that the tax has not diminished the sale of the article.

California Seedling Cherries.

Three years ago Mr. Leonard Coates of Napa introduced the "Centennial" cherry, a seedling of Napoleon Bigarreau, raised by Mr. W. H. Chapman. Since then Mr. Coates has made arrangements with Mr. Chapman by which he is propagating at his nurseries three other seedling cherries, all of California origin.

We are enabled now to give not only a de-

"Purity" is the name given to a beautiful cherry of waxy, transparent appearance, a seedling of "Elton." It possesses the delicacy of flavor of its parent, but is more rounded and does not bruise so readily. It ripens about one week before Napoleon Bigarreau, and therefore comes in at a season when it can be best used by the canners.

It is immensely prolific and bears regularly. Its seed is very small. Its chief attraction,

more than a carload of "Centennial" and "Black Mastodon" cherries?

The original trees of these three varieties are grand and symmetrical specimens about 10 to 12 years old, and of great vigor.

The method of raising these seedlings is as follows: When the fruit of a variety from which it is desired to raise a seedling is mature, but not overripe, a dozen or two of the largest and most perfect specimens are carefully picked,

fect specimens; and (3) never allowing the seeds to be exposed to the air.

Poisonous Milk.

Referring to an article given on another page concerning the danger of disease and death lurking in unclean milk, we cite the fact which has already been hinted at in the *RURAL*, that science has disclosed the specific poison to which may be attributed part of the evil effects. This is, of course, distinct from the evil work of bacteria or disease germs, which we have shown are found in the milk of cows suffering from tuberculosis and the like. R. H. Firth in the *Lancet* gives the following: An epidemic of attacks of violent purging and vomiting among the soldiers in the Punjab was traced to the use of certain milk. The residue of the suspected milk was found to be of sp. gr. 1.025; casein, 4.1; fat, 3.9; and sugar, 5.04 per cent. The dairy pans were found to be unwashed, and some emitted a repulsive odor; the weather at the same time was very hot. The milk was coagulated, filtered; the filtrate was neutralized and made feebly alkaline by potassium hydrate, and shaken with ether. On evaporating the ethereal extract, a crystalline residue of sickly odor and pungent taste was obtained. Given to men in small quantities, it produced nausea and headache, and caused violent purging and vomiting with dogs in 15 minutes. Milk tested in a similar way gives negative results. Eight samples of milk were allowed to stand, and were tested every 20 days. After two months, three of the

FIG. 3.—PURITY.

FIG. 1.—BLACK MASTODON.



FIG. 3.—CALIFORNIA ADVANCE.



THREE NEW CALIFORNIA SEEDLING CHERRIES ORIGINATING IN NAPA COUNTY.

scription of these cherries, cuts of which appear in this issue, but also the method by which Mr. Chapman has been so remarkably successful.

The "California Advance" is a seedling of Early Purple Guigne. It ripens fully one week earlier than its parent, the Early Purple Guigne, is larger and of more obtuse rounded form, and a much heavier bearer. This makes it of immense value, particularly in the early fruit sections, where one week in advance of the hitherto earliest variety will mean thousands of dollars in the profits of the growers.

In color it is dark purple, turning black when fully ripe; in flavor, rich and sweet, and of a good degree of firmness.

however, is its wax-like appearance. It bids fair to make an extremely profitable and elegant canning cherry.

The last of the three is "Black Mastodon," truly a mammoth specimen. It is a seedling of Pontiac, and, ripening about with the "Centennial," Mr. Chapman first designated it by the name of "Black Centennial," but afterward gave Mr. Coates the privilege of naming it, who decided on "Black Mastodon." It is not so heavy a bearer as the two preceding, at least in Napa, but makes up for that in its size. In texture it is very firm and meaty, which will make it one of the most valuable shippers. What will take the eye of our Eastern friends

with the stems on, and laid upon a layer of moist, fine creek sand in a shallow box, covered with another layer of sand, and the box buried in a shady, cool place along the creek bank until the fall. After rain enough has fallen to prepare the land, the seeds are carefully planted, with the sand around them. The finest looking trees raised from these seeds are transplanted the following fall to the orchard, and, in order to get fruit as rapidly as possible, grafts are taken from them and inserted in some old, bearing tree.

This is all that is done, the points being (1), great care in handling the fruit and picking it at the right time; (2), selecting the most per-

samples yielded the same crystalline substance which produced the same symptoms when given to animals. This substance, which seems to be a ptomaine, is evidently the result of decomposition. No specific organisms on which to fasten it beyond some common forms of oidium and penicillium were found.

RAILROAD LANDS.—Under the recent orders of Secretary Lamar, 25,000,000 to 30,000,000 acres of railroad indemnity lands will be opened to public settlement.

On the 8th of November next the people of Oregon will vote on a constitutional amendment prohibiting the liquor traffic.

HORTICULTURE.

The Apricot in California.

Continuing our report of the last meeting of the State Horticultural Society, we come now to the stated subject,

The Apricot.

The discussion on the apricot was opened with the following essay by Judge W. C. Blackwood of Haywards:

The apricot is said to be native to Armenia in Asia, and introduced from that country into Western Europe by the Romans. It is on its native stock a long-lived tree. Mr. John Wolfskill of Winters told me some years since that at Santa Fe, New Mexico, there were trees 80 or 100 years old still vigorous when he knew them, some 20 years since. Cultivated on the peach-root, I am unable to say how long they will last. In an orchard I planted some 30 years ago, there were some apricots on peach-stock. The most of these trees are still there, and seemingly as vigorous as ever.

Soil and Climate.

A moderately moist loam is the best for the growth of the apricot. Too much moisture is ruinous. A clay soil is not good. The tree seems to thrive best where it has a moderate exposure to the ocean breezes and genial warmth of temperature; hence the wonderful success which has attended its culture around the bay of San Francisco and coast counties further south. Its cultivation has never been made successful in the Atlantic States, and it does not succeed very well in many of the interior counties in our own State. The climate of the interior seems to be too dry and hot, and if artificial irrigation is resorted to there the gum disease develops and the fruit, when ripe, is watery and deficient in richness.

When climate and soil are favorable the tree is subject to few diseases. In the vicinity of Haywards, where the tree has been successfully grown now for 30 years or more, no disease has ever developed, and it is singularly free from being attacked by insect pests.

Varieties.

The books describe some 20 or more varieties, many of which have been experimented with in this State, and the most of which have been discarded as unprofitable for general market purposes. Of the older varieties cultivated in this State none seem to retain their hold on popular favor except the Moorpark and the Royal. The Hemsikirke, the Breda, the Peach and Du Bois' early are no longer cultivated to any extent by nurserymen in this State.

Then we have some new varieties to which public attention is occasionally called. The St. Ambrose is a new variety. From what I have seen of it I think it hardly equal to the Royal. There is the Siberian or Russian, favorably spoken of by nurserymen of Kansas. It is about the size of the Breda. Its chief excellence seems to be its hardiness, and it is said to stand as much cold and frost as the peach, and blossoms about the same time. It probably will now become popular in this State. There have been some new varieties originated in this State. Of their claims to popular favor I know nothing and can say nothing.

The Moorpark originated in England. It is an old and highly esteemed variety for its enormous size and excellent flavor. In some portions of the State it is said to be a regular bearer, but in the country around the bay it is an uncertain bearer, producing full crops only once in four or five years. For canning purposes it is objectionable by reason of its ripening on one side first, but for drying it has probably no superior.

The Royal, introduced into this country from France, is for all purposes, perhaps, the best apricot cultivated by our orchardists. It is an immense and a constant bearer, and, when the fruit is properly thinned, it attains a full medium size. It ripens evenly and assumes a rich orange color with a red blush on the side which is exposed to the sun in ripening. It does not commence to decay as soon as the Moorpark—in fact, I have seen it dry on the tree instead of rotting. For canning or shipping long distances it has no superior, and, when dried, it makes a beautiful light-colored fruit; and, as for flavor, it is among the best.

The Blenheim is another favored variety. It is of a beautiful lemon color when ripe, and in size about the same as the Royal. The skin of the Blenheim is very tender and is easily broken. As for flavor, I think it has no superior. It is valuable for canning or drying. The tree is a vigorous grower, covering itself well with broad leaves, but when young is apt to cast the most of its fruit. When it obtains age it bears well and seldom needs thinning out. There is another variety of apricot, called by some the "Blenheim." This variety bears quite young, is a good apricot; but not as vigorous a grower, nor is the foliage as dense as the first variety I have described. From descriptions found in the book I think it is not a true Blenheim.

In conclusion, I would say California would seem to have a monopoly of the apricot business, although it is grown in some other portions of the United States. When properly dried, it is among the best of our cured fruits,

and among the canned varieties it has no superior. The cultivation of the apricot in those portions of the State adapted to its growth will, I think, always be profitable to the orchardist.

Discussion.

A general discussion on the apricot followed the reading of Judge Blackwood's essay. Mr. Hathaway of San Lorenzo said he had been told by one of the large canners that he regarded the Blenheim as the coming apricot for canning.

Mr. Coates of Napa exhibited samples of apricots—Royal—of large size, dried in his new "Common-Sense" fruit drier in four hours. Some other parties had dried Royals by the same process in two and a half hours. The market demands bleached fruit, and as long as it does it will have to be supplied. There is a growing prejudice against the use of sulphur in bleaching fruit on account of its destroying the flavor. Fumes of sulphur are injurious unless used with great care. The public will have to be educated to natural-colored fruit. Dealers all demand bleached. The fruit he exhibited had not been bleached through any sulphurous process. Usual time for drying apricots in driers is from 8 to 12 hours. He has done it in from 2½ to 4½. Driers usually do two batches in 24 hours. In the sun it takes two days or more.

Mr. Shinn: What are the best varieties to be grown in this State? Shall we ship East or dry fruits? All these are proper subjects now for discussion and the subject cannot be exhausted. One variety may be best for canning and another for drying. He had seen dried apricots from Ventura county at the Mechanics' Fair, did not know what variety, but larger than those shown. He was told that the grower had dried 100 tons; sold it at 25 cents per pound at the wharf. Subject of dried apricots exceedingly interesting. Apricots are selling now at \$30 per ton; if dried can they be sold at 15 cents per pound? We have all the world a market for our canned goods. There are but few countries in the world where the apricots are produced at all—Spain and Portugal the principal countries. Year after year the demand for apricots from the Eastern States increases. As to what section of the State is most fit for their production, it is said the coast countries have a great advantage, and that the interior and southern parts of the State are less suitable for them.

Judge Blackwood regards the Moorpark where it succeeds regularly as the best and most profitable apricot grown in the State. It is large, rapidly handled, rich fruit. It always finds a ready market because of its richness. He regarded sulphuring fruit as a damage, but trade demanded bleached fruit. Had talked with a dealer who told him to sulphur fruit 20 minutes. It would not be fit to eat when cooked if done so long. They all want white fruit, but when a man uses bleached fruit once or twice, he won't use it any more. Now I hold that this thing of sulphuring fruit is just adding poison to the fruit according to the length of time you sulphur it. Sulphuric acid is deleterious to health, as every physician knows. Time is coming when this sulphured fruit will be dropped. I am going to dry fruit this year, and am going to sulphur it, but I don't like it. The Royal for all purposes will retain its place as a popular variety. It can be shipped long distances; will hang on the tree for a long time; it will wait some days for you to handle it after it is ripe; is a rich fruit. Blenheim known here by that name does not answer the description of the fruit by that name given in the books. My Blenheims are bright lemon color; skin is easily abraded—has got to be handled carefully, or shows bruise stains. It is good for canning; think it will be good fruit for drying.

Mr. Shinn: Is the Moorpark a good bearer? Mr. Blackwood: Bears pretty regularly, it is said, in Ventura county. I have had trees in my orchard 14 years, and but two crops from the trees. They do not pay for the room they occupy. This year they were very full; had to thin them out.

Mr. Shinn: This is very important. People do not care to grow trees that way. Hemsikirke is a good bearer. I never heard but a single objection to the Royal, and that is its size. Royals are very small this year. Blenheims are a degree larger.

Mr. Shinn: The Blenheim is about one-half larger than the Royal.

Mr. Blackwood: Thin out the Royal and it will be larger than the Blenheim. Heat has affected them this year.

Mr. Shinn: I will suggest to young orchardists to make efforts to grow seedlings and obtain just the kind of apricot for our use. To obtain seedlings, plant pits of Royals and see if good qualities cannot be added to it.

Mr. Tompkins: This thinning of Royals is a very serious objection; it is about as expensive to thin them as to pick them. The Blenheim is larger and does not need thinning. It is uniformly much larger than the Royal; and, when dried, is better than the Royal. Thinning is a very serious objection.

Mr. Shinn: Mr. Barbour of San Jose states that both the Royal and Blenheim or Shipley ripen uniformly; ripen freely, etc. I fear the St. Ambrose will be a shy bearer—more shy than the Moorpark.

Mr. Blackwood: Mr. Collins had me visit his St. Ambrose orchard and showed me trees with fruit on. I would not recommend them. They are not as good as, and cannot be compared to, the Royal. They do not bear as well.

The Shot-Hole Fungus.

The following letter was read:

CHICO, June 22, 1887.

Mr. E. J. Wickson, Secretary, and Gentlemen of the State Horticultural Society: Nothing would give me more pleasure and profit than to accept your invitation to be present at your meeting of the 24th, and tell you "what I know about the apricot." But as tons upon tons will turn from green to ripe this week, it is necessary that some of us stay at home and push things to save the crop. We who do stay at home move a vote of thanks to those who will attend the meeting, and the rest of us will profit by reading their sayings in the RURAL PRESS, (Long may it live!)

The diseases of the apricot are very few so far as my knowledge goes. Trees do and will die without any apparent reason. They usually leaf out in the spring, set full of fruit; afterward the leaves turn yellow, the fruit prematurely ripens and the tree is gone. Sometimes this will occur around a defined spot until one-fourth or one-half of an acre has been left without a tree. I suppose these are alkaline spots, but why trees will do so very well for two or three years on these same places and then succumb, I am not able to say.

The "shot-hole fungus" is the worst disease on the apricot that I know of. The first I saw of it was four years ago, in an orchard one and a half miles from Rancho Chico orchards. I brought samples to Dr. Harkness, who was visiting General Bidwell at the time. He said it was a fungus of some kind, and thought it was to be occasioned by the very sultry north wind we were having at the time, and which was preceded by cool, damp weather. He was of the opinion that it would not spread to do much damage, but it has continued with us yet. A few weeks after finding the fungus in the orchard spoken of, I found on Rancho Chico two rows of very old Moorpark badly affected. They were right in the course of the wind from the other orchard. Two years ago I cut off all of the tops of these two rows and sprayed with strong soap and sulphur. There is now a good top and a good crop. Some of the fungus is to be seen, but it is not nearly so bad as before. I will send you a box of apricots; by it you can see what it will do, if you do not already know too much about it.—G. M. GRAY, Rancho Chico.

Mr. Tompkins: Fruits not classified enough. One nurseryman will show you one kind and call it Royal, another will have a different name. Even in the best nurseries, vary from a large Royal to large Blenheim. Should be classified. Division of opinion over a peach from Chico last year as an instance.

Mr. Shinn: Fruits in a perfect muddle in this State. Standing committee of State Board of Horticulture three years ago to work up this subject, but expect will not hear anything more about it. American Horticultural Society worked many years for it and brought something out of it, but not very much. Any remedies for diseases?

Judge Blackwood: Dr. Kimball dusts with quicklime when the fungus is beginning to show itself. It is not deleterious to the fruit.

Mr. Wickson: It is probable that the sulphide whale-oil-soap remedies for fungus for pear, apple, etc., would reduce the fungus on the apricot. Applications should be made in the winter-time.

Propagation and Planting.

Mr. Tompkins: What are the best trees to plant—yearlings or two-year-old trees?

Mr. Shinn: There is difference of opinion in that matter. Apricots ought to be planted at the age of one year, although many prefer two-year-old trees. It seems to me that a tree two years old is better able to bear the shock of rupture and removal than a younger tree. That is my philosophy, but the general opinion of planters is in favor of one-year-old trees.

Mr. Tompkins: What root would you put apricot trees on?

Mr. Shinn: Apricot root is good for apricot. I advocate for each tree its own root, all other things being equal. I cannot be moved from that position. There are, however, exceptions to the rule. Situation may make an exception. Some pears may be best grown on quince roots. On certain classes of soils the apricot tree should be on the plum root, because the plum root will live in moist soil than apricot. Will make that exception. On my place there is a row of apricots grafted on plum, more than 30 years ago. The trees are not the size of others on apricot root, nor have they borne as full as those upon apricot or peach root. The apricot does well on the peach. If the land to be planted on is good peach land, put on peach root. One objection is that gophers like apricot root, while the peach root is too bitter for them. Must destroy gophers if they like apricot root.

Mr. Blackwood: Gophers work at night; travel at night. Make sure of him and he is not there. They are hard to kill.

Mr. Shinn: As for age of trees, I believe cherry, apple, plum and pears may be planted at two years, if the trees are not overgrown; they are better able to recover from the shock than yearlings are.

Mr. Blackwood: The apricot on the peach gives long life to the peach stock. In the old orchard I planted peach and apricot trees at the same time; the peaches all gone and apricots still vigorous.

Mr. Perkins: I have an orchard one-half planted with one-year-old apricot trees, the other half with dormant buds. They are now five years old and are all the same size. I did the same with the peach, and now the dormant buds are ahead.

Mr. Tompkins: There is other experience to the same effect. Trees in dormant buds set five years ago were ahead of year-old trees planted the year before them.

Mr. Shinn: I never had good luck in trans-

planting dormant buds. Sent East for them, they being scarce here, but two-thirds died; did not get as good trees as those budded here. They had been carried too far in dormant buds. Do not recommend that method. It will make sprouts very badly. You have to develop that bud, and, unless the sap flows pretty freely, you will not get the bud you want.

Mr. Wickson asked that a committee be appointed to report on the apricot brought by Mr. Trumbull.

Mr. Shinn: If superior to the Pringle, it ought to supersede that almost worthless variety.

Messrs. Tompkins, Coates and the secretary were appointed the committee.

Cold Storage.

Mr. Lelong: Apricot crop seems to be largest; peach crop next. They seem to have thinned and cultivated fruit more properly. As to manner of handling, could not give any information at present. Was told if cold storage could be got up as at Riverside, that the demand would be still larger for green fruits; otherwise, canners combine and pay what prices they deem best, and fruits suffer on that account. Letters from cold-storage works give no encouragement to come here to start works.

Mr. Allegretti: I have made propositions to some people of Alameda and Santa Clara counties of a way by which there may be a great deal of the crops stored away. I can put up for \$5000 works large enough to store 100 tons of fruit. By storing it away it can be shipped East, and sold as green fruits in New York three months after the season is over.

A member: Mr. Allegretti wishes to organize a company to establish works for the treatment of fruits. All fruit-growers ought to encourage him.

Mr. Tompkins: Peaches go very well without treatment if properly handled. At Vacaville and Winters they have shipped them for years. An enterprise for fruit storage ought to be started in the winter to have time to prepare it.

Mr. Lelong: Works can be put up in two or three weeks.

Mr. Shinn: Farmers are slow, conservative people and do not take to new ideas readily. They must lose fruit before they would take to new ideas.

Mr. Allegretti: The expense nor time required would not be much; I am willing to share myself the burden of putting up a large house. I have one that will hold 50 tons. I have discussed this matter and solicited people to go into it. When the fruit comes in, store it for two or three weeks and not glut the market. It would sell to canners just as they could use it, and not be put in the market for people to buy at any price. It costs a very small amount; a house can be put up in two weeks for 100 or 150 tons. I will put my share in, and not expect any royalty.

The subject for discussion at the next meeting will be "The Peach; Its Culture and Marketing."

State Board of Horticulture.

A meeting of the Executive Committee of the State Board of Horticulture was held at the office of the board in this city on June 30th. The meeting was called to order by President Cooper. There were present, Commissioners Ellwood Cooper, Dr. Edwin Kimball, A. Block.

On motion of Mr. Block, Tuesday, Nov. 8th, to Friday, 11th, inclusive, was the date fixed for the holding of the Eighth State Fruit Growers' Convention, at Santa Rosa, under the auspices of the State Board of Horticulture.

The president then appointed Gen. M. G. Vallejo and Dr. Kimball on Committee of Arrangements. Mr. W. G. Klee was instructed to assist the committee.

On motion of Mr. Block, State Inspector Klee was authorized to procure the assistance of a chemist to experiment, to discover, if possible, a process by which the orchardists of this State can manufacture their own caustic soda, having all the necessary ingredients on this coast, and to file a full report thereof at the convention.

On motion of Dr. Kimball, it was ordered that the board shall meet at the office of the board in San Francisco on November 7, 1887, at 10 o'clock.

State Inspector Klee and Dr. Kimball were authorized to have made 10 analyses of fruit sprayed with arsenites, at a cost not to exceed \$100.

On motion, the program for the forthcoming convention was referred to the president.

On motion, the appointment of standing committees for 1887-88 was also referred to the president. The following gentlemen were requested to prepare essays on the following subjects, to be presented at the convention:

W. H. Aiken, on Prunes; Milton Thomas, on Crystallized Fruits; A. T. Hatch, Suisun, on Fruit Unions; A. Scott Chapman, San Gabriel, on Orchard Fertilizers and on Fumigating Trees with Chemical Gases for the Destruction of Insect Pests; W. A. West, Fresno, on the True Smyrna Fig; W. M. Williams, Fresno, on Fruit-Drying; S. F. Leib and Geo. A. Fleming of San Jose, on Fruit-Drying; Dr. Edwin Kimball, Haywards, on Dates and Apricots; N. R. Peck, Penryn, on Orange Culture; I. A. Wilcox, Santa Clara, on Small Fruits; Prof. Hilgard and W. G. Klee, on Insect Pests and Remedies; Ellwood Cooper,

Santa Barbara, on Olive Culture; H. Weinstock, Sacramento, on Railroad Transportation.

On motion, it was ordered that the rooms offered by A. Hayward, at 224 Sutter street, be accepted for the use of the Board for offices, provided that they can be had for two years, with the privilege of five. On motion, the committee then adjourned.

B. M. LELONG, Secretary.

English Gooseberries.

EDITORS PRESS:—Experience with English gooseberries was called for a week or two ago. I imported a dozen rooted plants from Carter & Sons, Holborn, London, two years ago. Coming late in the spring, more than half were spoiled in transit or by careless handling.

Four good bushes this season bloomed vigorously and set fruit. Heavy mildew appeared on the point of one twig, and I sulphured all the plants freely. The fruit grew and attained a fair size, but began to show mildew. A few days later, as the mildew was spreading, the bulk of the fruit was picked. That remaining on the bushes developed a complete heavy white coating, while the leaves and twigs were unaffected. Subsequently the mildew turned brownish and peeled off, leaving fruit stunted and scarred, but still growing. It would be of no value for market, nor does it look inviting for home consumption. The fruit first picked made very good pie material, or "gooseberry fool" (an English dish composed of stewed gooseberries and custard or cream); but it was rather green and hard for market, though the berries were larger than the ordinary California market gooseberry. The leaves and twigs still look vigorous and healthy, the mildew having been confined to the berries.

The mildew cannot be attributed to any undue supply of water, as I have irrigated the bushes but rarely.

I am also experimenting with a new English black currant, the Black Champion, whose berries grow in bundles like the ordinary cherry-currant. The trees are now bearing, and promise well. Some Kentish filberts of same importation also show a few nuts this year, and the trees appear thoroughly prosperous.

EDWARD BERWICK.

Carmel Valley, Monterey.

[The behavior of the gooseberries seems to depend much upon local conditions. We know growers who grow the large English varieties without mildew, or have done it in the past. Robert Ashburner of Baden Farm, San Mateo county, has brought us fine, clear fruit, and N. Wageneller of Ukiah has been successful. —EDS. PRESS.]

IN A CHANGING WORLD.—Geologists have described Britain as swarming with a multitude of forms of gigantic reptiles, some of them 60 feet or more in length, during the reptile age—the middle period in the earth's geological history, when mollusks and reptiles attained their culmination and declined, and when the first mammals of England at a later epoch—the middle of Quarternary—is given by Owen: "Gigantic elephants of nearly twice the bulk of the largest individuals that now exist in Ceylon and Africa, roamed here in herds, if we may judge from the abundance of their remains. Two-horned rhinoceroses, or at least two species, forced their way through the ancient forests or wallowed in the swamps. The lakes and rivers were tenanted by hippopotamuses as burly and with as formidable tusks as those of Africa. Three kinds of wild oxen found subsistence in the plains. There were also gigantic deer, wild horses and boars, a wild cat, lynx, leopard, a British tiger larger than that of Bengal, and another and even more terrible carnivorous monster with saber-shaped canines eight inches long. Troops of hyenas preyed upon carcasses and feeble quadrupeds. There was a savage bear larger than the Rocky Mountain grizzly, a gigantic beaver, wolves and various smaller animals, down to bats, sholes, rats and mice."

DIRECT ABSORPTION OF NITROGEN.—Berthelot, in *Compt. rend.*, has the following: Soils were placed in vessels of glazed earthenware, and in some cases were protected, in others exposed to air and rain, the rain-water being collected and analyzed, and the amount of ammonia and nitric acid in the air being also determined. The results show that vegetable soils continually absorb nitrogen from the air, even when they are not supporting vegetation. The amount absorbed is in all cases very much greater than the quantity of nitrogen existing as ammonia or nitrogen oxides in the air or rain. In fact the rain removes from the soil in the form of soluble nitrates considerably more nitrogen than it brings in the form of ammonia. At the same time, the amount of nitrogen absorbed is far greater in the case of soil exposed to rain than where soil is protected, probably owing to the greater activity possessed by the nitrogen-absorbing organisms under the former conditions. In the majority of cases, a notable proportion of the absorbed nitrogen is converted into nitrates.

TIMBER FIRES.—The recent forest fires in Michigan are said to have caused a loss of \$7,000,000 in values and eight human lives.

THE LUMBERMAN.

Acacia vs. Hickory.

As we have no hickory in this State and are growing many species of acacia, the following from the *Carriage Monthly* is of much local interest:

The following criticism of hickory timber was made by a correspondent of *Der Chaisen und Wagenbau*, of Munich, Germany:

"Hickory timber cannot by any means be replaced by any other of the foreign timbers. It is true that the hickory timber especially used by us for wheels, on account of its toughness and durability, as compared with other timbers, is greatly liked for use on our best carriages; but on the basis of repeated observations and experiments, we assert that German timber, specially for spokes, can be placed side by side, and is equal, considering the same conditions, to that of American hickory, the grade we refer to being the acacia timber. If I am not mistaken, in Northern Germany it is less known, but in Southern Germany it is used in preference to hickory, while in Northern and Southern Germany hickory timber is bought and used for all fine carriages. There are in Germany and Switzerland many carriage-builders who do not use hickory, not because of the price, but on account of its future durability; they do not like the hickory, and not without cause. The toughness of the recently cut timber is out of the question; but the quality of the acacia timber when in use for wheels and kept dry always keeps the same, while the hickory has the disadvantage, even when painted, of becoming porous on the inside.

"An old, experienced carriage-builder, with whom I had occasion to speak in regard to hickory timber, said, with decision, that when the hickory loses its freshness the wheels will become wormy; this is a worm peculiar to that timber. I have also noticed the removing of hickory spokes and replacing with acacia spokes on account of being worm-eaten. It would be interesting if our South German friends would advance their opinions with regard to acacia timber, as there are many who know the qualities of that timber thoroughly, and can give a correct judgment on the question, whether acacia timber is as good, if not better, than American hickory."

To this communication the publisher of *Der Chaisen und Wagenbau* replied as follows:

"Yes, acacia timber is better for spokes than hickory; but there is not sufficient of this timber in Germany for all the wheels required. Acacia timber is glass-hard, and, as proof of its superiority, all the omnibus wheels of Lyons and Paris, France, are made of it. We recently saw in Munich the sorting of hickory spokes, and very many were worm-eaten—out of three sets but one good set could be used. Then, again, we have finished wheels made of ash from 10 to 16 years old in which no worms had appeared. We Germans cut timber in the right time, but in America they cut it at any convenient time. Anything foreign is appreciated by us sooner than our domestic goods, but we have come at last to see things in their proper light."

The quality and use of hickory timber is much better known in the United States and Canada. There is no better timber for wheels, and especially so for light wheels. It is close-grained, tough, and has the required elasticity not to be found in any other timber. It is true that it loses its toughness with age when in use on a carriage, but this is also the case with all other timbers, much depending on the climate or atmosphere, as the more exposed to dampness the more porous it will become; but when well covered with paint, which excludes the air, its quality remains the same. Almost all carriage spokes used in France are made of acacia timber, with the exception of the hickory spokes imported from the United States. Acacia makes good spokes for heavy carriages where no elasticity is required, and gives a very good finish when painted, as it is close-grained, but will rot very fast if the water penetrates on the inside tenons. Oak is far superior to acacia, as it will not rot and is tough, second oak, in fact, grading next to hickory. When acacia timber has been wet but a short time the tenon will break off very easy; and if used for our lighter grades of wheels, it would not stand the necessary use at all.

Lumber in Southern California.

The great boom in Southern California has created a demand for lumber, and the mills on Humboldt bay are actively engaged in filling orders. The price of the commodity has been raised and rates of freight are up to \$7. Vessels are scarce, and a fleet sufficient to carry away the output cannot be obtained. Sunday, a vessel in port which arrived without charter was offered \$8 per thousand feet to load lumber for San Pedro. Many of the shipyards on the coast have all the work they can attend to, building schooners for the coasting trade.

It is claimed by our contemporaries in the southern portion of the State that the boom there and the consequent increased demand for lumber has been one of the chief moving causes in the recent advance in the price of lumber throughout the State.

A correspondent of the *San Bernardino Index* in speaking of this advance in prices says: It

looks as though the growth of this section is likely to be arrested by the continued and unreasonable advance in the price of lumber. There can be no additions to our population without building, and the capitalists who handle the lumber supply have kept raising the price until it has become almost prohibitory.

There are illimitable forests of redwood and pine north of us, reaching as far as Alaska, yet lumber is sold for almost its weight in silver, and the price is advanced every few days "as much as the traffic will bear." Unless a remedy can be found for the existing corner in lumber, the great immigration we are looking for next winter will find no foothold.

I suggest two measures: 1. The starting of brickyards and substitution, so far as possible, of brick for lumber as a building material. There is no limit to the production of brick almost anywhere in our valley, and, so far as used, it will diminish the demand of lumber. 2. Let some gentleman with pluck and capital enter into competition with the lumber kings and procure lumber from some part of the world that is not controlled by the monopoly. By thus increasing the supply and diminishing the price a great impulse would be given to building, and consequently to our prosperity. Our future is intimately connected with the lumber question. Let it have a thorough ventilation in your columns.

The soundness of a log of timber may be ascertained by placing the ear close to the end of it, while another person delivers a succession of smart blows with a hammer or mallet upon the opposite end, when the continuance of vibrations will indicate to an experienced ear even the degree of soundness. If only a dull thud meets the ear, the listener may be certain that soundness exists.

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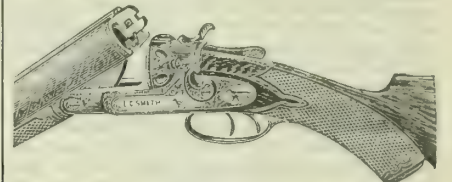
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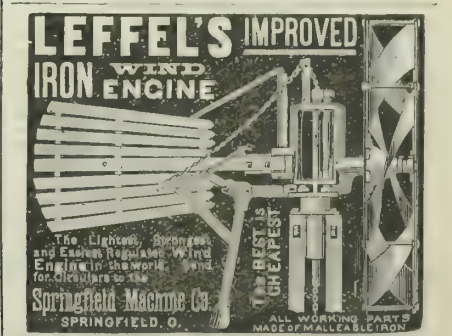
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DIVIDEND NOTICE.

The German Savings and Loan Society.

For the half year ending June 30, 1887, the Board of Directors of the German Savings and Loan Society has declared a dividend at the rate of four and thirty-two one-hundredths (4 32-100) per cent per annum on term deposits and three and sixty one-hundredths (3 60-100) per cent per annum on ordinary deposits, payable on and after the 1st day of July, 1887. By order.

GEO. LETTE, Secretary.

DIVIDEND NOTICE.

OFFICE OF THE HIBERNIA SAVINGS and Loan Society, San Francisco, July 1, 1887.—At a regular meeting of the Board of Directors of this Society, held this day, a dividend at the rate of 3 3/4 per cent per annum was declared on all deposits for the six months ending June 30, 1887, payable from and after this date.

ROBERT J. TOBIN, Secretary.

ORANGE CULTURE

A practical treatise by T. A. GARRY, giving the results of long experience in Southern California. 196 pages, cloth bound. Sent post-paid at reduced price of 75 cts. per copy by DEWEY & CO., Publishers, S. F.

Southern California Asphaltum.

The San Diego Mesas.

The following is part of a letter written by Carl A. Schenck and sent to the PRESS, after a short stay in San Diego and San Luis Obispo counties:

The old Spanish settlers and missionaries had a great veneration for saints. To rivers, mountains, valleys, churches—to many inanimate objects—this adjective is most liberally applied. Is this, perhaps, accounted for by the consciousness that men in general lack greatly in holiness? And is the said adjective used in this fashion to acknowledge and give reverend expression to the superlative impression which the grandeur of nature produces in human mind, doing honor at the same time and paying homage to such noble souls, who, in life, have sacrificed their own interests to the welfare of mankind?

The country around San Diego is built up in mesas or table-lands of light elevation with a much-worn material carried down from the mountains. Numerous creeks, which are now dry, have cut deep gulches into the beds of gravel and sand of post tertiary formation. The city of San Diego itself is built upon the long slope of such a mesa, running down to the beach with a gentle descent.

The asphaltum beds of San Luis Obispo consist of a sandy rock impregnated with the hydrocarbon. The size of the grains composing this sandstone is from fine sand to the thickness of a man's thumb. Taken fresh from the quarry, the rock looks dark-brown to black; in the heat of the sun detached pieces become soft and can be pulled asunder and the asphaltum drawn out in sticky fibers. Over miles of country are these hydrocarbonaceous deposits spread out with no other overlying formation than the fertile soil and the vegetation which it produces.

Have torrents of some hydrocarbon been active in this particular place in washing down sand and gravel, performing the disintegrating and removing work, in which water is generally the agent? or is the asphaltum a product of decomposition of immense growths of fungi and other sea-plants in loco?

Wherever the rock is bare of vegetation and where it stands out in bold cliffs it has been bleached superficially by the sun. Holes and small caverns are also disclosed in the structure of the rock at such places.

The hydrocarbonaceous substance is not evenly distributed throughout the formation, being more abundant in one place than in the other; the heat of the sun makes it ooze out of the ground in rich localities, forming a black, soft and lustrous crust which in shape reminds one of melted wax or tallow flowing down a gentle slope.

Nature has produced a material which is excellent for paving streets, not needing a previous admixture of sand or other substance.

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"The first thing we do, let's kill all the lawyers." This is rather a blood-thirsty proposition, which we modify by offering to cure this worthy class of people. Most of them suffer (in common with nearly all others of sedentary habits), from the injurious effects of dyspepsia, indigestion, piles, loss of appetite, and other ailments caused by a constipated habit of the body. Dr. Pierce's "Pleasant Purgative Pellets" eradicate all the disorders in promptly removing the cause thereof, and induce a rare degree of comfort and health.

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Consumption, the greatest curse of the age, the destroyer of thousands of our brightest and best, is conquered. It is no longer incurable. Dr. Pierce's "Golden Medical Discovery" is a certain remedy for this terrible disease if taken in time. All scrofulous diseases—consumption is a scrofulous affection of the lungs—can be cured by it. Its effects in diseases of the throat and lungs are little less than miraculous. All druggists have it.

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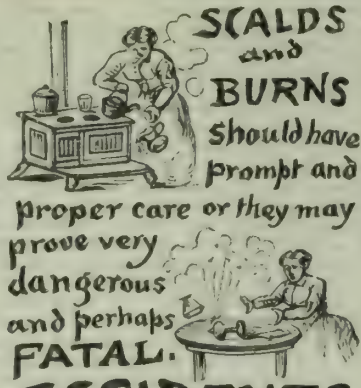
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An old physician, retired from practice, having had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma, and all Throat and Lung Affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints, after having tested its wonderful curative powers in thousands of cases, has felt it his duty to make it known to his suffering fellows. Actuated by this motive and a desire to relieve human suffering, I will send free of charge, to all who desire it, this recipe, in German, French, or English, with full directions for preparing and using. Sent by mail by addressing with stamp, naming this paper, W. A. Novas, 149 Powers' Block, Rochester, N. Y.

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ENTOMOLOGICAL.

Paris Green vs. Arsenic.

EDITORS PRESS:—The statements which have been made from time to time in the PRESS that Paris green was a stronger poison than white arsenic, were so different from my experience in using large quantities of these poisons that I doubted the accuracy of the statements. In order to settle the matter definitely, I addressed letters to professors of various universities and Agricultural Colleges in different States, and lastly to the Chemist of the Department of Agriculture at Washington, through the Commissioner of Agriculture, asking for a definite answer to the question, "Which is the stronger poison, arsenic or Paris green?" From only two of these have I been able to get a satisfactory answer. I was surprised that some of the parties addressed should state that they could not answer my question, for the reason they could never discover any difference in these poisons. I had supposed that every chemist had in his laboratory some tests by which the relative strength of various substances could be positively ascertained. At all events, it seems to me they should be in possession of such knowledge.

Yesterday's mail brought an answer to my letter of inquiry from the Chemist of the Department of Agriculture, a copy of which I send you for publication:

The poisonous properties of Paris green depend largely on the amount of arsenic which it contains. Pound for pound, white arsenic contains a much larger portion of arsenic than Paris green. The actual poisonous effects of any toxic agent are largely controlled by the nature of the organism to which it is to be applied. Hence, in some cases, white arsenic, and in others Paris green, might prove a more powerful poison. In general white arsenic is to be considered, however, a more powerful toxic agent than Paris green.

The answer to my letter of inquiry to the president of the Colorado Agricultural College is substantially the same as given above. I am, therefore, still of the opinion that arsenic is a more deadly poison than either Paris green or London purple, and is much cheaper.

Santa Rita. J. S. TIBBETS.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in DEWEY & Co.'s Patent Office Library, 250 Market St., S. F.

FOR WEEK ENDING JUNE 28, 1887.

365,586.—CORN-POPPER—J. B. Davis, Santa Rosa, Cal.

365,508.—ENGINE GOVERNOR—Geo. E. Dow, S. F.

365,518.—ORE-FEEDER—J. & J. H. Hendy, S. F.

365,521.—SCREEN FOR FLUMES, ETC.—D. B. Hunt, Angels Camp, Cal.

365,754.—CAR-AXLE LUBRICATOR—Lyon & Munro, S. F.

365,632.—BRICK KILN FIRE-BOX—J. W. Read, San Diego, Cal.

365,544.—WAD-SORTER—Prentiss Selby, S. F.

365,558.—MOWER ATTACHMENT—A. White, Kerbyville, Ogn.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

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Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and, as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription rate, \$3 a year. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

SONOMA COUNTY LANDS.—L. W. Walker, about two and a half miles from Petaluma, is about to cut up 400 acres of land on the border of Marin and Sonoma counties into lots to suit purchasers, from one acre upward. The land lies on the road to Marshalls. It will be sold at about an average price of \$75 an acre. Mr. Walker has a full dairy ranch, stocked with 100 head of Jerseys. It has ample pasturage for that number and is in complete order for carrying on the business.

CHEMICAL WORK AT THE UNIVERSITY.—Though the laboratories in which public work is done will be closed during the University vacation, it will be possible to secure chemical work of private interest during the vacation by addressing Mr. G. E. Colby at Berkeley. He is a skillful analyst who will remain at the laboratory, and will prepare analyses of soils, waters, or any other materials for moderate charges.

THE BOSS FLEECE.—A merino sheep, owned by Reynolds & Danks, Summer county, Kansas, recently yielded a fleece weighing 53 pounds, the heaviest on record. He was clipped by an expert, who took six hours to complete the job.

Relics of '49.

EDITORS PRESS:—The following item, taken from the Nevada City Herald, is going the rounds of the press:

"Scattered here and there among the pines and thickets, along the streams that were mined away back in the fifties, are many lonely graves. The lapse of years has destroyed the stakes which once stood at head and foot, covered them with leaves, and in some cases trees are growing upon the little mounds, and in a few more years there will be nothing left to mark the resting-place of many a pioneer who died and was buried without the rites of burial. Many of these graves are lost to even those who once knew where they were, and in a few years there will remain to us nothing of them but memories. Along the banks of Deer creek, the Yuba and all other streams that were once remarkable for their richness, can be seen the sites of the cabins of the '49ers. Time has destroyed the walls and roofs of those cabins, but the level ground floors and the old stone chimneys, plastered with mud, still remain. These old chimneys are the only monuments left to mark the places where the pioneers lived through the stirring 'days of gold.' And even the chimneys are fast crumbling with decay. Vines, weeds, bushes and the mold which gathers about all old ruins have been slowly hiding them from sight."

Yes, and who of to-day cares? Scribblers of this era in too many instances picture the '49ers as men whose highest aim was to wash for gold, bear bowie-knives in their boots and revolvers girded about their waists, gambling their sport, with murder ever in their eye. There is wild romance in this and there is more bold in romance than manliness. So base have been the representations of the men of '49, that regard ceases to spring in the breast of the younger California population as they view the remains of the long ago. It is only those who knew the character of the men of the past who can cast an appreciative glance at the relics of '49. They honor the age. They love the times. They knew and appreciated the men—men of manliness; men of nerve; men of vim; of intelligence and brains such as never congregated as a population in any nation's history. It was the uprising of the energy and enterprise of the world—the emigration of 1849. They came, they saw, they delved; turned rivers, made mountain passes accessible, brightened the commerce of the world, gilded homes of every civilized nation. They built towns and cities, and crowned their labors by building a State, and all within 18 months. One by one the old cabins go to make room for the grander structure. This is as it should be. Onward the State must move, but as you level the homes of the '49ers, think of their occupants as brothers belonging to the heroic age of California. The State builds a monument to Marshall; the '49ers built their own monument—THE GREAT STATE OF CALIFORNIA.

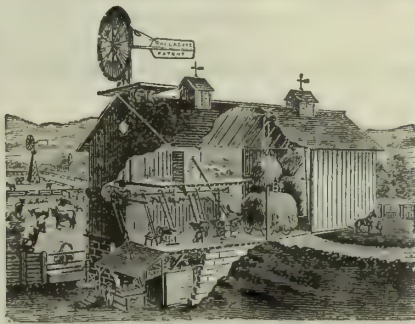
ALMARIN B. PAUL.

San Francisco, June, 1887.

The Use of Geared Windmills.

As the utility, convenience, economy and durability of wind-power becomes better known, the demand rapidly increases, and the day is not far distant when a majority of the windmills put up will be geared for driving all kinds of farm machinery.

The accompanying illustration represents a Halladay Standard-geared windmill, erected on one end of a barn and as used for running the I X L feed mill, I X L corn sheller, I X L stalk cutter, wood saw, grindstone and pump, all of which goods are manufactured by the U. S. Wind Engine and Pump Co. of Batavia,



Wind Engine for Farm Use.

III. This company has made the manufacture of windmills and accompanying machinery a specialty for over 30 years, and is said to have the largest factory of the kind in the world, and scarcely a week passes during which time it does not make shipments to different parts of the globe.

We can cheerfully recommend this company and their goods as being perfectly reliable. This illustration also represents the Standard haying tools, consisting of the Noyes Anti-friction, Standard Four-wheel and Rod Hay Carriers, Grapple and Harpoon Hay Forks, etc., as used for mowing away hay. All of the above goods being also manufactured by the same company.

AMERICAN APPLES IN ENGLAND.—According to the statement of English journals, the apples received in England from this country, last year, sold for £700,000, or nearly \$3,500,000. Of this amount the Canadian fruit brought \$400,000.

Anderson Springs.

About these Springs a well-known journalist writes as follows:

Anderson Springs are second to none in America for refreshing and curative qualities.

They are to us the most beautifully situated, best shaded, romantic and picturesquely surrounded of all remedial springs favorably and generally known in California. The climate is decidedly cooler in summer than is usual in places of resort in Lake county, which seems destined to be the greatest and best sanitarium district of the whole Pacific Coast. It is notably beneficial to consumptives and asthmatics; for dyspepsia, rheumatism, dropsy, stomach, liver and kidney complaints, Anderson Springs are exceedingly valuable.

Beautiful streams of clear, cool water traverse the extensive natural and majestic groves. The waters are hot and cold, and contain sulphur, soda, iron and other purifying and invigorating qualities, in a remarkable degree. Some of the springs are very cold, effervescent, aromatic and altogether palatable and agreeable.

Important improvements have been added to the place each season since opened, and continuously kept, by the present ownership; during that time, the number of guests has annually increased.

This resort is a particularly desirable one for families and pleasure-seeking guests who desire rest and recuperation, with reasonable recreation and sociability.

Pure hot and cold water, and hot and steam sulphur baths, are free to all guests.

The board is exceptionally good, and the whole establishment is honestly and faithfully conducted, in a homelike manner, wholesome and gratifying to its large number and deserving class of visitors.

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BULL PUNCH OR TROCAR.—Mr. Burke, of 401 Montgomery street, an enthusiastic breeder and importer of Holsteins and Berkshires, has a sample Trocar just manufactured by his order in the East. They are strong, serviceable instruments and are claimed to be far better adapted to farmer's use than the fancy instruments usually costing from \$5 up. It is made of the best steel and provided with a silver-plated sheath. The punch is inserted in the nose before removing the sheath, the punch is then withdrawn leaving the sheath in the nose, the end of the bull ring is then inserted into the small end of the sheath, the ring being carefully pushed through, at the same time withdrawing the sheath; leaving the ring in the nose. The instrument is also very useful in severe cases of bloat. Its cost postpaid is only \$1. The advertisement will be found in our advertising columns.

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SUIT PENDING.—The Newark Machine Co. of Columbus, Ohio, owners of the patents of the "Imperial" Automatic Swing Straw Stacker, have brought suit in the United States Court of Chicago this week, against W. T. Shell of Polo, Ill., and Davis, Luthy & Co., of Peoria, Ills., in the sum of \$25,000 each, for building and offering for sale "Imperial" Automatic Swinging Straw Stackers that the Newark Machine Co. claim are infringing the patents belonging to them. It would be well for dealers and threshmen to beware of spurious-made stackers.

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Dewey's patent elastic binder, for periodicals, music and other printed sheets, is the handiest, best and cheapest of all economical and practical file binders. Newspapers are quickly placed in it and held neatly, as in a cloth-bound book. It is durable and so simple a child can use it. Price, size of Mining and Scientific Press, Rural Press, Watchman, Fraternal Record, Masonic Record, Harper's Weekly, and Scientific American, 75 cents; postage, 10 cents. Postpaid to subscribers of this paper, 50 cents. Send for illustrated circular. Agents wanted.

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California Inventors

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Prevents Sickness among Young Chickens.
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NOTE.—This Improved Egg Food has been in general use in this and other countries during the last ten years, and all the above repeatedly proved in thousands of cases. Your neighbor uses it.

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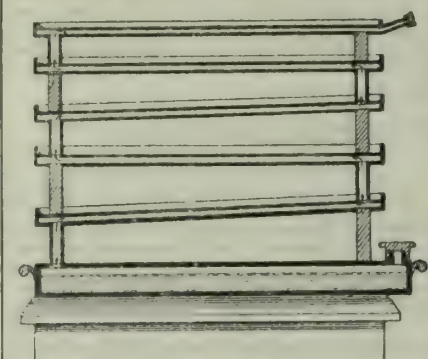
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Remember this is an Entirely New Departure,

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Is recognized as
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Always gives satisfaction. SIMPLE STRONG and DURABLE in all parts. Solid Wrought-iron Crank Shaft with DOUBLE BEARINGS for the Crank to work in, all turned and run in adjustable babbitted boxes.

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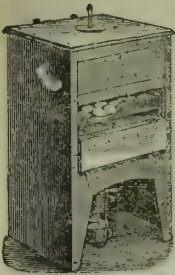


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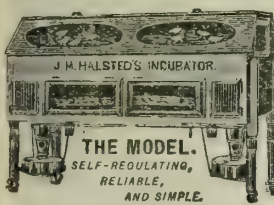
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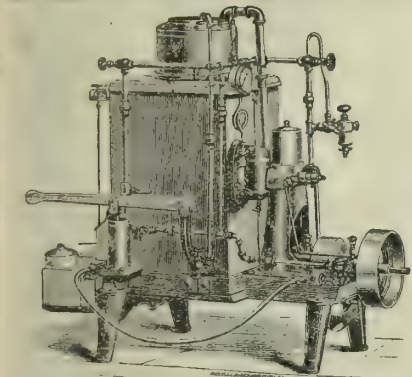


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Fruit Engravings, The finest, best and cheap. est Photographs and Engravings of Fruits, Vegetables, Houses, Farms, Landscapes, etc., made by S. F. PHOTOGRAPHING CO., 659 Clay St., S. F.

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At SACRAMENTO, Cal., Sept. 12 to 24, 1887.

\$2000 in Cash for County Exhibits.

SPECIAL ATTENTION OF THE FARMING COMMUNITY

Is called, as well as the various Immigration Societies, Boards of Trade of the several Counties, and all others interested in bringing out the resources or their respective Counties, to the advantages offered by an Exhibition at the

STATE FAIR

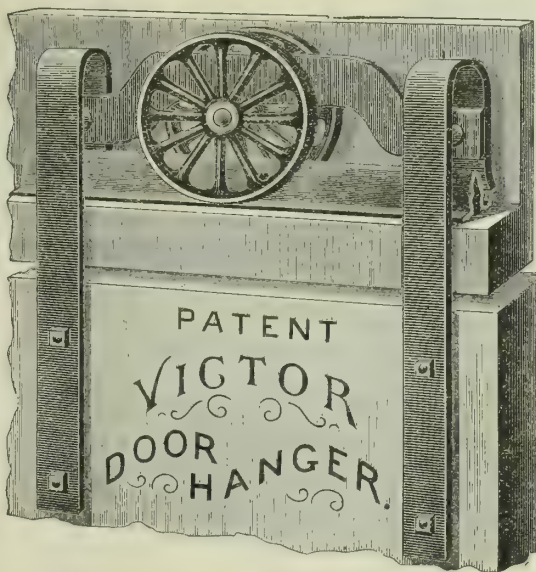
Of the varied products of their counties. The supervisors of each county are invited to make a liberal appropriation, sufficient to pay the expenses of getting together an Exhibition of County Products. Premiums received can be returned to the treasury of each county making the appropriation, so that their respective counties would be written up and advertised at a small expense by an exhibition of this character. The Railroad Company transports the same free of charge.

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APPLY FOR SPACE AT ONCE, as the Society is willing to devote the entire exposition building, if necessary, to displays of CALIFORNIA PRODUCTS. A NEW FEATURE has been added to the Premium List this year, in the shape of awards for a Sheaf Display of Cereals. Forty Sheaves, not less than 10 inches in diameter, of 10 varieties of grain are called for. Not necessary to be grown by exhibitor. Notice is now given that samples may be gathered during harvest, and laid away for exhibition. Address the Secretary for Premium Lists and other information.

EDWIN F. SMITH, Secretary.

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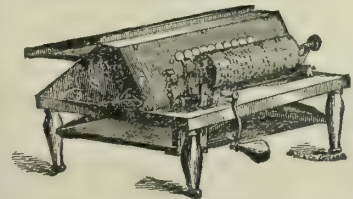
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They play the songs of every country, including those of France; For lodge, church or social meetings; for concert or a dance. No experience is needed, the tone is full and sweet, For the music is all perfect and the parts are all complete.

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NON-POISONOUS SHEEP DIP!

Mixes instantly with Cold Water.

LITTLE'S CHEMICAL FLUID.

Price, \$1.25 per Imperial Gallon.

Sold in iron drums containing 5 imperial gallons, equal to nearly 6 American gallons. One gallon mixed with 60 gallons of cold water will dip thoroughly 150 sheep, at a cost of less than one cent each; easily applied; a coultcher of wool; a certain cure for scab.

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Mixes instantly with water; prevents the fly from striking. In a 2-pound package there is sufficient to dip 20 sheep, and in a 7-pound package there is sufficient to dip 100 sheep. Price, 17 cents per pound.

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(Successors to Falkner, Bell & Co.)

406 California St., S. F.

S. H. MARKET REPORT

NOTE.—Our quotations are for Wednesday, not Saturday, the date the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, July 6, 1887.

The midsummer holidays interfered no little with general trade in country produce the past week. The weather has been and continues to be of the most favorable character, of which farmers are taking advantage by gathering their product as fast as possible. The English wheat trade has ruled quiet throughout the week. To-day's cable was as follows:

LONDON, July 6.—Cargoes off coast, quiet; cargoes on passage and for shipment, quiet but steady; Cal. wheat off coast, 39s 6d; Cal. wheat just shipped, 39s 6d; French country market, very heavy; Liverpool wheat spot, steadier; Liverpool wheat Cal. 7s 5½d to 7s 8½d.

Foreign Review.

LONDON, July 4.—The *Mark Lane Express* says: Under an unbroken drought the wheat crop promises above the average yield and is of exceptionally fine quality. All other crops in good soil look remarkably well. Spring-sown crops, on poor land, are withering. Trade in native wheat is growing worse. In London there is scarcely any offering yet, and sales are only effected at a decline. Sales of English during the past week were 15,697 quarters, at 33 shillings, against 36,246 quarters at 31 shillings during the corresponding week last year. Trade in foreign wheat was slow. Australian and American red winters are down 1 shilling. There were 7 arrivals of wheat cargoes; 3 were withdrawn and 4 remain. At to-day's wheat market, wheat at sales pressed values 1 shilling lower. Flour is 6 pence cheaper. Corn is steady. Barley is firm. Oats, owing to drought, are 6 pence to 1 shilling higher. Linseed is 3 pence cheaper.

Eastern Wheat Markets.

NEW YORK, July 6.—12 M.—Cash, 88c, July, 85½c, Aug., 84½c@84½c, Sept., 84½c@85½c, Oct., 84½c@85½c.

CHICAGO, July 6.—63½c for cash, 63½c for July, 71½c@71½c for Aug., 73½c@73½c for Sept., and 75c for Oct.

Crops at the East.

CHICAGO, July 3.—The following crop summary will appear in the *Farmers' Review* this week: Reports on yield of winter wheat now coming in corroborate our previous statements as to the shortage that might be expected. Missouri leads in her average and is followed by Illinois, while other States have the following relative position: Kentucky, Michigan, Indiana, Ohio, and last, Kansas, where the chinchbugs have done very serious damage. As yet reports on the average yield of the winter wheat crop are just beginning to come in, but the following from the different States probably furnishes correct indications of the result of the harvest: Twelve counties report an average of 17 bushels, and four counties place an average condition of 78 ½ ct. Nine counties in Indiana place the average at 14 bushels and three counties an average condition of 70 ½ ct. Seven counties in Michigan report the average yield 15 bushels. Eleven counties in Ohio report a yield of 13 bushels, while five counties report a condition of 85 ½ ct. The yield in 12 Missouri counties is 18 bushels, and the condition in three is 108 ½ ct. Five counties in Kentucky place the yield at 16 bushels. In Kansas, nine counties report an average yield of 11 bushels, and five an average condition of 55 ½ ct. Seventeen counties in Illinois complain of damage to the crops by drought. Like complaints come from six counties in Indiana, and 13 counties report damage from insects and drought. Rain is needed in Kentucky and Wisconsin, and six Missouri counties complain of drought. The condition of spring wheat in the different States is as follows: Seventeen counties in Iowa report an average condition of 74 ½ ct., while 13 counties in Minnesota place it at 75 ½ ct. Eleven counties in Nebraska report an average of 86 ½ ct., and the same number in Dakota place it at 89 ½ ct. As was expected, the hay crop turned out light and pastures were nearly everywhere dry. The prospects for the crop of apples in the West are fair to middling. In many places the fruit is dropping from the trees.

Eastern Wool Markets.

NEW YORK, July 3.—Values are very irregular for most grades, especially fleeces, with the best operating basis here still keeping below the plane of cost in the country. Old wools are nearly or quite gone.

The Philadelphia market continues quiet. A little better inquiry is noted, but it is either on wools of which there is not a sufficient assortment for active trading, or it fails to result in large sales, because of the unwillingness of sellers to make concessions. Among sales were 100,000 lbs. Territory fine, medium, at 22@23c; 33,000 lbs. Territory, fine, at 20c; 40,000 lbs. Territory, bucks, at 13c; 12,000 lbs. mountain medium at 26@27c; 5000 lbs. mountain medium at 20@23c.

The Boston market remains in an unsatisfactory condition. Among sales were 45,200 lbs. Territory at 17@18c; 65,000 lbs. Oregon, at 17@20c; 3000 pounds spring California, part at 21c.

NEW YORK, July 5.—Wool is quiet and generally steady. Domestic fleeces, 30@37c; pulled, 14@34c; Texas, 9@24c.

PHILADELPHIA, July 5.—Wool is quiet but steady and unchanged.

BOSTON, July 5.—Wool is firm and unchanged.

California Products at Chicago.

CHICAGO, July 2.—The potato market is dull and weak. The supply on sale is quite large, but there is very little demand, buyers not caring to purchase until after the 4th. Californians sold slow at \$1.50 to \$1.75 per hundred lbs. The stock of California oranges is about exhausted and the season is virtually over.

CHICAGO, July 5.—California green fruits are in good request and steady. The supply is also good;

prices quotable. Apricots, 20-lb. bxs, \$1.50@1.75; half crates, \$1.75@2.00. Peaches, 20-lb. bxs, \$2; Plums, choice, 20-lb. bxs, \$1.75@2.00; Plums, Peach, 20-lb. bxs, \$3@3.25; Plums, Royal, Hative, half crates, \$2.50@2.75; Pears, Beurre Giffard, \$2.50@3; Bartlett's, \$4.50@5. Stock in soft order sells at less prices.

California dried fruits are very quiet. The supply is small and prices steady. Pitted plums, evaporated, 10@11c; sun-dried, 10½@10¾c; apricots, evaporated, spot goods, 22@25c; evaporated, future delivery, 15@15½c; sun-dried, none here; prunes, 9@11c; raisins, London layers, 20-lb. bxs, \$1.40@1.50; loose Muscatel, per bx, \$1.25@1.30; California layers, per bx, \$1.25@1.30.

California Products in New York.

NEW YORK, July 3.—Fresh Fruit.—Auction sales of California fruits are proving attractive and profitable. On Friday 126 half-crates of plums sold at \$1.50@1.95, and 656 half-crates of apricots at \$2.05@2.30. Tangerines 75c per doz.

Dried Fruits.—California raisins are being distributed at the rate of 3000 to 5000 boxes a week, at full prices. Loose Muscatels, No. 2 Crown, \$1.20@1.25; No. 3 Crown, \$1.35@1.50; London layers, \$1.35@1.50.

Canned.—California pears are selling fairly at \$3@3.25.

New York Hop Market.

NEW YORK, July 3.—The market continues quiet. Dealers show no interest as buyers, except for moderate lots of goods that may be required for delivery to brewers on contracts, and brewers, it appears, are indifferent about making purchases. Medium grade States and Pacifics are held at about former prices, but meet with slow sales. Coast crop 1886, best, 21@23c; same, common to good, 16@20c; 1885, good to prime, 10@13c.

Local Markets.

BAGS.—The market appears to have a quieter feeling, although this may be due to the midsummer holidays. Calcutta Standard are quotable at 6½@7 cts.

BARLEY.—The market after the Fourth opened quiet, but the tone is strong, although there are many who look for lower prices, notwithstanding the short crop and heavy increased consumption. On Call to-day sales were as follows:

Morning Session: Buyer 1887—400 tons, \$1.17½ ct. Afternoon Session: Buyer 1887—300 tons, \$1.17; 200, \$1.17½. Seller 1887, new crop—100 tons, \$1.07½ ct.

BUTTER.—Choice hard, high-colored butter is hard to get. The supply of poor grades is very heavy and worked off slowly.

EGGS.—Strictly choice fresh laid are wanted, and command full prices. Off qualities are slow and low.

CHEESE.—Owing to Eastern competition, the market for Californian is narrowing, causing a lower range of values under a strong selling.

WHEAT.—Free selling of actual wheat is reported in the country, on the basis of our quotations. On Call the syndicate continues to take every ton of wheat thrown out by the bears. The latter failing to break prices by selling short are trying other tactics to send prices down, but the outlook at present is against them, for farmers are standing in with the bulls. On Call to-day's sales were as follows:

Morning Session: Seller 1887—300 tons, \$1.88½; 100, \$1.88½; 500, \$1.88½; 300, \$1.89; 200, \$1.89½; 600, \$1.89½; 100, \$1.89½; 300, \$1.89½; 100, \$1.89½; 200, \$1.89½ ct. Afternoon Session: Seller 1887—300 tons, \$1.89½ ct.

[COMMUNICATED.]

Market Information.

Cereals.

The following shows, as far as obtainable, last year's wheat crop in this State:

Exports July 1, 1886, to July 1, 1887..... 720,537
Local consumption..... 350,000
Stock in Call Board warehouse July 1..... 112,532

Total..... 1,183,069
Deduct.....
Stock on hand July 1, 1886..... 77,978
Receipts from Oregon..... 68,409 146,587

California crop..... 1,036,482

The quantity in farmers' granaries and also in interior warehouses, not Call Board warehouses, is not given, but then it will hardly go above 15,000 tons, which added to the above gives the crop at about 1,051,482 tons.

Below are given the highest, lowest and average prices of No. 1 wheat for each month of the past cereal year. Quotations are based on actual sales in the sample market, and not on Call Board figures.

Month.	Average.	Highest.	Lowest.
July 1886.....	1.24	1.27½	1.20
August.....	1.30½	1.37½	1.25
September.....	1.33½	1.37½	1.30
October.....	1.34½	1.40	1.30
November.....	1.39½	1.45	1.35
December.....	1.48	1.52½	1.43½
January 1887.....	1.57½	1.65	1.52½
February.....	1.50½	1.65	1.42½
March.....	1.58½	1.70	1.48½
April.....	1.70½	1.76½	1.67½
May.....	1.75	1.80	1.72½
June.....	1.80½	1.85	1.75
For the 12 months.....	1.52½	1.87½	1.20

The local wheat market has been inactive since Thursday last, owing to the holidays. Crop advices are fairly favorable, although continued shelling is reported, in some sections, heavy, but in the most of the others, light. Oregon advices continue favorable, with the yield east of the Cascades reported a full average to the acre.

Eastern mail advices are confirmatory of a light turnout of winter wheat, but spring equal to last year, which was 6,000,000 bushels more than in 1885. The visible supply on July 4 was 34,400,000 bushels; a falling off for the week of nearly 5,000,000 bushels.

The following are the latest mail advices from England: *Dornbusch's*, of June 17, says: "Days of golden sunshine and nights of high temperature have worked wonders in the aspect and position of

the cereal crops in the United Kingdom. Wheat is growing rapidly and barley and oats are flourishing apace, but the two latter want warm rain and plenty of it to bring them into prime condition. The season is still a fortnight behind the average, but taken all around the prospect is said to be more hopeful than it was at this time last year. In France the weather is very favorable and 'earring' is now taking place in the earlier districts. Germany and Belgium are also rejoicing in fine, brilliant weather, with a consequent improvement in the outlook for harvest."

Beerbohm, of June 17, says: "Another week of forcing summer weather has further greatly improved the appearance of the crops in the United Kingdom, and the progress of vegetation is as satisfactory as it is astonishing compared with the state of the plant a few weeks ago. It is true that the earing time is a full fortnight late, but with a continuance of the present weather, it is evident that the yield of wheat will likely prove superior to the short crop of last year. In France there has been an equally decided change for the better, and the outlook for the crops is now considered favorable for a fair average yield. In some parts of Germany there are complaints, but generally speaking the outlook in that country is also favorable."

Receipts of barley at this port the past crop season were 2,200,000 cts, against 1,115,079 cts the season of 1885-86. The exports were 925,664 cts against 219,886 cts the season of 1885-86. The average price of No. 1 feed was as follows:

Month.	Average.	Highest.	Lowest.
July 1886.....	.86 4-5	.97½	.77½
August.....	.88	1.00	.80
September.....	.90½	.95	.87½
October.....	.94½	.97½	.90
November.....	1.02½	1.07½	.95
December.....	1.05½	1.10	1.00
January 1887.....	1.12	1.20	1.02½
February.....	1.05½	1.17½	.92½
March.....	1.01½	1.07½	.95
April.....	1.08½	1.15	1.05
May.....	1.11½	1.20	1.02½
June.....	1.07	1.10	1.02½
Total 12 months.....	1.00½	1.20	.80

The average spot price of No. 1 feed barley for the following years was:

Year.	Price.
1882-83.....	\$1.25½
1883-84.....	.94½
1884-85.....	.97 1-10
1885-86.....	1.23
1886-87.....	1.00½

Charters to U. K. are, in this month, \$2.50 (12½c per ct) per ton less than in July, 1886.

The receipt of oats last crop season was 455,624 cts, against 700,639 cts, the season of 1885-86.

Oats closed dull and heavy, with light trading. New oats will soon put in an appearance.

In rye and buckwheat there is nothing doing, owing to light supplies and no demand.

Corn is easy under liberal supplies and an inactive demand. Crop advices are fairly favorable.

Exports of wheat from India for the week ending June 25th were 1,140,000 bushels, of which 380,000 bushels were to the United Kingdom and 760,000 bushels to the continent. The total shipments from January 1st to June 25th were 16,940,000 bushels, of which 7,940,000 bushels were to the United Kingdom and 9,000,000 bushels to the continent.

Interior advices report that the yield of barley on the lowlands and tules will be large to the acre, and of good quality. In the large barley-producing counties the crop, it is now said, will be less than heretofore claimed.

Quantity of barley on passage to United Kingdom June 9th, reported at 850,000 bushels against 640,000 bushels for corresponding time in 1886.

Quantity of wheat on passage to France June 10th, reported at 3,200,000 bushels against 656,000 bushels for the corresponding week in 1886.

Crops in France are in better condition, though the harvest will be late. Rye is ripening well, but the yield will only be an average.

The area devoted to flaxseed in Berar, India, is reported at 386,376 acres, against 618,224 acres last year, a decrease of 37½ per cent.

The wheat crop in New South Wales is reported at 5,955,000 bushels, against 2,768,000 bushels during the previous year—the largest yield since 1870. The average per acre was 17½ bushels.

It is believed that the acreage under wheat in the United Kingdom this year will show an increase of five per cent over that of the previous year, the increase being largely at the expense of barley and oats.

The highest price ever reached by wheat in Chicago was \$2.85 per bushel, in the year 1867, and the lowest price was 55c per bushel, in 1861.

Feedstuff.

Notwithstanding the receipt of hay in this city was 111,176 tons from July 1, 1886, to July 1, 1887, against 84,612 tons the same time in 1885-86, still prices kept up better than during the latter time, which goes to prove the very large increased consumption. The market to-day is quiet, but strong, with holders not pressing the market, believing in better prices later on.

Owing to several flouring mills temporarily shutting down, the supply of bran and middlings is light, causing a firmer market. Other ground feeds are without change.

Fruits.

Cantaloupes are making quite a show. A few watermelons have come in, but not enough to justify quoting. Grapes are coming in more or less green, and otherwise poor. Choice grapes would find a quick market.

Apricots appear to have touched their lowest figure for the better varieties.

Choice peaches are coming in more freely, but as yet the trade only buys—too high for canners.

Plums are in fair receipt, but the more choice have not put in an appearance, or, at least, none are quoted.

Currants have a wide range, owing to quality. Poor currants are in oversupply.

Blackberries and raspberries are gradually settling under freer receipts. Canners are not taking in yet—too high.

Strawberries are being cleaned up from day to day by canners, at from \$3.50 to \$4 per chest. The trade pay more.

Raisins are in light stock, with the more choice

grades hard to get. This year's crop promises to be larger than that of 1886, and of a much better grade.

Apples are showing to better advantage, but prices do not appreciate, owing to free receipts.

Cherry plums are hard to sell.

Dried fruits continue to come in slowly. More apricots are at hand, and are readily placed at from 12 to 14½c per lb.

Live-Stock.

Heavy sales of beef cattle are reported in different parts of the State, and also in Nevada, and, as a rule, above prices obtainable in this city. Why prices are kept down here is becoming quite a question, but those in position to answer are non-committal. The consumption continues light. Mutton sheep have a firmer tone, owing to the flocks being in the mountain ranges. Calves are in light supply. Hogs are firmer under a growing scarcity. The supply of dairy fed is about exhausted, while the grain fed will not be ready for some weeks. Hogs fed on acorns are very scarce; last year at this time there was a heavy supply, but now there are very few. The market is dull for work horses, but strong with quick sales for roadsters, single-footers, and matched teams.

The following are the wholesale rates to slaughterers to butchers:

BEEF—Extra, 7½c; first grade, grass fed, 6½@7c per lb.; second grade, 6c; third grade, 4½@5½c.

MUTTON—Ewes, 5@5½c; wethers, 6@—c.

LAMB—Spring, 7@8c.

VEAL—Large, 6@7c; small, 6@8c.

PORK—Live hogs, 4½@5c for heavy and medium; hard dressed, 7@7½c per lb; light, 4½@5c; dressed, 7@7½c; soft hogs, live, 3½@4c. On foot, one-third less for grain or stall fed, and one-half less for stock running out.

Vegetables.

Cabbages are slower, but no lower, as are root vegetables.

Potatoes come in more liberally, but prices keep up, owing to the active demand. The quality shows an improvement over last year.

Onions are steady at full prices. Hard keepers are quickly taken at full figures.

String beans are not of the best, and consequently move off slowly.

Cucumbers, tomatoes, summer-squash, and peppers are mending slowly under free receipts.

Green corn is strong and higher, owing to the first crop being about out of the market.

Miscellaneous.

The tonnage movement compares with last year at this date as follows:

	1887.	1886.
On the way.....	260,092	306,703
In port, disengaged.....	119,612	33,319
In port, engaged.....	13,222	27,324

Totals..... 392,926 367,346

The above gives a carrying capacity as follows: 1887, 628,781 short tons; 1886, 587,753 short tons; increase over last year, 40,928.

A correspondent wishes to know how to "tell fresh-laid eggs from those slightly off." The shell of a fresh-laid is rough, but the shell of an egg "slightly off," or not fresh-laid, is smooth and feels more or less oily.

Poultry under light receipts have ruled strong and higher throughout the week.

Beans are slower, with a weaker tone, and some concessions made.

Choice fine wools are firm in sympathy with the East, and also Europe, but poorer grades move slowly.

Hops are being more inquired after by local brewers, owing to an increased consumption of beer. Quotations cover the range of the market.

Provisions have a stronger tone, owing to Eastern telegrams reporting a lighter supply of hogs and prices stiffening.

San Francisco, July 6, 1887.

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, July 6, 1887.			
Apples, bx com.	30 @ 50	Pigs, loose.....	3 @ 4
do choice.....	50 @ 70	do, local.....	8 @ 10
Apricots, bx.....	35 @ 70	do evaporated.....	16 @ 20
do Royal.....	35 @ 50	Peaches.....	@ —
Bananas, bunch.	2 00 @ 3 25	do pared.....	@ —
Blackberries, ch.	5 00 @ 8 00	do evaporated.....	@ —
Oranblonnes, ch.	2 00 @ 3 00	Pears, Altona.....	5 @ 6
Cherries white bx.	40 @ 60	do grid.....	4 @ 5
do black bx.....	50 @ 75	do evaporated.....	8 @ 10
do Royal Ann.....	75 @ 1 25	Plums, pitted.....	9 @ 10
Cherry plums.....	30 @ 50	do unpitted.....	3 @ 5
Cranberries.....	10 @ 12	Prunes.....	6 @ 10
Currants ch.....	2 50 @ 5 00	do French.....	8 @ 12½
Gooseberries lb.	24 @ 75	Zante Currants.....	8 @ —

RAISINS.

Grapes.....	25	@	1 00	Imperial Cabu-		
do Rose Peru.....	—	@	—	et. fancy.....	1 75	@ —
do Muscat.....	—	@	—	Crown London.....		
do Tokays.....	—	@	—	Layers, fcy.....	1 50	@ —
Isabel.....	—	@	—	do Loose Mus-		
Wine, Zinfandel.....	—	@	—	catels, fancy	1 40	@ —
do Mission.....	—	@	—	do Loose Mus-		
Limes, Mex.....	11 00	@	—	catels.....	1 35	@ —
do Cal. box.....	—	@	—	Cal. Valencia.....	1 25	@ —
Lemons, Cal, bx	2 00	@	3 50	do Layers.....	1 25	@ —
do Sicily, box	6 00	@	—	do Sultanas.....	1 25	@ —

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

BEANS AND PEAS. Paper shell..... 19 @ 20
Bayo, cti..... 1 90 @ 2 50
Butter..... 1 75 @ 2 00
Peanuts..... 1 80 @ 2 00
Red..... 1 40 @ 1 55
Pink..... 1 25 @ 1 50
Large White..... 1 90 @ 2 00
Small White..... 1 75 @ 2 00
Lima..... 1 75 @ 2 25
Fid Peas, blk eye 1 00 @ 1 05
do green..... 1 00 @ 1 12
do Niles..... 1 25 @ 1 50
BROOM CORN
Southern per ton 50 @ 75
Northern per ton 50 @ 75
CHICORY
California..... 52 @ 61
German..... 52 @ 71
DAIRY PRODUCE, ETC.
BUTTER
Cal. fresh roll, lb. 16 @ 20
do Fancy brand 21 @ 22
Pickle roll..... 20 @ 24
Firkin, new..... 16 @ 20
Eastern..... @
CHEESE
Cheese, Cal., lb. 8 @ 9
Eastern style..... 10 @
EGGS
Cal. ranch, doz. 23 @ 25
do store..... 18 @ 20
Ducks..... @
Oregon..... @
Eastern..... 18 @
FEED
Bran, ton..... 23 00 @ 24 00
Cornmeal..... 28 00 @
Grd Barley ton..... 25 00 @ 26 00
Hay..... 9 00 @ 15 00
Middling..... 26 00 @ 28 00
Oil Cake Meal..... 26 50 @ 28 50
Straw, bale..... 40 @ 60
FLOUR
Extra City Mills 4 95 @ 5 70
do Country Mills 4 45 @ 5 45
Superfine..... 3 70 @ 4 45
GRAIN, ETC.
Barley, feed, cti. 1 10 @ 1 17
do Brewing..... 1 15 @ 1 25
Chevalier..... 1 45 @ 1 60
do Coast..... @
Buckwheat..... 1 00 @ 1 20
Corn, White..... 1 15 @ 1 25
Yellow..... 1 10 @ 1 20
Small Round..... 1 20 @ 1 30
Nebraska..... 1 07 @ 1 15
Oats, milling..... 1 75 @ 1 80
Choice feed..... 1 60 @ 1 65
do good..... 1 50 @ 1 57
do fair..... 1 45 @
do black..... @
do Oregon..... @
Bys..... 1 25 @ 1 50
Wheat milling
Gilt edged..... 1 87 @ 1 92
do Choice..... 1 82 @ 1 87
do fair to good 1 77 @ 1 80
Shipping choice 1 85 @
do fair..... 1 75 @
HIDES
Dry..... 14 @ 16
Wet salted..... 7 @ 8
HONEY, ETC.
Beeswax, lb..... 20 @ 22
Honey in comb. 10 @ 13
Honey in comb.
Lancy..... 13 @ 14
Extracted, light 5 @ 5
do dark 3 @ 4
HOPS
Oregon..... 17 @ 22
California..... 15 @ 22
ONIONS
Pickling..... @
Red..... 60 @ 65
Silver..... 60 @ 65
NUTS—JOBBING
Walnuts, Cal., lb. 13 @ 14
do Chile..... @
Almonds, bds. 5 @ 7
Soft shell..... 18 @ 19
POYATOES
Burbank..... @
Early Rose..... @
Cuffey Cove..... @
Jersey Blues..... @
Petaluma..... @
Tomas..... @
River road..... @
Humboldt..... @
do Kidney..... @
Chile..... @
do Oregon..... @
Peerless..... @
Salt Lake..... @
New Potatoes..... 50 @ 95
POULTRY AND GAME
Hens, doz..... 6 00 @ 8 00
Roosters..... 5 50 @ 11
Broilers..... 3 00 @ 7
Ducks, tame..... 4 50 @ 6
do Mallard..... @
do Sprig..... @
Geese, pair..... 1 00 @ 1 50
do Goslings..... 1 25 @ 1 50
Wild Gray, doz 18 @ 20
Turkeys, lb..... 18 @ 20
do Dressed..... @
Turkey Feathers, tail and wing 10 @ 20
Snipe, Eng., doz @
do Common..... @
Doves..... @
Quail..... @
Rabbits..... 1 00 @
Hare..... 1 25 @
Venison..... @
PROVISIONS
Cal. Bacon, Heavy, lb..... 8 @ 9
Medium..... 9 @ 14
Light..... 10 @ 11
Extra Light..... 11 @ 12
Lard..... 8 @ 12
Cal. Smoked Beef 11 @ 12
Hams, Cal..... 12 @ 14
do Eastern..... 14 @ 14
SEEDS
Alfalfa..... 8 @ 9
Canary..... 3 @ 4
Olive red..... 10 @ 12
White..... 15 @ 17
Cotton..... 20 @
Flaxseed..... 2 @
Hemp..... 4 @ 4
Italian Rye Grass 25 @ 26
Perennial..... 7 @
Millet, German..... 4 @ 5
do Common..... 7 @ 10
Mustard, white..... 2 @ 3
Brown..... 2 @ 3
Rape..... 1 @ 2
Ky. Blue Grass..... 11 @ 13
2d quality..... 11 @ 12
Sweet V. Grass..... 7 @
Orchard..... 20 @ 25
Red Top..... 15 @
Hungarian..... 8 @ 10
Lawn..... 30 @ 40
Mesquit..... 10 @ 12
Timothy..... 5 @
TALLOW
Crude, lb..... 2 @
Refined..... 6 @
WOOL, ETC.
SPRING—1886
Humboldt and Mendocino 21 @ 26
Sact' valley..... 18 @ 24
Free Mountain..... 21 @ 26
N'bern defective @
S. Joaquin valley 13 @ 19
do mountain..... 16 @ 21
Cava's & F'hill..... 16 @ 21
Oregon Eastern..... 18 @ 25
do valley..... 20 @ 27
Southern Coast..... 11 @ 18

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.]

DATE.	Portland.				Red Bluff.				Sacramento.				S. Francisco.				Los Angeles.				San Diego.			
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.
Jun. 30-July 6																								
Thursday.....	.00	68	Nw	Fr.	.00	96	S	Cl.	.00	82	SW	Cl.	.00	61	W	Cy.	.00	80	W	Cl.	.00	68	Nw	Cl.
Friday.....	.00	70	Nw	Fr.	.00	96	N	Cl.	.00	82	SW	Cl.	.00	62	SW	Cl.	.00	82	W	Cl.	.00	68	Nw	Cl.
Saturday.....	.00	72	Nw	Cl.	.00	100	N	Cl.	.00	80	SW	Cl.	.00	62	W	Cl.	.00	82	W	Cl.	.00	64	Nw	Cl.
Sunday.....	.00	72	Nw	Cl.	.00	94	S	Cl.	.00	84	SW	Cl.	.00	59	W	Cl.	.00	82	SW	Cl.	.00	68	W	Cl.
Monday.....	.00	72	Nw	Fr.	.00	100	N	Cl.	.00	90	SW	Cl.	.00	61	W	Cl.	.00	78	W	Cl.	.00	66	Nw	Cl.
Tuesday.....	.00	78	Nw	Cl.	.00	162	N	Cl.	.00	90	SW	Fr.	.00	66	W	Cl.	.00	86	SW	Cl.	.00	72	SW	Cy.
Wednesday...	.00	80	Nw	Fr.	.00	96	S	Cl.	.00	84	SW	Cl.	.00	60	W	Cl.	* T	86	SW	Fr.	* T	66	S W	Cy.
Total.....	.00				.00				.00				.00				* T				* T			

EXPLANATION.—Cl. for clear; Cy. cloudy; Fr. fair; Fy. foggy; — indicates too small to measure. Temperature, Wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. Note "T" indicates precipitation inappreciable.

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THE CEDAR SPRINGS SAWMILL.—H. D. Barton has purchased the machinery of the Cedar Springs sawmill in Tulare county, and will remove it to Pierce valley and saw the timber of that region. Mr. Barton states that there is a fine body of timber around Pierce valley that has escaped the attention of timberland seekers, and that he intends to have his sawmill in operation there by the 1st of August next.—Tulare Times.

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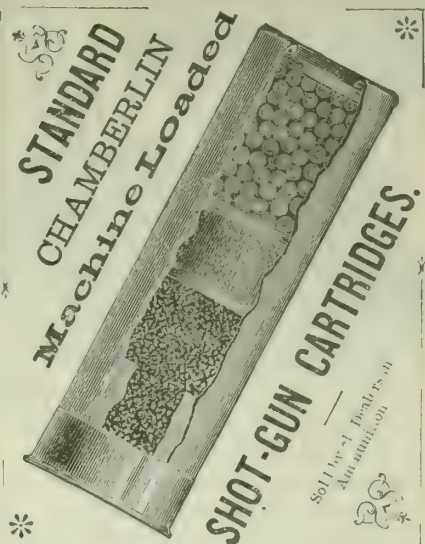
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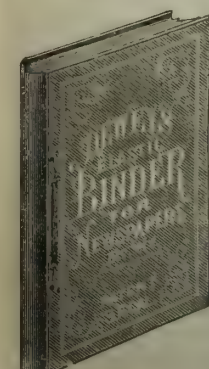
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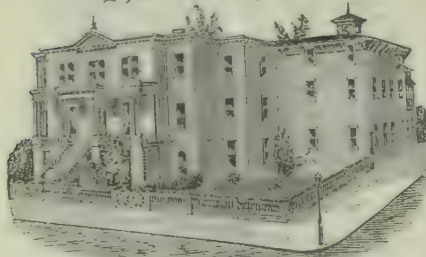
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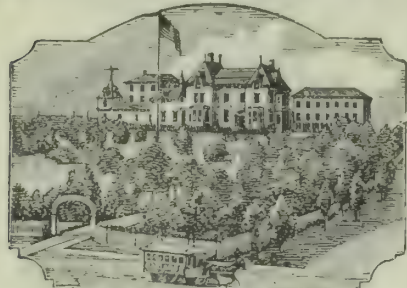
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UNIVERSITY OF CALIFORNIA, Nov. 3, 1886.

Dr. J. KOBBS—Dear Sir: I have analyzed your sample
of "Nitrogenous Superphosphate," with the
following result:

Soluble Phosphoric Acid.....	12.90 per cent
Reverted Phosphoric Acid.....	.95 "
Insoluble Phosphoric Acid.....	2.33 "
Potash.....	2.23 "
Ammonia.....	1.87 "
Nitric Acid.....	2.95 "

The above amount of Nitric Acid is equal to 0.85
per cent Ammonia, therefore, total of Nitrogen calcu-
lated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vine-
yards, orchards, gardens, farms, and I recommend its
use by the cultivators of the soil generally, in Cali-
fornia. Yours truly, DR. E. A. SCHNEIDER.

University of California, College of Agri-
culture.

BERKELEY, Nov. 20, 1886.

Dr. J. KOBBS, San Francisco—Dear Sir: I take pleas-
ure in adding my testimony to that of Dr. Schneider as
to the high quality of the "Nitrogenous Super-
phosphate" Fertilizer, analyzed by him at your re-
quest. It is a high-grade article, and as such re-
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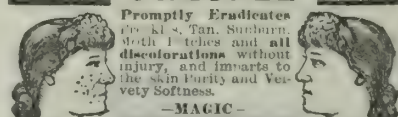
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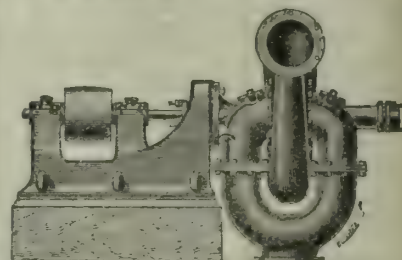
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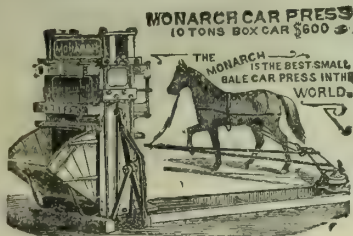
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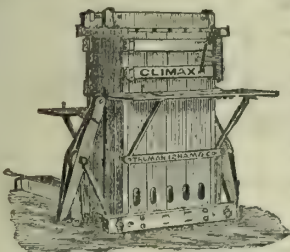
THE MONARCH. JR.. HAY PRESS.



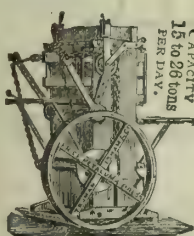
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Has three or four times the capacity of Eastern-made presses, with the same number of men and horses.

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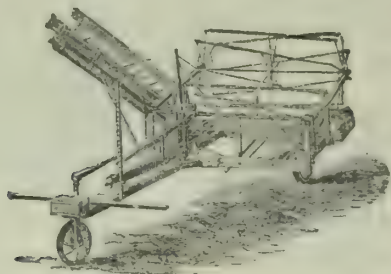
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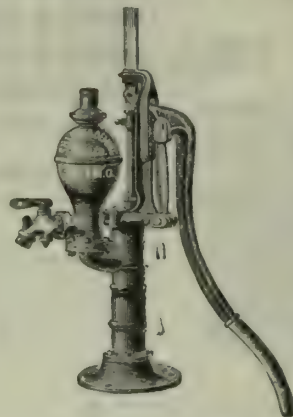
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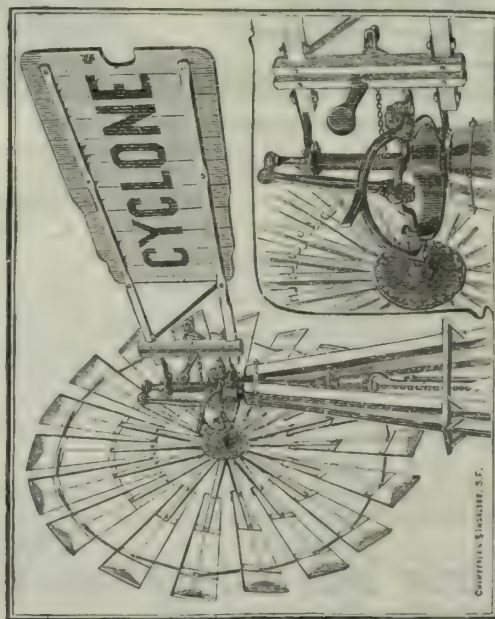
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Vol. XXXIV.—No. 3.]

SAN FRANCISCO, SATURDAY, JULY 16, 1887.

\$3 a Year, in Advance
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The Sweet Gum.

Readers of the RURAL who came hence from the Sunny South, and have learned to mean the eucalyptus when they talk of "gum tree," will be pleased to return for a moment to the "gum tree" of their earlier days, which is inexpressibly handsomer than the importations from Australia. Our engraving shows a twig of the highly prized tree of the South. It is from a recent report of Dr. Vasey, United States Botanist, who includes it in his list of native medicinal plants.

The sweet gum is a large tree, native in the United States from Connecticut westward to Illinois, southward to Florida and Texas, thence into Central and Southern Mexico. It belongs to the witch-hazel family (*Hamamelaceæ*). It grows from 80 to 150 feet high, reaching its greatest development in bottom-lands of the Lower Mississippi. Its symmetrical, compact form and bright, glossy, star-shaped leaves make it one of the most beautiful trees of the forest. The flowers are of two kinds, the male and female being in distinct clusters; the male flowers are in a raceme of small, globular clusters at the end of the twigs, having very many stamens intermixed with small scales. The female flowers are situated below the male ones; they are inconspicuous at first, but gradually enlarge into a round head or cluster of two-celled ovaries, each with two beak-like points, the whole when mature forming a globular, spiny ball of about an inch diameter, shown in the engraving. The leaves are from three to six inches in diameter, rounded in outline, and divided into from three to seven, usually about five, pointed lobes. They are smooth and shining, finely serrated on the margins, and fragrant when bruised. In the warm portions of the country and in Mexico a balsamic juice flows from the tree, which has medical properties. The United States Dispensatory states that this juice "is a liquid of the consistence of thin honey, more or less transparent, of a yellowish color, of a peculiar, agreeable balsamic odor, and a bitter, warm and acrid taste. It concretes by time, assuming a darker color. It is sometimes collected in the form of tears, produced by the spontaneous concretion of the exuded juice." This resinous gum has properties very similar to that of the true storax which is yielded by an allied species of *Liquidambar* growing in Asia Minor. The gum of our native tree has been collected to a considerable extent for the preparation of chewing-gum; it has also been medicinally employed for the same purpose as storax, in the treatment of catarrhal affections and of pulmonary complaints.

LOS ANGELES POMOLOGISTS.—The meeting of the Los Angeles County Pomological Society held last week at Orange must have been an occasion of much interest. Essays were read by Milton Thomas and D. Edson Smith, and a poem by the horticultural poet laureate, A. V. Kercheval. Mr. Coquillet made an address on fruit pests. We expect to refer to these matters hereafter. Milton Thomas reported a plan for holding a fair in Los Angeles from Sept. 12th to the 19th, and then send all the good portions of the exhibit to the Grand Army exhibition at St. Louis. The plan was adopted and the Executive Committee was instructed to carry it out. A Working Committee was appointed to collect the exhibits.

CONDENSED MUST.—J. De Barth Shorb of Los Angeles states that the movement looking toward the manufacture of condensed grape must for exportation is progressing. Two machines are being made in this city according to Dr. Spruegmuhl's plans. They will each cost about \$25,000. The copper for the vacuum pans, the essential part of the apparatus, arrived recently, and the work is going forward rapidly. The contract calls for the com-

London. Mr. Shorb says he believes the company can guarantee that generally an increased price will be paid for the grape products. He says he told a Fresno man, who last year sold his grapes for \$9 a ton, that for that quality of grapes they could afford to pay \$15.

GRAIN BAGS MAY RETURN FREE.—In a circular to customs officers, Assistant Secretary of the Treasury Maynard says: Grain bags man-



THE SWEET GUM OF THE SOUTH—*Liquidambar styraciflua*.

pletion of one of the machines by September 20th and the other as soon thereafter during the vintage as possible. One of the machines will go south, and one will remain in one of the northern vineyard districts. Each machine has several parts—a grape-crusher, an apparatus to extract the seeds and another to press the skins. The skins are pressed and shipped with the must. Each of these machines will have a capacity for disposing of about 80 tons of grapes a day. The process of condensing is a quick one. In about four hours from the time the grapes from the vineyard are put into the machine the condensed must will be ready for shipment. It will be shipped in barrels or casks direct to

factured in the U. S., when exported filled with American products, may be returned to the U. S. free of duty, notwithstanding that such bags were manufactured from foreign materials. This decision will be applied to all future importations of returned grain bags and other coverings of exported merchandise which may be of the manufacture of the United States.

THE California Kennel Club has decided to hold a bench-show in this city some time next month. Over 200 dogs are already booked, and will probably be exhibited in Odd Fellows' hall.

COLTON has elected to incorporate as a city of the sixth class. The vote, which was taken on the 11th, stood 116 to 57.

Forestry.

It is announced that a meeting of the State Board of Forestry will probably soon be held to consider the important measures which the Board has now in progress or in contemplation, and to decide upon a line of work for the coming season. Some months ago an importation of Australian tree-seeds, chiefly Eucalyptus, was distributed in the southern part of the State, and probably reports of growths secured for planting-out will be made. It is contemplated to establish a forestry experiment station in the neighborhood of Santa Monica, Los Angeles county. Naturally, the Board would look first to the extreme south of the State because of the lack of forest in that district.

It is announced that if funds are sufficient another station will be established in the upper part of the State. It is reported that the work of the Commission in stopping timber-cutting on school lands has been quite effective. Other depredations are, however, of more or less frequent occurrence, particularly the burning of large tracts of timber by criminal carelessness of campers and others. This is the main reason for the organization of a forest guard. As far as the funds of the Commission will allow, parties will be paid for performing this duty; but in order to make it still more effective, the services of volunteers will be asked for, and to this call there should be responses from all persons residing in the timbered portions of the State.

It seems after all that no Arbor Day has been established for California. The Legislature passed the bill fixing Washington's Birthday as Arbor Day, but the Governor failed to approve it. The bill may have been attended by provisions which he did not favor, but we cannot see what objection there can be to enrolling California among the many progressive States which are increasing their arboreal resources very fast by the general interest which the people take in Arbor Day celebrations. We trust the matter will certainly prevail at the next Legislature.

STATISTICS OF THE GRAPE CROP.—Clarence J. Wetmore, secretary of the Viticultural Commission, is sending out circulars calling for reports from vine-growers on the condition and prospects of the grape and wine product for the coming vintage. Information is asked concerning injury from frost and various vine diseases; the aggregate grape crop this year as compared with last, the special varieties which yield well and those which do not; general remarks concerning matters of importance in the district. Any grape-growers' help in this matter will no doubt be welcomed, and blanks for reports will be furnished on application to Mr. Wetmore, at 204 Montgomery St., S. F. We hope the reports will be full and wide-reaching and promptly made, for correct statistics on this subject are of great importance.

CALIFORNIA FRUIT-GROWERS.—B. M. Lelong, secretary of the State Board of Horticulture, estimates that there are at present 12,000 orchard-owners in California, and that during the past five years their ranks have been recruited at the rate of 1000 per year. This includes, of course, new-comers who have planted orchards and the many who have been won from grain or stock farming to devote part of their land to the growth of fruit.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

In the Santa Paula Country, Ventura County.

EDITORS PRESS:—In our descent of the Santa Clara valley of the south, on leaving that portion heretofore mentioned as the Valley of the Sespe, we enter the Santa Paula country, at the distance of about 18 miles from the coast. The country here intended to be specially mentioned extends down the Santa Clara some six miles to the termination of the mountains on the south side of the valley, only some four miles above the village of Saticoy. This section includes the narrow valley of the Santa Paula river, which enters the Santa Clara valley about two miles below our starting-point, and extends in its ascent several miles northwardly and in the direction of the Ojai valley.

Healthfulness being one of the greatest of considerations in our determination of the desirableness of a country for a place of residence, we notice that this Santa Paula section may be considered as division ground between the frequently recurring fogs of the coast and the drier atmosphere of the valleys above. Within the immediate influence of the fogs the climate may be considered healthful except for persons afflicted with lung or throat diseases, or rheumatic affections; but, owing to the great humidity of the atmosphere, persons coming within these exceptions would be far better off living in the Upper Santa Clara valley or some of its tributaries, where the altitudes are greater and where the fogs do not usually penetrate. At times considerable winds prevail in the Santa Clara valley, but unless accompanied by fogs their influence is not considered detrimental to health.

The Town of Santa Paula

Is situated near the confluence of the Santa Paula and Santa Clara rivers, 16 miles east of San Buenaventura, is a trading post, has a depot on the S. P. R. R. Coast Extension, publishes a newspaper, and has several good business establishments. Being in the midst of a fine agricultural region, this place bids fair to become a desirable location for business, and since the building of the railroad to this point, and now on further, it is rapidly increasing in population and importance. The inhabitants are supplied with an abundance of good water, taken from Santa Paula river, several miles above. We notice the fine, commodious schoolhouse here, which speaks a volume for the intelligence and enterprise of the country.

Neighboring Farms.

Within the boundaries of this section are many flourishing ranches, exhibiting a high state of cultivation, with much the same capabilities as to production of live-stock and range as to varieties of crops as those enjoyed by the upper portions of the valley. Both the climate and food seem extremely well adapted to the raising of fine horses and cattle, and we intend, in a separate chapter, to notice the fine stock ranch of W. L. Hardison, one mile north of Santa Paula.

Wheat, barley, beans and corn are the staple field crops. Great quantities of barley hay are raised in all this valley. The lima bean is planted extensively. Persons just from the East, for the first time, on visiting this country, might be curiously struck with the fact of being able to raise a large crop of lima beans without a stick or pole to run them on; but people who pass one summer in our atmosphere will witness the dry surface of the soil, and need no further enlightenment on this subject. Enough moisture is retained in the ground to raise field crops, such as above mentioned, to perfection, and yet the surface remains so dry that no uneasiness exists with reference to mold or decay of beans or other crop running on the ground. Early and thorough plowing is an indispensable prerequisite to the raising of such crops. By the means of frequently breaking the surface of the ground in the early part of the season, when the same will not interfere with growth or the running of the vine, sufficient moisture is retained to secure the crop. Both Irish and sweet potatoes of first-rate quality are, on good authority, reported to be grown here, and so may properly be included among the important field crops of the country.

The Soils.

The soil of the Santa Clara valley here changes from the sandy formation of the upper valley to what Prof. Hilgard describes as a "dark-gray silty loam of great depth and remarkable for its retention of moisture near the surface." This is descriptive of the soil of the lower portions of the valley in the Santa Paula region and on down to the coast. In describing the valley soil taken from Mr. N. B. Blanchard's orange orchard near Santa Paula, Professor Hilgard remarks: "The color of this soil is a light amber, and when wet blackish and silty, very easily tilled, and retaining its tilth remarkably, so that the hand can easily work its way up to the elbow, and an ax-handle can be thrust down to the head with little exertion. The material remains apparently the same for from 12 to 20 feet in the lower bench of the valley where this sample was taken. Toward the hills there is a second bench, where the soil is apparently the same, but of a slightly reddish tint. On the mountain slopes the soil, still quite similar in its working qualities, is of a decidedly reddish tint, and is remarkable for its retention of natural moisture,

enabling it to produce corn without irrigation."

The orange orchard of N. B. Blanchard, mentioned by Prof. Hilgard as above, is by far the largest orange orchard in the county. We called to see the place and take notes of its history, but unfortunately Mr. Blanchard was away from home, having gone to Los Angeles, and no one present who could give us any important information. We understand from others that there are here about 100 acres in orange trees. The orchard appeared to be kept clean and the trees, as far as our observation extended, in good bearing condition. We saw none of the fruit, as it appeared to have all been picked. We were not over the orchard, but, under the circumstances, contented ourselves with driving along the road at the side.

In what is called the Santa Paula canyon, (the same being the Santa Paula valley before mentioned), one mile north of the town of Santa Paula, H. Crumrine has 500 orange trees 11 years old, principally seedlings, with a few of the Navel, Mediterranean Sweet, and Eureka varieties, remarkably clean limbed and free from disease, having neither smut nor scale. The trees are in fine bearing, and the fruit of good size and excellent flavor. He has about 30 lemon trees of Eureka, Lisbon, and Sicily varieties, all doing well. He has also a hedge of lime trees bearing excellent fruit. The condition of the trees and fruit of this orchard speaks well for what may be done in the way of raising fruits of the citrus family in this neighborhood.

The soil in Mr. Crumrine's orchard is for the first three or four feet in depth gravelly, having been washed from the hills on the west side of the valley. Under this, Mr. Crumrine reports a deep, rich loam from 8 to 25 feet in depth.

Deciduous Fruits.

As a representative place we will notice the very attractive orchard of J. F. Cummings, four miles below Santa Paula. Mr. Cummings has many kinds and varieties of fruit. We note the Eastern black walnut, now about eight years old, and which bore at seven, and now in the second year of its bearing. The English walnut is regarded as the best tree for profit that can be planted in this valley. Mr. C. is this spring planting 40 acres of this valuable nut-bearing tree. Of soft-shells there are now a number bearing, but the trees are not thrifty. This variety of the walnut at this place is condemned as liable to grow long-limbed on one side, high up, which unbalances and throws the tree substance into unsightly and disproportioned shapes and to the great injury of the balance of the tree.

The apricot is a great grower and bearer. The tree seems to love the salty atmosphere coming up from the ocean and leans in that direction, its strongest limbs reaching out even against the winds that during the day blow up the valley. All other trees lean in the opposite direction. Of varieties the Large Early bears almost every year, and is considered the most desirable for all purposes. The Moorpark is here, as in most places in the State, a shy bearer.

Of other fruits the peach is considered generally a good bearer. Apples do fairly. The Yellow Bellflower, Yellow Newtown Pippin, Early Harvest, Red Gum and White Winter Pearmain are considered the best for this place. Of plums he has a blue seedling, which is a fine bearer, but no other plums do well. We understand that plums and prunes do fairly in some places. Cherries here, as in most places in the county, are a failure. The loquat is considered an important fruit, bears every year, coming in at the last of April and first of May when much needed. The Japan persimmon bears heavily every year. The fig all over this region promises a good success. Almonds budded, do not, at this place do well. Some seedlings in the neighborhood bear well, which indicates the direction that experiment might well afford to take.

On Mr. Cummings' place oranges are a fine success, and ripe from January to July. The Washington Navel, Mediterranean Sweet, and some others are generally of large size, and, in the matter of taste, the Mediterranean Sweet is excellent. It is at this place seedless. The Washington Navel is not so sweet.

Mr. Cummings has land that has yielded 25 sacks of 100 pounds each per acre, and of the finest quality. His acreage of beans has been as high as 2150 pounds.

The eucalyptus seems to be at home in this valley, and on this place we see some remarkably fine specimens ten years old and two feet in diameter.

Some two miles below Santa Paula we find the banana blooming and fruiting to perfection in open grounds. In all this country we notice the extraordinary developments of various palms, and of flowering shrubs and plants, affording to visitors a constant source of delight, and by their charming influences, enhancing the value of households.

McD.

Uses of the Water Barrel.

EDITORS PRESS:—The fire of fuses and the pop and crack of crackers and bombs has already commenced here in our beautiful city, to let us know that the day of days to boys is near at hand, and Fourth-of-July accidents, runaways and conflagrations will soon have come and departed. Most conflagrations at birth are small, and could be easily quenched if water could be promptly applied. We keep at our house what we call "The Truth Barrel," for though a receptacle for lye, yet its great

economy and usefulness is a self-evident truth. It is located midway between the backdoor and the pump, and is set into the ground six or eight inches. Morning-glories, Maderia vines and a hopvine grow around and over it, and vie with each other for the beauty prize. I think the morning-glories will get the prize for beauty, but the homely, leaky old barrel and the luxuriant hopvine that utilizes the rich plant-food that leaks from the barrel will win the prize for usefulness.

The uses of hops need no recital. The barrel furnishes means to rapidly dip and throw many buckets of water without stopping to pump. In case of fire this alone may be worth many hundred dollars. One or more buckets of wood-ashes are kept in the barrel. This breaks or softens the water so that it is almost as good as rain-water for washing and bathing. After using the hard well-water awhile, it is a treat to take a bath in this soft water from "The Truth Barrel."

Again, pumping the water at odd moments, to fill the barrel is much easier, and makes "wash-day" much pleasanter than to do all the pumping on "Blue Monday." The investment is so small one can afford to pour in an extra bucket of water after the barrel is full, thus running it over and carrying off lots of bits of charcoal and other floating matter, not wanted in the water, but useful to the surrounding vines. I think many delicate plants do better when watered from this barrel; the water being softer and warmer seems to agree with them.

C. A. WYMAN.

San Jose, Cal.

THE FIELD.

Agriculture and Chemistry.

F. H. Storer, Professor of Agricultural Chemistry in Harvard University, has just written, and C. Scribner's Sons have published, a most excellent treatise in two volumes entitled "Agriculture in Some of its Relations with Chemistry." This work, the fruit of many years' public instruction in Harvard University, is in no way a technical treatise, nor does it make any special appeal to chemists and students of chemistry. It is agriculture rather than chemistry that forms the subject of the book, and it is the general and universal phases of the subject that are treated rather than any particular operations of the agriculturist. The work was prepared in the interest of persons fond of rural affairs, and of students of agriculture. It is the final form in which have been cast the results of long study, observation and experience, both practical and in the classroom. The style is clear and straightforward, and the discussion throughout is open to the comprehension of any intelligent reader. As an authoritative treatise the work cannot fail to take the highest rank, and although it is intended mainly for those who are specially interested in some form of agricultural industry, the general reader will find much that is of extraordinary interest in the domain of natural science.

The work is comprehensive in scope and exhaustive in its treatment of a great variety of subjects. Professor Storer discusses agriculture in all those important relations into which chemistry enters in any degree—the general relations of soil and air, the atmosphere as a source of plant-food, the relations of water to the soil, movements of water in the soil, tillage, implements and operations of tillage; in short, Professor Storer describes the relations of soil, air, and water to the plant and to each other, tillage, manures and fertilizers, rotation of crops, irrigation, the growth of crops, and staple crops.

We have no doubt that many of our readers who desire knowledge of the principles underlying agricultural practice, and of the latest achievements in the domain of agricultural science, will find Prof. Storer's treatise very valuable. One of our readers in this city who has it, and evidently is reading it carefully, sends us a copy of some paragraphs which attract his attention. He writes as follows:

I beg to hand you an excerpt from a recent work on Agriculture, by Professor Storer of Harvard University with reference to the cost of wheat crops from good land and poor land which at this season of the year may prove useful to the Agriculturist, although the result of the computations, which were originally applied to farming in France, may not correspond with the cost of production in California.

I quote as follows:

Starting with a five-acre field, the idea is to manure the land in such a way that the wheat crop (when its turn comes in rotation) shall absorb 26,400 lbs of manure from one-half of the field, and 44,000 lbs from the other half. It is admitted that every 10 lbs of manure absorbed stands for a yield of 1 lb of wheat, so that the manure upon the lightly manured half of the field will give a crop of 2640 lbs, or say 42 bushels of wheat; while that upon the half which was more heavily manured will give a yield of 4400 lbs, or over 70 bushels of wheat.

Admitting, furthermore, for the sake of argument, that the manure costs a little more than 7½ cents per 100 lbs, the 2640 lbs of wheat (due to the 26,400 lbs of manure) will have cost \$19.20 on account of manure, and in the same sense the 4400 lbs of wheat (due to the 44,000 lbs of manure) will have cost \$32.

The other items to be taken into account, such as labor, seed, ground rent and interest on the capital employed, the sum of which added to the cost of the manure will raise to \$1.40 the cost of each bushel of wheat harvested on the lightly manured half of the field, while the cost of each bushel harvested on the richly manured land will be \$1.25.

Reckoning the straw at \$3.60 per ton and that

there are 132 lbs of straw for each bushel of wheat, the cost of the bushel of wheat will be reduced to \$1.16 and \$1 respectively.

Finally, if the wheat is sold at \$1.20 per bushel and the straw at \$3.60 per ton, the profit on that half of the field which was lightly manured will be \$1.80 and the profit from the other half which was well manured will be \$16.40.

[We would like to have these points discussed by our wheat-growers.—EDS. PRESS.]

THE STABLE.

Treatment of Mares in Foal.

Samuel Gamble of the Cook Farm in Contra Costa county has a valuable article in the *Breeder and Sportsman*, which we reproduce as follows:

When you have decided to breed your mare you have let up on her work. It will be better to cool her out well before breeding her, by turning her out to grass, and take away all her grain before she is bred. There is a wonderful difference in opinion. Some believe in keeping a mare at speedy work. Some mares will get upset if kept at too hard a strain at work and refuse to feed, lose their condition, and cannot be depended on for their usual exertions. At all events, it is found in practice that though the majority of maiden mares will become stunted while at work, yet that a large number require a run out to grass before they will become in foal. There are many mares which their owners desire to work on for some months after being bred and wish to avoid the expense of keeping from the spring when bred to the horse to the next spring. I believe all mares are better for slow work up to within two months of foaling, but they should not be ridden or driven so fast as to occasion exhaustion. Farm or truck mares are generally used to within a few days of their time. You must see that the work is gradually let up on your mare, and avoid straining her. If her legs keep sound, a mare may be made to earn her keep for nine months.

The time of sending your mare to the horse will vary for the purposes for which her produce is intended. If for racing, it is desired that she will foal as soon as possible after the 1st of January, and as she carries her foal about 11 months, the first time of her being in use, after the 1st of February, is the period chosen for her. All racing colts take their ages from the 1st of January, and other classes from the 1st of May; and as about March 1st is the time when the young grass begins to be forward enough for the use of the mare, the breeder is not anxious to have his foals dropped much before March 1st. As mares are very uncertain animals, he will do well to take advantage of the first opportunity after March, as by putting off the visit to the horse, you may be disappointed altogether, or the foal may be dropped so late that the grass is all gone. All valuable brood mares are often sent to foal at the place where the sire stands, who is intended to be used next time. The traveling the foal too soon after foaling would be injurious to both dam and her foal, and hence the precaution I have named is adopted. The mare then remains to be tried at interval days, some in nine days and others in seven, and others in 14 days, and others in 18 days. Mares are not the same. By the time your mare is stunted, the foal is strong enough to stand a journey of about 15 miles a day, which is quite as much as a nine-days-old foal can travel to a horse without injury, and that done very quietly, the mare being led at a slow walk all the way.

When the mare is in foal, if not intended to be kept at work she should be turned out in good pasture, but it should not be so rich and succulent as to disagree with her stomach or make her unweildy from fat. This mistake is a constant cause of miscarriage, the bowels becoming relaxed from the improper nature of the grass, and sometimes the mare will become thin and starve her foal in its growth. Mares that have been grain fed highly all their lives should have, if possible, one or two feeds daily of ground oats or barley with bran and a few carrots, after they are six months gone, and a free use of their paddocks. Excessive fat is a state of disease, and interferes with the due nutrition of the foetus, while it is very dangerous in foaling time, when it not only interferes with the process, but also produces fever. Supposing yours is at work, she should have some kind of green food, any kind of green grasses, or, after the grass is gone, carrots are fine sliced in a bran mash every night. By adopting this food the mare is kept free from inflammation, and yet the foal is well nourished. Excitement of every kind should be avoided if possible.

Slipping the foal is sometimes caused by the smell of blood or excitement, and my experience teaches me that one mare miscarrying will sometimes affect others. If a mare has "slipped" a foal in a previous pregnancy, double care should be taken, as she will be far more likely to do so again. When it happens about the fourth to sixth months gone, care should be taken at that time. It is better to keep her by herself, in a small paddock, where she will get exercise. Physic or purging should not be given unless it is really necessary. If the bowels are so confined as to require some stimulus of this kind, and if bran mash or other changes in the food fail to produce any effect, choice should be made of the mildest aperient which is likely to answer the purpose.

With regard to the management of the mare in parturition, I shall leave its consideration to my readers, and to some of them, who will agree with me, my advice is, if they should have a case of this kind and assistance is needed, it is safer to have recourse at once to a properly educated veterinary surgeon. Stud grooms who have had much experience will sometimes be able to aid Nature with advantage, but in the long run will probably do more harm than good if they attempt any serious interference.

Treatment after foaling in a healthy state, the mare very soon recovers from the efforts she has made in bringing forth the foal, and in fine weather she may be allowed to enter the field the fourth day, which is soon enough to suit the strength of the foal, though the young foal is very active within a few hours after it is born. Until the foal is strong and straight on its limbs, it is better, in my opinion, to keep it from running too much. Until the mare can get plenty of grass, she should have carrots and a mash of ground oats, with bran, which should be made at first in the shape of gruel. The water in which this is made should have the chill taken off. The proper time of putting the mare to the horse your readers all know; with me, I prefer the ninth day.

During the remainder of the time of suckling no special treatment is required, except to see that the mare gets well fed and protected from bad weather. At weaning time she sometimes requires a dose or two of cooling medicine, but generally she is so nearly dry that no interference is required. If the young foal is well formed and healthy it will require no attention beyond that which I said is necessary for the dam. Those accidents which are liable to happen, such as rupture either in the navel or flank, abscess in the hernia, or inversion of the feet, etc., can all be treated in the proper time and places. In some cases about the time of the mare being "in use" the foal is generally purged a good deal, and a warm drench will often be required.

At three months or so the foal will eat a little ground oats, which is required for all highly bred young stock if you require to race them young. All work-horse colts would be better for this. But if it is begun it should be continued. But unless the foal is bred and shows such promise that it is expected to turn out well, the extra expense will not be reimbursed. Now, between a trotting bred or a thoroughbred for racing purposes fed a little grain, and one confined to hay, the difference in value would be 1000 per cent, but among inferior bred horses, on the average, it would scarcely pay.

Shelter from the bad weather should, however, be afforded to colts of all classes during the winter season, and unless they have this they soon grow out of form and lose flesh however well they are fed. A colt neglected in the winter never recovers its proper shape, nor does it grow into the size and strength of body and limbs which naturally appertain to its breed. Therefore, the cruelty of exposing the young colt to a climate for which it is not fitted does not pay, and on the latter account, if not on the former, even the most heartless who consider their own interests will make suitable arrangement for protecting their young colts from the bad winter climate. The colt should be handled from the very first week of its life, but there is no occasion to use it roughly. The pressure of the hand on all parts of its body and limbs, and in a short time the foal will allow its feet to be picked up and its head and ears to be rubbed without taking offense.

Grooms are sometimes in the habit of showing off their powers in this way by taking the foals up in their arms. But this can do no good, for it may do some injury to the walls of the abdomen. About the fourth month during weaning a light halter should be put on, and after the colt is accustomed to its pressure by repeatedly handling, in a few days a leading rein may be put on and the colt enticed to follow. At the same time it must be made to feel that resistance is useless, and if it begins to pull it must on no account be allowed to get away. By no means pull straight back on him, but coerce him gently. With a side strain and carefully handling the colt will rarely give any trouble in this way. But there are variations in the power which different men have over the animal creation; some will control without using the slightest violence, while others will be always fighting with the colt. This class should never be allowed to have anything to do with the baby colt. Yet, if a man is found resorting to violence with a young foal, he should be removed or he should be carefully watched, and if he repeats his offense you ought to say to him, "Here, you take a long walk from here; you are getting too fat," etc.

The usual age for weaning the foal is about the end of the fifth, or five and a half months, because the dam is generally about half gone with her next foal and cannot bear the double drain upon her system; nor does the foal benefit much by the milk after this age, the teeth and stomach being quite strong enough to crop and digest its food. For a youngster like this, if the fall is dry and no green feed, a few steamed turnips or carrots should be mixed with bran and given to foal night and morning. Two foals placed together in the same stall or paddock for company miss their mothers sooner than when confined by themselves. Care should be taken that nothing is left within their reach which can do injury, every fence being carefully examined so that no nails or rails are likely to get to their bodies or limbs as they gallop and play about. Foals of all ages are mischievous and are inclined to lay hold of anything which

attracts their notice. Besides the shelter which I have insisted on, the foal requires throughout the first winter good feeding proportioned to its breeding and the purposes for which it is intended. Let the breeder bear in mind that a check given to the growth in the first winter is never afterward entirely recovered, and that if the colt which has experienced it turns out well, he would have been still better without it.

THE VETERINARIAN.

Instinct and Intelligence.

EDITORS PRESS:—It is impossible to draw sharp lines of demarkation in nature. Thinking men cannot say where instinct ceases and reason commences. It is just as difficult to state where the animal kingdom leaves off and the vegetable begins, and in our courts of justice and medical jurisprudence they find it very hard to say where insanity comes in.

There are actions and habits in many of the lower forms of animal life which evince intelligence. In Sir John Lubbock's treatise on ants he says that "a stranger ant, introduced into a nest, although of the same species, is at once recognized as a foreigner, and is usually maltreated or at once put to death." Further experiments went to show that chloroformed ants were at once removed to the edge of the parade board and thrown over—in fact treated as if they were dead and removed from the living accordingly; while intoxicated ants were generally carried into the nest if they were ants connected with that community; if not, they were thrown overboard. These little animals undoubtedly have certain means of communication, as the following indicates: Mr. Belts says: "I next covered an ant with a piece of clay; several others passed it. One of them tried to pull away the clay, but was unable to do so. It immediately set off at a great rate, and I thought it had deserted its companion, but it had only gone for assistance, for in a short time about a dozen ants came hurrying up, evidently fully informed of the circumstances of the case, for they made directly for their imprisoned comrade and soon set him free."

I omitted to state that Sir John Lubbock's idea in making an ant intoxicated by a moderate amount of chloroform was to ascertain whether they had any password by which they were able to distinguish strangers—thinking that in this condition of intoxication they would be unable to remember it. But the sequel proved that there must be some other means of recognition. They at first appear much puzzled at finding their fellow-creatures in this condition, take them and carry them about for a time in a somewhat aimless manner. (Of course all these matters are well known to the readers of the RURAL, and my apology for repeating them is to lead up to the subject.) Their method of making slaves of aphides is interesting.

Mr. Darwin says the brain of an ant is one of the most marvelous bits of matter in the world. The brain is proportionally larger than that of any other insect. Injury to this organ causes, as in the higher animals, tetanic spasms and involuntary reflex movements, followed by stupefaction. In the case of slight injury to brain by other ants, it has caused the most remarkable phenomena. Many of the wounded were seized with mad rage and flung themselves at every one that came in their way, whether friend or foe. Others assumed an appearance of indifference and walked serenely about in the midst of fighting.

A writer to *Nature*, some years back, gave an anecdote showing clearly that birds are at times vindictive: "One day the cat and the parrot had a quarrel—I think the cat had upset Polly's food, or something of that sort; however, they seemed all right again. An hour or so afterward, Polly, standing on the edge of the table, called out in a tone of extreme affection: 'Puss, puss! come now, come now, pussy!' Pussy went and looked up, innocently enough, when Polly with her beak seized a basin of milk standing by and tipped the basin and its contents over the cat, then chucked diabolically. Of course it broke the basin and half drowned the cat."

As an instance of education in birds may be mentioned the tame condition of the sparrows in the parks of this city. I have frequently noticed dogs of my own dreaming, barking slightly in their sleep; and ferrets have often been noticed going through the performance of catching rabbits—i. e., in a modified manner—during sleep, making slight thrusts with their mouths, etc. Mr. Darwin states that an elephant was being fed through the bars of his cage, with potatoes. One falling and being just out of reach of his trunk, he blew it against the wall nearly opposite, and on its rebounding he was able to get it. Surely this was more than instinct!

Instances of the manifestation of something more than instinct in dogs occur so frequently as to render their description almost unnecessary and to some people monotonous. "Monkeys, Apes and Baboons—Notwithstanding these animals differ much from dogs in not having been mentally improved, there is enough evidence to show that their mental life is of a distinctly different type from that of any of those we have previously considered, and that in their psychology, as in their anatomy, they approach most nearly to man." So writes G. J. Romanes.

James Forbes, F. R. S., in his *Oriental Memoirs*: "One of a shooting party, under a banyan tree, killed a female monkey and carried it to his tent, which was soon surrounded by 40 or 50 of the tribe, who made a great noise and seemed disposed to attack their aggressor. They retreated when he presented his fowling-piece, the dreadful effect of which they had witnessed and appeared perfectly to understand. The head of the troop, however, stood his ground, chattering furiously. The sportsman, who felt, perhaps, some little degree of compunction for having killed one of the family, did not like to fire at the creature, and nothing short of firing would suffice to drive him off. At length the animal came to the door of the hut, and, finding threats of no avail, began a lamentable moaning, and by the most expressive gestures seemed to beg for the dead body. It was given him. He took it up sorrowfully in his arms and bore it away to his expecting companions. They who were witnesses of this extraordinary scene resolved never again to fire at one of the monkey race."

G. J. Romanes, at the end of a work upon these matters, says: "In my next book I shall hope to show how, from so high a starting-point, the psychology of the monkey has passed into that of the man." Mr. Huxley writes, speaking of man's early condition: "At the same time, the increasing rudeness of his implements, as we go back, undoubtedly indicates that we have made some approach toward the period when he first emerged from the purely brute state and became a tool-using animal."

To many it may appear that there is a greater difference between man and monkey than between day and night. Yet on comparing the highest type of man with the Hottentots, who live at the Cape of Good Hope, they will with difficulty convince themselves that both are of the same origin. It being absolutely impossible to destroy anything, and knowing as we do that it is by virtue of some peculiar force that we live, is it reasonable to think that this element will cease to exist? As is said by one of Humboldt's biographers: "The highest mortal can only be explained as the product of a more than mortal Power." ROBERT J. DAWSON, V. S.

225 Geary St., S. F.

FLORICULTURE.

Planting Gardens for Effect.

[Written for the RURAL PRESS by GARDENER.]

I shall not attempt, under this head, to take up the subject of ribbon planting, as this demands constant work and much skill, and should not be attempted where a regular gardener is not kept, unless one can give his whole time and careful attention to keeping such a garden in order.

Fine effects may be produced merely with the common plants usually grown by any one with good taste and an eye for color, without, necessarily, a large amount of labor being involved.

As a rule, instead of being first carefully laid out and then arranged with an eye to future effect, the every-day gardener is made piecemeal, regardless of a general plan, plants being stuck in where it is "handy," and flower-beds being made one at a time, to accommodate the new plants as they come. As a consequence, instead of being as beautiful as possible, it is a conglomeration of plants, merely, and often with the most distressing and startling combinations of color. Indeed, many who in other things have good taste will say, "Why, you can put any colors together in flowers, you know," and following this rule, they plant orange-scarlet against intense pink or crimson, and crimson against rose color, with happy disregard of all ordinary rules by which they are governed in other matters.

If one would have a garden-plot prettily arranged, it must be, like anything else to be well done, taken in the beginning. I have in my mind now, two gardens where the two methods were practiced. In one, the owner sat down, got his plan on paper, and arranged for his flowers as he did for his fruit trees. In the other, the plants were "stuck in" on the installment plan, and the result—well, they have a plenty of flowers—I suppose that is the chief end of a garden.

Do not put in anything with the idea of afterward pulling it up and replacing. Take my word for it, you will never have the heart to pull up a large, well-grown bush and put one of meager size in its place; you will be much more likely to hunt up some other spot for the little one and let the large one remain "till things get grown a little," which usually means "indefinitely postponed."

For the best effect you want masses of color, and, as a rule, the more distant the mass the more brilliant the color should be, unless it is white.

Try to arrange your colors so that one shall not "kill" the other, and if you have two striking or discordant tints, separate them by the length of the yard, or at least by a mass of white or green, combinations which, fortunately, may always be used.

Another point is to get as many ever-blooming plants as possible, that your yard may not be barren of flowers a good part of the year; and where you have shrubs or plants which bloom at one season only, to so arrange them as to make the best showing.

By planting your pink flowering Weigelia,

double and single white bridal wreath, and purple and white lilacs in a clump, surrounded by a wide stretch of pink and white daisies, you will have a bed which will be a mass of bloom for weeks in the spring. If you arrange near that another bed of summer-blooming plants and another (of chrysanthemums, for instance) which blooms during the fall, you may have that side of your garden constantly in blossom, not scattering; but in an effective manner.

If we could select just the plants we most admire and fill our garden with them, the task would be an easy one, but, unfortunately, some bloom in the early spring and some not till late summer or fall, and while as individuals they are fine, they will not do to plant together where effect is looked for.

Another thing is to plant your tallest growing plants in the back and the lower ones toward the front. Tall plants hide the low-growing ones and the effect is not so good.

There are many large flowers like dahlias, poppies, hollyhocks, etc., which show brilliantly at a short distance and set off by a backing of foliage are most beautiful. There are so many shades of color among the dahlias, and they bloom so long a time, that it is a matter of wonder to me that they are not seen oftener in our gardens. Double poppies, too, are very beautiful and showy, and a group of them make a blaze of color which is very attractive. Right here I would put in a plea for the double hollyhock, too; while as a mass, the stately spikes of bloom are the loveliest possible for distant effects, the individual bloom is equal to the loveliest rose in shade, texture and shape. I have seen those of a delicate pink tint which I thought, with their satiny petals, equal to any hothouse flower I ever saw, and I have seen a whole company of young folks eager to know the name of the lovely pale straw-colored ones worn by a young lady in her hair.

The gladiolus is another plant which makes a gaudy and beautiful showing. These come into bloom just about the time the roses are resting from their spring blossoming, and it is a good plan to plant clumps of them between your rose-bushes. Their range of color is almost endless, and a choice collection of gladiolus will alone make a garden brilliant for many weeks.

Blue, while one of the most effective colors for a garden, is the most seldom seen, especially in free-blooming plants. Indeed, until we stop to think of it, we do not realize how few flowers there are of a real true blue. However, there are some plants of that color which bloom freely and a long time. Among these is the bachelor's button, which grows nearly as large as a marguerite, though an annual, and is covered with the deepest blue blooms. This is the prettiest sort of a contrast for red or white, and does a "sight," as the saying is, toward brightening your garden. There is, too, a pretty low-growing annual of the most intense perfect blue and good size, the *Convolvulus minor*, one of the morning-glory family. A bed of this, edged with white or yellow, is as pretty as anything you can imagine, and gives a dash of relief to the commoner reds and yellows.

The *Salvia patens*, one of the sage family, is another lovely blue, and as it grows rather tall is very striking if planted in bunches. Always put in as much of this color as you can, for the more you have the prettier your garden will be.

Don't clap in plants regardless of color, size or fitness, and wonder why it is that your garden "somehow doesn't look just right," and do, while you are about it, pay some attention to the color of your house, too. I know this is seldom done, but I can see no reason for allowing combinations out of doors which you would never think of allowing indoors. Don't, if your house is painted a deep, bright buff, put brilliant orange flowers around it; or, if it is the fashionable terra cotta, plant intense scarlet geraniums against it. There are so many pretty ways of planting that there is no need of such combinations.

Put your scarlet geraniums in a long sweep up against white marguerites. Both of these bloom constantly, and with a little trimming are always in good shape. In another spot put a clump of deepest pink geraniums, and up against them a mass of pale purple verbenas. In one corner, where it will not conflict with anything else, plant a mass of double yellow marigolds or deep purple verbenas.

Make whole beds of different colored verbenas, or double white petunias bordered with the scarlet verbenas. Somewhere, where you have space, put in a solid bed of pansies, and if they are backed by yellow, all the better.

Don't leave all reason and good taste behind when you start to make a garden. You wouldn't paint a picture, or, indeed, even arrange your parlor this way. You would go to the door and stand and look at it, and try the effect of this bit of color here, and that bit there, and arrange it after repeated trials, just to your satisfaction. Why can't you stand at the front gate and do the same? Why can't you say, "Let me see, that corner needs some scarlet," or "Right down here it ought to have some blue," and "Over there I think some orange would look well"? Why can't you, in short, use your good taste and judgment in this as well as other things?

The particular manner of laying out the shapes of beds and walks is for each individual to decide for himself, but no matter how poorly that may be done, if the place is properly planted, or good taste shown in its arrangement, a garden will always look well.

North Temescal.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Hopeful for America.

Robert Collyer, the beloved and famous Liberal Christian preacher, is now in California for a summer visit. An Oakland reporter, speaking with him of the ignorant and superstitious foreigners in the U. S., inquired: "Do you believe this element could subvert this Government if it were thoroughly organized for that purpose?"

Dr. Collyer answered: "I do not. I believe that if such a crisis should arrive, the American will meet the emergency firmly and effectually. I consider the American the grandest man on the face of the earth. He is slow to apply the crucial measures necessary to effect his purposes, but when the time comes he will assert himself with a power that will sweep all before him, leaving not a vestige behind."

"We must not judge of American energy or American principle by the ebullition of the great cities. We must look to the American of the agricultural districts, the mountain, plain, and valley, for the true sentiment that will oppose, with resistless vehemence, the mob of anarchists, socialists, and ignorant bigots of the metropolitan slums. But I do not apprehend any danger whatever from this quarter. These people have come to us with the mark of the oppressor's heel fresh upon their necks, and they are endeavoring to tyrannize over those who are weaker than themselves, as they have themselves been tyrannized over. They do not comprehend the principles of our Government and they mistake liberty for license. They are not worthy of American citizenship, and never will be."

"A great deal is said about ameliorating the condition of the poor, but I do not believe in it myself. It is a sentimental philanthropy that will have the effect of producing a race of mendicants and paupers more abject than those that to-day infest southern Europe. The poor of this country have the power to ameliorate their own condition and they should be compelled to do so."

"Moreover, I am firmly of the opinion that the American is fully capable of dealing with and forever settling this so called conflict between capital and labor, this antagonism between the laboring man and the corporation. The American will eventually come to judgment, and he will decide the question fairly and impartially. I may be an optimist in these matters, but I am convinced that I am right, and the future will prove the correctness of my assertions."

The Grange and Education.

We have in this country nearly 2,000,000 voters who cannot read or write, and we have 7,500,000 children out of the schools growing up in ignorance. It is a great problem: What are we going to do with this increasing ignorance? Intelligence and the ballot must go hand in hand in a country "of the people, for the people, and by the people." This already vast number of voters who can neither read nor write is a dangerous element in our politics. It is bought, sold, and handled "like dumb-driven cattle," and is a balance of power in many localities already. The Grange always has and will continue to push and advocate the cause of education. It has a special mission in this direction, not only as a local matter, but as one of national importance.

Our forefathers wisely established the free school at the same time that they established the free ballot. A ballot in the hands of an ignorant voter is as dangerous as a gun in the hands of a child, dangerous to himself and to those around him. As our population increases we must have an increase, and not a decrease, in intelligence, or our free institutions cannot be sustained.

There are generals who can command a brigade, who are failures in handling a corps. There are men who can conduct a small business in a country village, who would fail in carrying on a large wholesale business in a city. Men who would make excellent mayors of a city of a few thousand inhabitants, who could not act as the governor of a State. And so with our increasing millions of people and voters; we need more intelligence, higher statesmanship. The thousands of Granges scattered all up and down our land are the schools of political economy, the schools of citizenship, from which are going out more intelligent voters and legislators, State and national, prepared to grapple with the new issues that an ever-advancing age is bringing to the front.—*Mortimer Whitehead.*

BADGEY GRANGE, Illinois, has a "Missionary Committee," whose duty is implied in the name. They have ordered a lot of Grange literature from the Lecturer of the National Grange to distribute among farmers in their county. Every Grange should have such a committee, and every good Patron should feel it a duty to do volunteer work of the same kind.

GRASS VALLEY GRANGE gained eight members last quarter, and has just elected two more. They hold a meeting every Saturday night, and appear to be thriving.

Grange Work and Progress.

(Prepared Weekly by M. WHITEHEAD, National Lecturer.)

THERE has been another great corner in wheat. Fortunes have been made and lost. Of course the "break" came, as usual, just as farmers are busy harvesting the new crop, and the "bears" will rule, with low prices, until the main portion of the crop passes out of the hands of the producers.

Adam Smith thought wheat less liable than any other commodity to be monopolized by speculators, because "its owners can never be collected in one place." But this supposed impossibility is practically overcome by the railway and telegraph, and now Boards of Trade arbitrarily make and unmake the prices of food, and wheat is as easily "cornered" as anything else. A single firm in Chicago, five years ago, gained control of the pork market, more than doubled the price, and cleared over \$7,000,000 on a single deal, the influence of which was felt in every part of the world. Farmers should think of these things while busy in the harvest-field, remembering how little supply and demand, good or poor crops, has to do with the price he is to receive. It is all in the hands of gamblers. Organized farmers will one of these days put a stop to it.

THE growth of the spirit of speculation is ominous. The salaries of clerks, the business capital, the bank deposits and trust funds of all sorts, which disappear "on 'Change," indicate how wide-spread is the unhealthy haste to be rich. And such have the methods of speculation become that "The Exchange" has degenerated into little better than a euphemism for "gambling hell." While one bushel in seven of the wheat crop of the United States is received by the Produce Exchange of New York, its traders buy and sell two for every one that comes out of the ground. When the cotton plantations of the South yielded less than 6,000,000 bales the crop on the New York Cotton Exchange was more than 32,000,000. Pennsylvania does well to run 24,000,000 of barrels of oil in a year; but New York City will do as much in two small rooms in one week, and the Petroleum Exchanges sold altogether last year 2,000,000,000 barrels.—*Henry D. Lloyd.*

THE GRANGE in Oregon has, during the past year, steadily increased in numbers. Three new Granges have been organized and nine dormant Granges revived. Our business co-operation has increased and is in a healthy condition. A number of new Grange halls have been erected and dedicated. Every new hall is an important acquisition and aid in our work, for it creates a new center for general and intellectual culture, and is a rallying place for the farmers of the neighborhood. Under our influence, our agricultural college is being established as an institution exclusively devoted to the promotion of agricultural education and the development of practical farming. Wherever in any community an active, live Grange has long existed, better farming is done, fewer mortgages on the land, more ornamental trees shade the wayside and adorn the homesteads, and more culture and refinement are apparent everywhere among the people.—*R. P. Boise, Master Oregon State Grange.*

UNDER the title of "Men who Own Themselves," the *Kennett Advance* (Penn'a), says: "Farming may be a laborious and irksome business and the profits of agriculture discouraging, but there is one thing which the farmer may possess which every man in any other avocation may well envy him, and that is his absolute independence. Men engaged in trade frequently feel obliged to refrain from doing what they consider their duty, lest in its performance they may injure their business. In Kennett Square the house-to-house canvass for signers to a remonstrance against the granting of a license to our one hotel developed a number of cases of this kind, and two or three persons who signed the remonstrance were subsequently overcome by their fears and had their names stricken off, the fear of a boycott proving too powerful for their sense of duty. The farmer, however, has nothing of this kind to fear. He is absolutely his own master, and neither his religious, moral, political nor social beliefs or disbeliefs may in any way be used to the injury of his worldly prospects. He wears no man's collar. And after all, this is more desirable than riches or place. One's manhood is something more to be desired than something that has to be gained by constantly crooking the pregnant hinges of the knee, or bowing to the caprice and whim of people we may in our inmost soul loathe and despise. The Grange is educating the farmer how to use this independence, not only for his own good in correcting existing evils, but in helping those who dare not help themselves 'for the good of our country and mankind.'"

If any one can possibly be held back on account of the Grange being a secret society, let me say to such that the secrecy of the secret societies, so called, in this State, compares with the social, fraternal and moral objects of those societies as the secret threads in the binding of your Bible compare with the contents of the Bible. I have belonged to a number of the secret societies, so called, and it seems to me that all these societies' secrets are but as the little hidden, almost inconsequential, yet necessary threads which held the members together in a brotherhood for the accomplishment of worthy objects, as the secret threads in the back of a book bind together in a precious volume what were otherwise loose and scattered leaves.—*John D. Lyman, Lecturer N. H. State Grange.*

"HIGH TAXES, extortionate interest and exorbitant rates of transportation are rapidly pauperizing the millions and multiplying our millionaires. These evils can all be cured by legislation." Yes, and the Grange is educating farmers and their sons in political economy and how "to take a proper interest in the politics of our country."

PROGRESS.—Five more new Granges—one each in Connecticut, Oregon and Alabama, and two in Pennsylvania.

THE officers of the Illinois State Grange have planned an active campaign. The State has been divided into three Lecture Districts, in charge of Major E. A. Giller, State Master, O. Wilson, State Lecturer, and J. R. Miller, each to choose his helpers. Preliminary work to be done in the Subordinate Grange at once, and then pushed after harvest.

The Secretary of the State Grange, Thomas Keady, writes: "Most of our Granges are in a hopeful, and a good proportion of them in a flourishing condition, receiving new members and making an impression for good in their several neighborhoods."

RED WILLOW GRANGE, No. 628, Nebraska, has just received 17 new members, and has fresh applications under consideration.

ARKANSAS has a called meeting of her State Grange this month. Mississippi holds her Patrons' Union July 19. Texas State Grange commences August 9. Alabama holds her State Grange meeting the last of August.

"WRONG breaks ranks, and right is leading; Sleep not on unstirred, unheeding."

Danville Grange on Interstate Commerce.

The following peculiar report of a committee of one was recently adopted by Danville Grange:

Worthy Master: Your committee, to whom it was assigned to draw up resolutions expressive of the sentiment of this Grange on the Interstate Commerce Act, beg leave to submit the following:

WHEREAS, The great wheel of misfortune has again completed its circuit in the matter of the Interstate Commerce Act, and again, as usual, the people stand head down at the bottom, while the oily-skinned plutocrats dance on high the step of victory; be it

Resolved, That, in our judgment, it is the sacred duty of the farming classes especially, with the people, in a body, to rise from their dogged submission to self-selected political slave-drivers, organize and arm themselves with the ballot, a proper sense of right and justice, a determination to see it enforced, and go to the polls with a sovereign vote for men, regardless of fossilized party mania, electing as their honored servants, and not their dreaded rulers, men from among their own ranks, whose profound learning has not unfitted them to see the needs and hear the demands of common people.

Resolved, That, in our judgment the conviction of the New York aldermen and other signal victories of law against disorder of late are the signs of the times that indicate a return to our original customs, that of a government by and for the people, as opposed to by and for a moneyed aristocracy, and that we have unbounded faith in the restoration of the people to power in the near future.

SONOMA POMONA GRANGE.—The next regular meeting of Pomona Grange of Sonoma county will be held in the hall of Santa Rosa Grange, on Wednesday, July 20, 1887. There will be a good deal of important business, and not a little social enjoyment. The usual Grange dinner will be served, to which only Grangers will be admitted. The following program appears in the *Republican*: Opening song, by double quartet of Sebastopol Grange; select reading, L. J. Hawkins of Santa Rosa Grange; address, by Edwin Peterson of Bennett Valley Grange; vocal duet, by Mrs. G. W. Huntley and Miss Wightman; address, by S. T. Coulter of Santa Rosa Grange; vocal solo, by Mrs. Huntley; reading, by Will Crain of Bennett Valley Grange; select reading, by Miss Emma Mills of Santa Rosa Grange; double quartet, by members of Sebastopol Grange; "Good of the Order;" closing song, by Grange.

THE FARMERS' CO-OPERATIVE UNION of Sutter county is one of the powerful and beneficial institutions of that county. Its object is to promote agriculture, horticulture and stock-raising. It has a capital stock of \$50,000. The officers are G. W. Carpenter, president and manager; Hon. George Ohleyer, secretary; B. F. Walton, treasurer. The directors are G. W. Carpenter, George Ohleyer, B. F. Walton, Hon. A. L. Chandler, A. H. Wilbur, J. H. Kimball and James Littlejohn. They have a balance sheet showing from \$150,000 to \$250,000. The union owns two warehouses of grain and other produce of a capacity of 15,000 tons. They sell and ship grain for the farmers, and receive deposits of money. This union of farmers has done incalculable good to its members and to the community generally.—*Dr. Latham in Record-Union.*

GEN. THEODORE WAGNER's beautiful residence on San Pablo creek, in Contra Costa, was burned up Wednesday night, the 6th. Nothing was saved but the piano and some chairs. How the fire caught is not stated.

BERKSHIRES AND SHROPSHIRE.—Mr. Andrew Smith of Redwood City, long known to our readers as a breeder of prize pigs, has just received direct from England four Berkshire swine (his fourth importation) and 13 head of Shropshire sheep—the very finest that he could secure in Great Britain by expert selection. Among the sheep are three young rams which Mr. Smith intends to dispose of—thus affording breeders a rare opportunity of securing a choice imported animal at reasonable expense.

HANDSOME APRICOTS.—It would be hard to produce dried apricots much finer than some which J. W. A. Gilmor of Vacaville sent to Jas. Linforth, a few days since, and the latter brought in for us to see and taste. We do not know that we have ever seen their superior in richness, flavor and beauty of appearance. They were prepared in one of the Zimmerman evaporators, whereof Mr. Linforth is general agent for the Pacific Coast.

THE HAY-FORK SWINDLER is again abroad in the land, and this time it is the Los Angeles county farmer who is credulous enough and green enough to oblige the scoundrel with his autograph.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

HORSE-POWER PUMP.—*Gridley Herald:* Last Thursday evening we visited Mrs. Levi Smith's little fruit ranch a mile north of town, to witness the operation of W. B. Bishop's patent horse-power pump. The horse-power consists of a circular tilting table, 20 feet in diameter, upon the top of which the horse walks. The table tilts about 28 inches. On the east and west sides of the platform—the beam upon which it oscillates running north and south—connections are made with the ends of walking-beams 20 feet long. At the other ends of these beams the pumps are attached—one at the outer end of each beam working in a 10 inch well. The weight of the horse is the motive-power, causing the table to tilt, thus raising or lowering the beam and working the pump. The fulcrums upon which the walking-beams work can be so changed as to increase or decrease the length of the pump stroke, thus giving the horse more or less power, as may be desired, increasing or decreasing the flow of water. It is the simplest and at the same time most effective horse-power pump we have ever seen.

Contra Costa.

SAMPLE PRODUCTS.—*Martinez Item:* Capt. F. Babbe has sent to the Board of Trade rooms some apricots, apples and plums, that tell volumes for the fertility of the soil in the vicinity of Babbe's Landing. One branch of an apple tree contains 40 apples, although it is not three feet long. Samples of early apples are superb, while the plums and apricots cannot be excelled. A bunch of alfalfa, two weeks' growth, measures 21 inches in height. It is cut, not pulled up by the roots, and was grown without irrigation or cultivation. Babbe's Landing is about five miles north of Brentwood.

El Dorado.

ROYAL INDEED.—*Georgetown Gazette:* The Royal Ann cherry tree on the premises of Mrs. C. H. Jones, from which she has just picked and sold 230 gallons of cherries, this season's crop, has been carefully measured by Jos. F. White, with the following results: Circumference of trunk, 7 ft. 5 in.; of first branch, 3 ft. 3 in.; second branch, 3 ft. 4½ in.; third branch, 4 ft. 3½ in.; fourth branch, 2 ft. 6 in.; fifth branch, 2 ft. 7½ in.; sixth branch, 2 ft. 2 in.—all below four feet above the ground. Height of tree, 30 feet; diameter across tree top, 57 feet one way and 60 feet another. Age of tree, 24 years. These cherries sold readily at 50 cents per gallon, and were purchased by J. A. Campbell for the Newcastle shippers, who forwarded them to Chicago for the Fourth of July trade. The Newcastle dealers declared these cherries to be the finest they ever handled.

Fresno.

RETURNS FROM A SMALL VINEYARD.—*Fresno Republican:* I. A. Grout, on lot 28, Central California Colony, had 1000 vines of the Muscat variety. These vines are set eight feet apart, hence would cover just one acre and a half of ground. Being sick and unable to care for the crop when ready to pick, Mr. Grout sold the grapes to Col. Forsyth on the vine for \$18 per ton. The vines yielded 19 tons of grapes, bringing Mr. Grout \$345 for the acre and a half, sold on the vines. Had the second crop been harvested, about three tons more would have been secured. These vines were six years old from the cutting, and give promise of yielding 23 or 24 tons this season.

A CLUSTER OF CRABAPPLES.—J. G. Tuttle has brought us a twig from a Siberian crab-apple tree. The twig was 11 inches long and about the size of a lead pencil. Growing upon it in a cluster resembling an enormous bunch of grapes were 85 fair-sized crabapples. Taken from the twig they weighed four pounds exactly. Mr. T. has two of these trees, and says every branch is loaded, and the trees are only prevented from breaking down by the fact that their bodies are short and the bending branches rest their burden upon the ground. Two years ago the fruit from these trees sold for \$15, and the yield will be double this year.

Humboldt.

EDITORS PRESS.—I have just returned from a trip through Pepperwood, Ingleswood, Meyers, Phillipsville (commonly called Snuffville), and Sliverville. I met Mr. Tuttle driving eight yoke of as fine graded Durhams as ever went over this road. They are sold for work cattle to the Occidental Mill Co. of Eureka. He had also an Ashburner bull, which is generally pronounced the best in this part of the county—weight 2200 pounds. The yield of wool was never better; feed was good throughout the ranges; Mr. Tuttle reports 108 bales. At Phillipsville they have just got through haying; 30 acres of volunteer yield over 50 tons. Mr. Stegmeyer was taking a few boxes of peaches, the first ripe ones around here. At Ingleswood they are very busy haying yet. It was 92° in the shade at 12 o'clock, and at Rio Dell it was about 58°, with a heavy fog at 5:30—considering it is only about 22 miles, it is quite a change. Yesterday it was 98° in the shade in the draft at Jacobson valley. Land can be bought for \$300 per acre at Rio Dell, planted in fruit.—*E. P. S., Rio Dell, July 13d.*

Inyo.

HE KNEW BETTER.—*Independent,* July 9: Four years ago John S. Gorman bought and located 280 acres at Camp Independence. He

had been a miner and never had any experience in farming before. When he went upon the land he was laughed at for his ignorance. "It was no good. Nothing would grow upon it. There was no water for it. The soil was full of alkali, and, worse than all, nothing could be got from the land without work." Mr. Gorman was not scared by the last assertion, and he did not believe the others. He planted corn, wheat and oats where the alkali was supposed to be thickest; he made deep drains to carry the water away from the land they said was too dry. Since the drains were made the soil is far more fertile than before. No stagnant pools of alkaline water are left to poison cattle; running streams flow through the pasture, and the cattle are rolling fat and as slick as otters. At present he has 60 acres in alfalfa, 40 acres of which were broken up and seeded this spring. The newly seeded land will give a fair crop this season. The total hay crop will be quite 200 tons; part of this will be wild hay, of blue joint, red clover and other native grasses. Fifty-five acres are in grain, including corn, wheat and oats. Ten acres are laid out for orchard, six being already planted, and some of the young apple and peach trees are now bearing. Mr. Gorman began raising horses three years ago; he started with a few head of good mares, and now has 25 head of as good horses as the county can show. His success shows the value of energy, industry and good hard common sense. The old fogies who laughed at him when he started now begin to rub their eyes. Perhaps they would try, if it were not for the fact that to try means to work.

Mendocino.

THE HOP-GROWERS.—*Ukiah Press*, July 8: The Mendocino County Hop-Growers' Association met last Saturday, but a quorum not being present, adjourned for two weeks. President L. F. Long called attention to the advantages to be derived, both by growers and pickers, from the adoption of boxes in which to pick hops, stating that boxes were in general use everywhere outside of this part of the State; and he read a description of the standard hop-box of Washington Territory, as follows: They are 5 feet 10 inches by 2 feet 10 inches at the top and 4 feet 14 inches by 1 foot 4 inches at the bottom, all inside measure; the corner posts should be of fir and 2x2 square; the box when completed should be 28 inches deep on the slope of the sides and ends; the lower board of both sides and ends should be fir 1x4 to nail the bottom to; the bottom should be one board 3x17, and in this country could be made of redwood; above the 1x4 at the bottom of the sides should be a 3x10 of redwood, then the handles 3x10 and last another 3x10 for the top; the handles should project about 10 or 12 inches past the ends of the box, and be rounded at ends; the ends are made of two boards 3x10 placed next to the 1x4 strip at the bottom, and capped with another 1x4 at the top to keep the boxes from being split by being piled in each other; the corner posts should be on the outside of the box, and in cutting the lumber for the sides an allowance of 2 1/2 inches should be made for each end of the box. The ends are made first, the lumber being cut neat measure, and the sides put on a piece at a time, the bottom being nailed on last and over all. The handles should be put on with ten-penny nails; the 1x4 strips with eight-penny; the bottom with a six-penny, and the 3-inch stuff with four-penny.... Another important matter was mentioned—that the brand of the Mendocino Hop-Growers' Association has been fraudulently imitated, and buyers thereby deceived into believing they were buying Russian river hops when they were not; and it was suggested that the association had a duty to perform in enforcing the law.

Monterey.

CROPS.—J. S. Tibbitts in *Index*: Following is a brief statement of the condition of the growing crops throughout the county for the month of June, as ascertained from correspondents at Gonzales and Monterey, and from personal observation: Taking 100 as the standard of comparison, corn stands at 75, wheat 40, barley 50, potatoes 75, beans 50, peaches 100, apples 75, grapes 100, pasture 75, hay 75. Amount of wool sheared compared with last year, 100.

Napa.

POPE VALLEY ITEMS.—*St. Helena Star*, July 8: June apples, peaches and apricots are now ripe here, and blackberries will soon be abundant. Wheat harvest is near its height, and the weather for the past week has been regular harvest weather, the mercury ranging from 90° to 100°. Many fields in this section are bearing finer crops than for several previous seasons. Vineyards are looking well, the warm weather rapidly developing the grapes. The vine luxuriates in the sun, and in consequence of our long, even spring, our vineyards will not on an average yield so abundantly as last year.

SILKWORMS.—*St. Helena Independent*: Mrs. M. F. Imann has successfully carried 15,000 silkworms through the season. As it requires 300 cocoons to the pound, it will be seen that the lady raised 50 pounds, all of which were in first-class order and which sold for \$1.40 per pound, yielding her nearly \$75. Counting the time actually given to the work, she estimates that the income is equal to \$2 a day.

San Diego.

OUR VARIED PRODUCTS.—*San Diego Union*: We attended a dinner party recently in this county, at which the entire menu consisted of articles grown, raised, made or caught within 10 miles of where we dined. We had green

turtle soup and Spanish mackerel, caught in the ocean near by. A young steer from the herd of our host supplied the fillet of beef. The pepper and limes for seasoning, and the olive oil for the mayonnaise, as well as the guavas which furnished the jelly, came from the garden under our window. All manner of vegetables, including green corn, cucumbers, and green peas, with oranges, strawberries and peaches, were likewise from the garden aforesaid. We had canvas-back duck from the lagoon below the house, and quail from the mesa above. Banana fritters were prepared from plants which grew in the ravine at the foot of the garden, and we drank as fine sherry and claret made from grapes grown on the ranch as were ever imported from Spain or France. There was no coffee, for that had not been raised, but there were tea plants growing in the garden from which we might have had tea if so inclined. The raisins and Zante currants for the pudding were also from the ranch. Is there any piece of ground in the civilized world, outside of this favored land, where such a dinner could be prepared from home products? We think not.

San Luis Obispo.

STACKING SQUIRRELS.—*Las Tablas Cor. Tribune*: Over 2800 squirrels have been killed and piled on Ed Smith's fine ranch by Mr. Benton and assistants. They showed me one pile that had over 600 dead squirrels in it, and numerous others with their hundreds. The buzzards had a regular picnic, coming from every direction to feast. Mr. Benton and Mr. Smith think they did not find one-half that were killed. Just think for a moment, 5000 squirrels on one ranch! What an enormous amount of grain and range they would destroy! Mr. Smith thinks that the amount of grain destroyed on his place would pay all the expenses of harvesting the crop, say one sack to each squirrel.

Santa Barbara.

HONEY SCARC.—*Independent*, July 9: Kelley Bros., who run an apiary in the Santa Ynez, were in town last evening. Out of their 400 colonies of bees they report that there will be little if any honey gathered this season. This seems to be the case with not only the apiaries in Santa Barbara county, but Ventura, Los Angeles and San Diego as well.

Santa Cruz.

DOMESTICATING THE WILD RASPBERRY.—*Courier-Item*: Some of our orchardists have been experimenting with the wild raspberry, to ascertain whether it will be profitable to cultivate, as the berry ripens much earlier, and the vine is a very prolific bearer. Their experiments prove that with cultivation the berry improves in size, and is of much finer flavor than in its natural state.

Solano.

EDITORS PRESS:—The weather is pleasant and warm, and has been fine for sun-drying fruit. The main business here now is taking care of the apricot crop, which is pretty well gathered in Pleasant valley and on Putah creek. In Vaca valley we are in the midst of gathering it. Thousands of pounds of fruit have been lost this season between Vacaville and Putah creek on account of heat, high winds and lack of help. Hands to work are very scarce. The driers are run to their full capacity, but do not accomplish as much as was expected of them. Those that dry in the sun have had no trouble with the machine. The finest fruit that I have seen this year was put up by Mr. Thissell, in Pleasant valley. He sun-dried a large crop and has sold to Porter Bros. of S. F. at 12 1/2 cents per pound for first grade, and 10 cents for second grade, sacks found. He has also contracted his peaches at 16 cents for peeled and 10 cents for unpeeled. Dryers are paying from 20 to 25 cents per 100 for cutting apricots, cutters boarding themselves. Mr. Dobbins of Vacaville has a large number of girls, boys and women at work. I have heard no complaint about the work not being done well. Sun-dried apricots are selling for 12 1/2 cents per pound at Winters and 10 cents at Vacaville. The apricots on young trees near Vacaville are turning black at the pit and cracking. This is supposed to be due to excess of moisture in the soil, which causes the fruit to ripen at the pit too soon. Many 'cots ripen and begin to decay inside, while the outside is perfectly green. There are various opinions about sulphuring. Some contend that 15 minutes is long enough, while others sulphur three hours. I think the time required to make it look well depends on the condition the fruit is in. If it is ripe and of good color, 30 minutes is long enough, but if it is green or bruised, one to two hours would make it look better; but I think the fruit is really better without any sulphur.—G., Vacaville, July 10th.

TONS OF FRUIT.—*Dixon Tribune*, July 9: One hundred and sixteen tons of fruit were shipped from Vacaville Tuesday. This is said to be the largest shipment ever made from that station. It was estimated that on the same day 100 tons were dried at various places in and near town. This gives a slight idea of the immense quantity coming into market from the fruit belt, and there are hundreds of acres of orchard yet to come into bearing.

Sonoma.

CANNED FRUIT IN DEMAND.—*Telegram from Petaluma*, July 10: The owners of the cannery had orders for 6500 dozen cases of fruit in their patent glass jars, and now comes an Eastern dealer, who wants all they can put in the jars. Although the capacity has been more

than doubled, they will run to its extreme limit.

HOPS.—*Democrat*, July 9: The hop prospect within the last two weeks has brightened perceptibly. Prices have increased to 20 cents, at which figures a few crops have been contracted. The indications are favorable for an average crop, and growers generally apprehend no difficulty.

Sutter.

BOUNCING BARLEY.—*Farmer*, July 8: Last week we stated that J. W. Messick of Meridian had thrashed from a certain field 77 bushels of barley to the acre. Mr. Messick's modesty did not permit him to go any higher. Since then his neighbors have measured the field, and found it of less acreage than was supposed, which runs up the yield to 94 bushels per acre.

Tulare.

NEW FRUITS.—*Delta*, July 7: The Barr seedling apricot, which originated in Visalia, is one of the finest varieties of that fruit grown. It is of a very light color, showing a slight greenish tint when ripe, smooth skinned, and has a very agreeable flavor. It would be an excellent fruit for our orchardists to grow on a more extensive scale.... I. H. Thomas has on exhibition at his fruit store some samples of the Prunus simoni, or apricot plum, from North China. The fruit when ripe is of a dull brick-red color and flat, being 6 1/2 x 5 1/2 inches in circumference. The fruit is very firm and meaty and has the appearance of being a good shipper; ripens soon after the wild goose plum. This is probably the first that has ripened in this State.

Yolo.

DRIED 'COTS.—*Winters Express*, July 9: The cannery finished cutting apricots for drying on Wednesday last. Altogether they have handled 250 tons of fresh fruit, which made about 50 tons of dried fruit. They would have cut as much more but for the north wind, which burned the fruit on the trees. The company gave employment for over three weeks to an average of 100 persons, and paid out for labor alone over \$2000. The fruit dried is of first quality and will undoubtedly command top prices. This enterprise has been a big item in the business of our town this season.

SPONTANEOUS COMBUSTION?—*Woodland Democrat*: Monday afternoon a barn on Bryte's dairy ranch, on the Yolo side of the river, was destroyed by fire, together with 100 tons of hay and several agricultural implements. The fire seemed to burst out over the whole building at once, and consequently is not thought to have been incendiary. Possibly the hay was packed too closely, and occasioned spontaneous combustion. Great care should be taken by all farmers not to pack hay too closely. When put in the barns it is always more or less green, and generates an enormous degree of heat.

NEVADA.

GRAIN EXPERIMENT.—*Reno Gazette*, July 7: Quite an encouraging result has been obtained from the experiment of planting grain where it can only get the natural rainfall in Spanish Springs valley, 12 miles northeast of Reno. To people passing along the road, the field makes as good an appearance as an average Colusa county grain-field. The wheat and rye are yellow, and look ripe and strong. The barley is a rich green patch between the two pieces of older grain. On closer inspection, the rye is found to be a very tolerable crop, considering that it is the first time the land was ever plowed and that it could not be cultivated very deeply. It started out fairly and got a stalk over two feet high. The wheat has headed out and is filled, but the grain is small, of course, for reasons given above. The Australian rye grass made a good set. The plants did not come up very thick on the ground, but they look strong and healthy. It is a perennial plant, and if it lives through the season it will make a noble pasture. The field will be plowed and sowed again with almost a certainty of a much better result next year.

OREGON.

MOTTLED COLT.—*Willamette Farmer*, July 1: Mr. C. Cunningham of Fort Klamath had an equine curiosity in Ashland, Saturday, which attracted much attention—a handsome spotted colt, as even and symmetrically marked with the two colors as if painted by an artist from a balanced design. The colt is four months old, and came over the mountains beside its mother, who was in a working team. Its sire was a mottled horse owned by H. P. Deskins, and said to be a descendant of one of the oriental breeds allied to the Arabian stock. Nearly all the colts gotten by this horse have been marked in a similar manner, showing a characteristic which must have become firmly fixed in the breed from which he sprang.

CORRECT NAME.—Our correspondent McD. asks to have the name of our old friend Blanchard, which occurs repeatedly "In the Santa Paula Country," on the second page of this issue, so changed as to read Nathan W. Blanchard. That page being already off the press, we take this way of making the desired correction.

WE notice another of our exchanges has fallen into calling a new style dairy factory a "creamatory." The word is a little too warm in its suggestions. "Creamery" is the accepted term.

Santa Barbara Jottings.

[Written for the RURAL PRESS by L. B. CADWELL.]

Crops throughout the county are looking well. There has been no hot, blasting weather here to injure the prospects. Harvesting the grain in the west end is progressing. The Lima bean crop in the east end is at least as promising as in former years.

Many apricots are going to waste in Goleta, Montecito, and Carpinteria valleys, the raisers not having taken the necessary steps to save them. Many placed dependence on the hope that the Coleman drier would buy them; but the company was not anxious to secure them and offered but three-fourths of a cent per pound, delivered at the drier in Santa Barbara.

Apples are very full; also most varieties of pears—Winter Nellis and Beurre Bosc being the exceptions—and they are not troubled with codlin moth. The pears are free from blight—better than for some years past. Peaches, nectarines, plums and prunes, are very full. Grapes promise better than for many years. English walnuts are estimated at one-quarter above the average yield.

The County Horticultural Society had its regular monthly meeting on the grounds of Mr. P. C. Higgins, Carpinteria, the 6th inst. About 75 members and friends were present and the meeting was full of interest. A long table was spread in the shade of oak trees and a grape arbor, and a fine dinner indulged in. The society thinks of incorporating under an agricultural charter, which would enable it to hold and improve property. The city of Santa Barbara will present them with one of the plazas when so incorporated. This society is one of the liveliest, gets up many good fairs, and aids greatly in the advancement of the county. Mr. H. C. Ford has been its president for many years—since its organization, in fact, and their success is largely due to his efforts and zeal in the work.

The great beds of asphaltum in Carpinteria are about to be used for street paving and sidewalks. A San Francisco company has leased the beds on Mr. Higgins' ranch and is now experimenting with the material. The deposits of bituminous rock in this valley may yet be used for making gaslight. The railroad company's graders set fire to this rock two or three months ago, and it is still burning. The fire covered one-quarter to one-half an acre, and burned so fiercely at times as to greatly hinder the work on the railroad.

The terminus of the S. P. Branch railroad is now at Carpinteria. The graders are working with all haste to get to Santa Barbara by August. The railroad company is going to build a fine depot at the latter point, and it is said will put up a fine hotel on the Hope ranch, which they have bought for the purpose. This hotel promises to rival the Del Monte for accommodations. It is the intention of the railroad company to boom Santa Barbara as a health resort; and certainly no better place can be found for that purpose. Much building is going on in the city and everything points to its material prosperity.

Carpinteria, July 10, 1887.

Stockton Notes.

[Written for the RURAL PRESS by Mrs. W. D. A.]

Two weeks of the harvest are gone and the work is at its height, with satisfactory working of the Houser, Holt, Myers and other machines, and a better yield than was expected from the severe drouth and sudden heat of May 27 and 28. All grain is shrunken somewhat, save at New Hope, on the islands, and in exceptional fields. A field near, that was plowed in just after the last rain and was too young for the May scorching, is yielding a plump berry and finely. Summer-fallow is fair throughout the county.

Average wheat brings \$1.72. Some sold their crop before harvesting and haul from the harvester to the warehouse. The past week has been very hot, with good wind. Thermometer 102°. If a match was touched to one of the dry fields, all creation would be on fire, so dewless are the nights, so fiercely bright the days. It is a good year for windmills, and the ground, not having had half the usual rain, demands frequent watering.

Four capitalists from San Diego county bought the controlling stock of the Mokelumne Ditch and Irrigation Co., and with the largest stockholders, Messrs. Langford, Sargent, Kettleman, Treadway and others, will begin the work so that water will be brought down before another harvest. They expect to water at least 300,000 acres.

The Stanislaus Ditch and Irrigation Co. has incorporated with directors, M. F. Tarpey, Dr. Gibbons, J. S. Morris, J. D. McDougald and J. Gambetta, to take water from the Stanislaus for the adjacent lands and Stockton.

Beetles are nearly gone, but linnets secured most of the cherry crop and are now at work on figs. Apricots were good and plentiful; so are peaches. Pears and apples are less wormy this year. Housewives are busy canning, pickling and drying the fair yield of fruit.

On the Fourth, Stockton and its hotels were full of visitors, who came to see the glorious day's parade and the evening's "Horribles," with their burlesque oration by the young and witty lawyer, Arthur Levinsky.

It is well for the Sons of the Golden West that they took this day in hand and reminded us of patriotism, and to inculcate it in our children.

Stockton, July 6, 1887.



Little Coats.

[Written for the RURAL PRESS by FANNIE H. AVERY.]
 "Moreover his mother made him a little coat."—I Samuel, iii: 19.

'Tis long since Samuel's mother wrought
 A little coat for him to wear,
 In token of her loving thought,
 Her tender, unforgetful care.

Strong emblem of maternal love!
 Sweet story from a distant age!
 We mothers prize it far above
 More striking themes on history's page.

For we, too, fashion little coats,
 For loved ones of our own to-day;
 While Fancy many a banner floats
 Above our needle's gleam and play.

The prophet's mother's hopes and fears,
 Her love, are changeless links that bind
 Our hearts to hers through all the years,
 And ebb and flow of humankind.

A Woman as a Locomotive Engineer.

For some time there has been a good deal of quiet talk among railroad men in the vicinity of Bridgeport, Conn., of a singular discovery that a woman disguised in male attire had been running an engine for many months. The fact has been kept secret by the railway officials, and was at first received with incredulity by their subordinates, but is a fact nevertheless. The heroine is an English girl named Mattie Morgans, who came to this country about two years ago after serving an apprenticeship as stoker on the Great Northern railway, between London and Edinburgh.

She concealed her sex so cleverly that she readily secured a position as fireman on the Naugatuck railroad and was eventually promoted to the post of engineer, first on a freight and afterward on a passenger locomotive, a post which she might have held to this day but for her voluntary retirement about six months ago. The cause of her retirement is told below in her own words. Five years ago Mattie Morgans, then a pretty girl of 19, fell in love with Tom Winnan, an engineer of the "Flying Scotchman." Tom's run was from King's Cross Station, London, to York and return alternate days. The Government contract calls for a forfeiture of a pound sterling for every minute the train is behind schedule time, which seldom happens.

Several evenings a week Mattie Morgans would wait at King's Cross and listen for Bow Bells and St. Paul to ring out 7 o'clock. With that hour would come thundering into the station the "Flying Scotchman." Tom Winnan and the royal mail. Weeks and months passed, and in that interval Tom Winnan, after his day's work was done, would stroll out to Hyde Park, St. James', Kew Gardens, or perhaps float up and down the Thames with his fair young friend. She would listen to the thrilling recitals of his adventures until she learned to love her hero as Desdemona loved the Moor. She yearned to fly through the air with him and share the dangers, excitements and triumph of a life so foreign to her own. It is not an uncommon thing in England and Scotland to find men's work performed by women, and what more natural than in this case to find woman's love of adventure, curiosity and love overcoming all objections. A short time only was required to bring out her plans. With Tom's earnest assistance she was duly installed as stoker under his charge, her rough fustian suit and face purposely besmeared with coal dust and oil completely disguising Tom's sweetheart. Day after day the "Flying Scotchman" engine No. 362, with seven-foot drivers, and just from the shops at Dundoon, flew over the rails at the rate of 52 seconds to the mile, honest Tom's hand upon the throttle and his sweetheart fighting at the fire-box. Never minded she the steam, the dust, the roar, neither confusion nor fatigue, for Tom's cheery words and encouraging smile were ever ready, and his strong arms saving her the heavy burdens from day to day. It was her pride to keep the steam gauge pointing at high-pressure mark. She understood the duty of oiling and cleaning, and was always ready to "hook out the grate" or "set the guide cup."

The engine had no cab, but instead the conventional English dashboard, an almost useless thing against a storm. It was not

long before her face became weather-beaten, which, together with the coal dust and grime, made the chance of discovering her identity less and less. Tom was very careful. He watched to see that no meddling engineer should observe that his "stoker" was a woman. So matters went on for nearly a year. Tom and she were to have been married. With the forethought of Traddles in "David Copperfield," bits of furniture and household utensils were bought, and the day looked forward to for happy housekeeping; but fate had decreed otherwise; Tom Winnan was killed. He was run over in the switchyard by a shunted car and died within an hour, his head upon his "stoker's" lap. It was then, when in anguish, Mattie Morgans betrayed her womanhood.

She fled the country and came to the

a relief engine. I suppose you will think it strange if I tell you that I have been inside of my engine's fire-box, but of course it was cold. I have also been inside the spark-arrester and shifted the diaphragm. Once while running a passenger train I keyed-up and fastened a slipped eccentric. We were running 40 miles an hour when it happened. I shut off, gave her sand, turned the air-cock for brakes, and brought up the train all standing. My fireman and I climbed under the forward driver-axle and pried the eccentric into place. The passengers gathered about and looked on. My fireman climbed back into the cab and worked the lever until the links came into place, and then I tightened the set screws holding the eccentric in place. I could not adjust the 'throw' to a nicety, and in consequence the 'lead'

from my trade. I cannot even refer to it without a shudder. I was running my train with a new engine, No. 120, and was going nearly 50 miles an hour. Far ahead on the track, between the rails, I saw something white which I thought was a piece of newspaper. As I drew nearer, O horror! it was a little child. It was sitting facing me and playing with the dirt and stones. I reversed and tried to stop, but it was impossible. As I got nearer the little thing looked up and clapped its hands apparently in delight of the big engine, and in an instant the ponderous monster had passed over it. I almost fainted, but stopped the train. The people went back. The poor little thing was ground to atoms. That was my last trip. That child haunted me day and night. I was taken ill and when at last I recovered I resumed my skirts. You have in Bridgeport, Farini (the photographer), who so many years was 'Lulu' and electrified audiences in Europe and America as a beautiful and shapely young girl. At Niblo's Garden 'Lulu' broke the hearts and won many favors from rich men. 'Lulu' was hurled from the catapult. He was shot out of a cannon. From concealed springs on the stage at Niblo's he was fired to dizzy heights, and his graceful figure deceived the poor deluded men into offers of marriage. 'Lulu' made a living by his disguise. Why should not I do the same? It is an even exchange. But I am done with my disguise, for I am going to be married. My affianced is a stationary engineer, and has charge of the 60-horse power engine in one of the large manufactories. After I am married I hope to be able to make a visit some time to England and point out to my husband the 'Flying Scotchman' where first I learned to run a locomotive."

Mattie Morgans is but 24 years old. She has light-colored banged hair, dark eyes, and is quite handsome. Her face approaches, perhaps, the masculine and has a determined expression of character, yet withal it lights up with pleasant smiles and betrays in unguarded moments the gentler feelings of the weaker sex.

Francis Scott Key.

Among the many handsome bequests of James Lick was one of \$60,000 for the erection of a monument to the memory of Francis Scott Key, author of the National Hymn, "The Star-Spangled Banner." In a few days this monument will grace the Golden Gate park, and add one more to its many attractions. The contract for the structure of this monument was awarded February 7, 1885, and the eminent American sculptor, W. W. Story, was selected to design and construct the beautiful tribute of honor. Mr. Story went to Rome, and in the desolate palace of Barbeni for two years toiled upon his task. It is now complete and is *in transitu* to this city. Work has been commenced in the park in the children's playground, south of Conservatory valley.

The accompanying cut is from a photograph taken from a model of the monument. The two main statues and bas-reliefs are of bronze, while the monument proper is carved out of travertine, a calcareous stone, sometimes known as Tufaceo marble. It is a reddish-yellow, slightly variegated with dark-blue lines, and its durability is amply attested by St. Peter's Cathedral, at Rome, portions of the Colosseum and the Porta Civita Vecchia, all of which are in perfect state of preservation. Mr. Story suggested travertine because its yellowish tone was agreeable to the eye, and it was susceptible of the most delicate artistic finish.

The monument will, perhaps, be one of the largest and most imposing in California. It will be 51 feet from the base to the top of the flag. The figure of America surmounting the flag will be eight feet high, and that of Key will be little larger than the life size. The reader may see from the cut that the figure of America stands in a bold attitude and embodies the spirit of patriotic freedom. In her right hand she holds the "Star-Spangled Banner," the folds gently drooping over her back. The pedestal upon which America rests is a delicately beautiful block of marble, each corner of which is surmounted by a miniature eagle, the typical bird of liberty and power.

The figure of Key is one of graceful pensiveness; his head resting on his right hand with a far-away look. It is the poet sitting in an attitude of thought. The bas-reliefs on the sides of the monument will be four feet in height and will be in bronze. The side presented to view in the cut is a group of figures singing the "Star-Spangled Banner," and on the other side is a fac-simile of the verses as written.

The philanthropist in making his bequests was anxious to leave some token of his patriotic love for his country, as well as his



JAMES LICK'S MONUMENT TO FRANCIS SCOTT KEY,
 Author of "Star-Spangled Banner."

United States. Her stock of money began to dwindle. What to do next puzzled her. The situation daily became more alarming. Desperate at last she determined to disguise herself again and apply to some railmaster of motive-power for a place as fireman. She was not long in securing a situation upon a Connecticut railroad, and after serving for nearly two years was appointed as engineer of a freight locomotive.

Perhaps her experience is best told in her own words:

"Yes, I was appointed engineer of the night freight. I had a 74-mile run and old '27' was my engine. The first night I ran, a forward strap of the main rod broke. I disconnected the main rod, covered the 'ports,' wedged up and fastened the 'cross-head,' and crawled 20 miles with only one side working, losing less than one hour of my running time. Then we got stalled in an up-grade and stood there till morning for

was a trifle 'off' on one side, so that when we started again the 'exhaust' barked unevenly, sounding like the exhaust of an engine properly 'quartered.' I performed this job in six minutes, which drew considerable attention from the railroad men. I received a letter of commendation from the superintendent and was shortly thereafter given the 'day express' to run. I never had any serious accidents, but I have killed two men. One was walking on the track; I blew and blew for him, but he did not hear me and was struck. The other man attempted to drive his wagon over a grade crossing. I struck him and killed him and his horse also.

"These accidents had a strange effect upon me. Of course I was not to blame and was exonerated by the officials, but seeing these men killed produced insomnia. I could not sleep. Their faces were constantly staring at me. I began to run down in health and my last accident drove me

gifts to science, charity and education. His own soul had been stirred and thrilled by this national ode. A monument to the memory of the gifted soul whose patriotic words had so long been the inspiration of the American people, and had become an imperishable part of their literature, seemed to Mr. Lick eminently fitting.

Francis Scott Key was more than a poet, he was an eloquent lawyer, and honored by the generation who knew him as a worthy citizen. He died suddenly in January, 1843, in the city of Baltimore, and was buried in the Mount Olivet Cemetery. Years after a plain marble slab was placed at the head of his grave by the Hon. George H. Pendleton, who married the poet's daughter, with this inscription: "Francis Scott Key, born August 9, 1780; died January 11, 1843."

Some attempts have been made to erect a more fitting monument to the poet, but they were unsuccessful. A bill was introduced in Congress by Congressman Unger, of Maryland, for this purpose, but nothing came of it. Afterward a bill was introduced into the Maryland Legislature praying the donation of \$5000 for a monument, but the measure failed. It is more than likely the name of the author of the "Star-Spangled Banner" would have gradually faded from memory, but for the thoughtful patriotism of James Lick.

The recent kind and liberal act of Mr. W. W. Corcoran in bringing home and furnishing an honorable burial of the remains of John Howard Payne, author of "Home, Sweet Home," was a noble and graceful tribute to the memory of one who had made so many hearts happy and invested home with a new charm. It refreshed the dear old song in memory and seemed to give a sweeter charm. The monument that will soon be a prominent ornament in our Golden Gate Park will not only keep alive the memory of Key, but will cause us all to sing with new fervor the immortal effusion of his patriotic heart.

The Heated Term.

Perhaps there is no country in the world where so many people enjoy themselves in the woods, up in the mountains, by the seashore and various other summer resorts, during the heated term. The President has just got home from a fishing bout in the Adirondack woods, and no doubt wishes he had staid there longer. His Constitutional advisers are all seeking rest and recreation somewhere. Congressmen are scattered as widely as the leaves whose breezy shades they are wooing. There is no politics worth speaking of. There is just enough business to keep the wheels of trade in motion. Now that the Fourth of July is over, Uncle Sam is inclined to snooze and take things easily.

As we are prone to take pleasure in contemplating the misery of others, the restlessness of other lands may give some zest to our summer siesta. England is still tugging away at the Irish question; France and Germany are making faces at each other and playing at mimic war; Russia is plotting how to outwit the Nihilists; Italy is still in the feverish flurry of trying to be somebody, and ever and anon are flitting rumors of the Pope's health. Surely it is a great blessing and comfort to live in a free country that has nothing to fuss and flurry about, that does not care to fight anybody and has got so big that no one cares to fool with it, and where the people are content with the present and proud of the future. About the only trouble we have is to know how to dispose of our surplus money. We have the Anarchists here and sometimes they throw bombs and make threats, but they are merely a sort of itchy pustule or parasitic vermin on the surface of the body politic, producing an irritating sensation, but in no wise endangering the political life and health. Happy the people who have no special National ambition only to be happy, prosperous and at peace with all the world.

YOUNG LADY (educated in Boston)—Have you any genuine maple molasses?

St. Louis grocer—We have some that are very fine. How many?

Young lady (recoiling in horror and moving toward the door)—None at all, if you please. Is there no store on this street where English is spoken?

It was the late Granville Moody, the "Fighting Parson," who at the battle of Stone River rode along his lines, shouting: "Give 'em hell, boys; give 'em hell in the name of God and your country;" but the pious old man always insisted afterward that what he really said was "Give 'em Hail Columbia."—*Burlington Free Press.*

A GOOD bill that no legislature ever passes: a thousand-dollar bill.—*Jersey City Argus.*

YOUNG FOLKS' COLUMN.

Dobbin's Friend.

Dobbin has a little friend,
Spotted, white and sable;
Every day she goes to him,
In his lonely stable.

Not a mite of dread has she,
Not a thought of danger;
Lightly runs between his hoofs,
Jumps upon his manger;

Lays her soft, warm cheek to his,
Purs her meek "good-morning!"
Gives the flies that hover near
Such a look of warning!

"Dobbin, dear," she sometimes says,
"Feel my winter mittens;
Nice and warm, you see, and made
Purposely for kittens."

"Dobbin, dear, such times at home!
Mother has caught a rat!
Brought it home to show to us—
What do you think of that?"

"Now, Dobbin, if you weren't so big
I'd take you to our house,
And give you for your supper, dear,
A plump, delicious mouse!"

"Dobbin!" she whispers, purring still,
"You often get so weary;
Why don't you balk or run away,
And get your freedom, dearie?"

Then Dobbin gives his head a toss,
And says, "For shame, Miss Kitty!
If I could do so mean a thing,
'Twould be a monstrous pity."

"No, no; my master's good and kind;
I'll never vex him, never!"
And Pussy, pleased, still rubs his cheek,
And likes him more than ever.

How Howard Bought the Baby.

Howard is a little boy, only six years of age, and lives with his papa and mamma in a village in the State of Michigan. One day he came running into the house, calling "Mamma, mamma!" and seemed very much excited. His mother asked him what he wanted.

"I do wish," said Howard, "we could buy Mrs. Lamb's baby. He puts his little arms around my neck and hugs me so cute."

"Buy Mrs. Lamb's baby!" exclaimed the astonished mother.

"Why, yes," answered the little fellow. "I will take care of him all the time. We can buy his clothes, too; and you won't be bothered one bit."

"But," said mamma, "Mrs. Lamb will charge more for her baby than we are able to pay."

"I know what we can do," said Howard. "We can trade something for him."

Mamma laughed, and said: "I don't think of anything I can spare, unless it may be the basin of soft soap the soap-man left here this morning. But, as Betty is doting on that for scouring the kitchen floor, you will have to ask her about it."

Away went Howard to the kitchen.

"Take it along. Oh, law! what a child!" said Betty, when Howard made known his wish.

In a few minutes Mrs. Lamb was surprised, on answering a knock at her back door, to find there a small, red-faced boy with a large basin of soap.

"I've come to buy your baby and all his clothes with this soap," said the little man.

As soon as Mrs. Lamb could speak for laughing, she said:

"Do you think I would be willing to part with my dear little baby for a basin of soap?"

"Oh, I do want him so much! Can't you trade him for something?"

"Well," answered Mrs. Lamb, "I might trade him for a big boy that I wouldn't be obliged to carry in my arms."

"Oh, goody good!" exclaimed the delighted boy. "I'll trade Fred for him, and send him right over when he comes from school." Fred was Howard's brother.

"Take the soap home, and I will put the baby in his cab, and you may come back and get him," said Mrs. Lamb. Howard ran home, and told his mother that he and Mrs. Lamb had made a trade, and that he would soon have a sweet little baby all his own.

In a short time, Howard appeared at the front gate, looking very happy indeed, and wheeling the baby carriage. "Mrs. Lamb says she will give me the clothes when Fred comes. She wants time to pick 'em all up," he explained to his mother, who had been inquiring after the wardrobe. His mother told him that he had better amuse baby by wheeling the carriage about the lawn, and then returned to her sewing.

All went well for a time; but, by and by, the baby became tired, and began to cry. Howard sang, turned somersets, whistled and played all sorts of pranks, but to no avail. The baby only cried the louder. He then in despair called his mother; but mother was too busy, and only reminded him of his promise. It was not long before Mrs. Lamb saw a tired and disgusted boy enter the gate, with her baby screaming at the top of his voice.

"Mrs. Lamb," said Howard, "you needn't 'spect Fred over. I don't want to keep this baby always. When I do want him, I'll borrow him."

Cats to Give Away.

The following "cat essay," by a couple of misses of Oak Vale school, was read in their school paper at the close of school on last Monday:

Great big cats and little young cats; All extra good for catching rats. There are 12 in number different size; And whenever one squalle, the old ones rise. Some yellow, some gray, some spotted, some black; But I must say, in meanness, not one of them lack. They may always be found in the house at night; And I'm sure a preacher would swear and fight. If your back is turned, or you're out of sight, They lick the pots and dishes just for spite. But the most are young and if trained with care, would be better cats than you'd find anywhere. If you don't believe it, come up and invest in a few, and you'll greatly oblige Dolly, and Eva too.—*Santa Maria Times.*

HARRY AND CHARLEY—aged five and three respectively—have been seated at their nursery table for dinner. Harry sees that there is but one orange on the table, and immediately sets up a wailing that brings his mother to the scene.

"Why, Harry, what are you crying for?" she asks.

"Because there ain't any orange for Charley."

GOOD HEALTH.

Wrinkles.

Wrinkles are due to the gradual wearing away of flesh underneath the cuticle. Why does it wear away? Because the facial muscles have either too little or the wrong kind of exercise. It will be observed that wrinkles usually take a downward course. This is due to the wrong kind of exercise. What exercise? Why, the washing and wiping of the face, to be sure. Reverse the process, and, instead of rubbing the face down in washing and wiping, always rub upward. This will have the effect of counteracting the tendency of the flesh to depart from under the cuticle, and will keep the face free from wrinkles. It is rather an awkward habit to acquire at first, but perseverance will make it second nature, and the result is worth many pains. This exercise is designed particularly for the benefit of the eyes and the upper portion of the cheeks. Then, for the middle and lower portion of the face, where hollowness rather than wrinkles is often noted, another plan must be taken. The facial muscles are subjected to very slight activity in the ordinary exertions of eating and talking. To fill the cheeks out round and plump it is necessary to develop the muscles there. These muscles are very slight at the best, and any special effort well directed will increase them in capacity and size. An excellent exercise for this purpose is this: Take a piece of soft leather—kid or chamois skin will do—and put the end of it between the teeth; then chew gently upon it for several minutes, taking care not to raise the teeth from the leather. If the teeth are raised it will bring into play only the ordinary muscles of mastication, whereas the purpose is to develop those that are seldom used. One who tries this method will find the cheek going through a queer action that is anything but graceful and pretty; nevertheless, it is immensely effective and will restore to its youthful plumpness even the most hollow cheek. Try it faithfully and you will be convinced.—*Journal of Health.*

REMEDY FOR THE POISON RHUS (OAK).—I notice in January issue that Dr. Frank Jones considers a strong solution of bi-carbonate of soda the most efficient application for the cure of rhus poisoning. Nearly 20 years ago I was first poisoned while botanizing, and have been poisoned every year since, from one to four or more times. I have tried the above named remedy and numerous others, and now use exclusively a strong (saturated) solution of alum, which relieves me quicker than any other application ever did. I would remark that, as is well known, the rhus affects different persons in different degrees, and some not at all; and I have thought it may also affect them in a different manner, as I have known several persons, one of whom would experience greater relief than another while using a similar remedy. Therefore all may not be so readily relieved by the application of the alum solution as myself and others to whom I have recommended it, but to all whom the soda bi-carbonate does not cure, I would say, try the alum solution.—*C. A. Ubeck, in Gardeners' Monthly.*

THE USES OF LEMONS.—Lemons are one of the most useful fruits in our domestic economy. Lemonade is not only a luxury, but exceedingly wholesome. It is a good temperance drink. The juice of half a lemon in a glass of water, without sugar, will frequently cure a sick headache. If the hands be stained, there is nothing that will remove the stain better than a lemon or a lemon and salt. After the juice has been squeezed from the lemon, the refuse can be used for the purpose. Lemon juice and sugar, mixed very thick, is useful to relieve coughs and sore throats. It must be very acid as well as sweet. Lemon juice is also a very good remedy for rheumatism and the so-called biliousness of spring. In the latter case the juice should be taken before breakfast.

DOMESTIC ECONOMY.

Bread-Making.

The *Milling World* gives the following facts, which will be of interest not only to all housewives, but to flour manufacturers as well:

A barrel of good flour should make from 270 to 285 five-cent loaves. Many bakers blend four brands, as two Minnesota springs and two Indiana winters, before they get the right alloy. Others use only one grade of spring and two of winter wheat. These make the best brands of fancy bread. Formerly yeast was made of malt, potatoes and hops, and this is extensively used. Fancy bread bakers use a patent yellow compressed yeast. It is popularly supposed that bakers use alum extensively in order to whiten their bread. That is not the fact. There is no necessity for the use of alum, and it is not used in the trade. There are about 20 large steam bakeries in New York, which give employment to several hundred men. One of these, a noted Broadway establishment, makes a specialty of Vienna bread and does an immense business. Vienna bread is made in air-tight ovens, of the best grade of flour, and milk is used instead of water in mixing the dough. In baking, the steam settles back on the bread instead of escaping. This makes the outer crust thin and tender, and gives the bread a peculiarly rich taste and pleasant aroma. What is known to the trade as "steam" bread is another recent invention. It is made of the very finest of flour and baked in air-tight pans, which inclose it on all sides. It is thus baked in its own steam, and possesses a flavor peculiarly its own. One very large bakery in New York is devoted solely to the production of aerated bread. It is a steam factory, and the bread so made is extremely light and spongy. The invention is an English one, but has been in use here for years. When the dough has reached a certain consistency, it is run into an air-tight cylinder and strongly impregnated with carbonic acid gas. This creates the lightness and sponginess without detracting in the slightest from its nutritious qualities.

RICE PUDDING WITHOUT EGGS.—Two quarts of milk, two-thirds of a cup of rice, same of sugar, small piece of butter and a little salt; stir occasionally on the stove until boiling hot, then put in a slow oven and cook until of the consistency of cream.

FLOUR GEMS.—One egg, one tablespoonful of sugar, two tablespoonfuls of butter, 1½ cupfuls of sweet milk, three teaspoonfuls of baking powder, 2½ cupfuls of flour. Beat well, have your gem pan hot and buttered. Pour in and bake quick.

WHITE CAKE.—Two cups of sugar, one cup of butter, five eggs, beaten very light, one cup sweet milk, 3½ cups of flour, two tablespoonfuls of cream of tartar and one of soda. Flavor with bitter almonds or vanilla.

PUFF PUDDING.—One pint of boiling milk and nine tablespoonfuls of flour; mix first with a little cold milk. When cold, add a little salt and flour, three well-beaten eggs, and bake in a buttered dish. Serve at once.

LEMON SODA CAKE.—One cup of sugar, one tablespoon of butter, two eggs, one-half cup of sweet milk, one teaspoon of soda, two teaspoonfuls of cream tartar, one pint of flour measured after sifting.

EXCELLENT CAKE.—Take one cupful of sugar, three cupfuls of flour, 1½ cupfuls of milk, half a cupful of butter and two eggs; mix thoroughly, adding two teaspoonfuls of baking powder. Bake in a hot oven.

MINT SAUCE.—Chop fine one bunch of mint, mix with it a tablespoonful of white sugar, a pinch of salt and pepper each, and five tablespoonfuls of vinegar. Stir well and serve with roast lamb or veal.

YANKEE MUFFINS.—To one quart of milk add one gill of yeast, one teaspoonful of salt, with four or five eggs beaten. Add flour sufficient to make a thick batter. Bake in muffin rings. Serve with butter.

LEMON JELLY.—The yolks of two eggs, one cup of sugar, one cup of water, one tablespoonful of cornstarch and the juice and grated rind of one lemon. Cook till thick. This is nice for layer cake.

MOCK SAUSAGE.—Soak dry bread in water. Take as much cold meat, chopped fine, as you have bread. Mix, and season with salt, pepper and sage. Make into small cakes and fry in hot lard.

BEEF CAKES.—Cut cold beef in slices and soak in vinegar over night, then dip in beaten egg seasoned with salt and nutmeg, roll in dried breadcrumbs and fry in butter to a nice brown.

GRAHAM FLOUR PUDDING.—One cup of graham flour, one cup of sweet milk, one cup of molasses, one cup of chopped raisins, one teaspoonful of soda. Steam three hours.

GINGERBREAD.—One cup of molasses, one-half cup of butter, two tablespoonfuls of water, one teaspoonful of soda, flour enough to mold. Roll out thin and bake in a quick oven.

SALAD OF SALMON.—Cut some cold salmon into slices or pieces about the size of a dollar, garnish with capers and strings of lettuce hearts; pour a salad dressing over the whole.



A. T. DEWEY. W. B. EWER.

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SAN FRANCISCO:

Saturday, July 16, 1887.

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See Advertising Columns.

The Week.

A good note can be made of the progress in irrigation endeavors. Our columns from week to week have mention of organized effort here and there for the utilization of idle waters, and the result must be great toward the upbuilding of the regions interested. Upon large enterprises there must always be conflict of opinion and sometimes of interests, but there is quite a commendable spirit of union and co-operation in most of the efforts which have been undertaken.

The cloud of litigation on the water question seems also to lift now and then; one of the most cheering rifts in the cloud this week being the dismissal of the riparian suits brought against irrigators using Kings river water. This action of the court will give peace and a great progressive impetus to the adjacent land in Fresno and Tulare counties.

Crop reports are still good, the increased yield in some fields being very satisfactory to the owners. According to all reports, every one who wants work can get plenty of it, and there is some complaint of a lack of hands. It is, of course, the busy season, but as our industries multiply, the opportunity for labor widens. Thus may it continue.

Advertising Methods.

A very interesting chapter might be written on the science of advertising, as it has been amplified and improved with the growth of magazines and newspapers until it has nearly reached the last degree of perfection. It is a wonder that Herbert Spencer or some of his disciples have never taken up the history of this art in order to illustrate the doctrine of evolution. The earliest methods were of the clumsiest sort. They seemed based upon the theory that the more cumbersome the vehicle of information the greater the importance of the information they conveyed. The first we hear of advertising was by public orators, a method still in vogue in some parts of Europe and even in this country, and the red and black lettered theatrical posters of the ancient Romans still hold their place on the bill-boards and deadwalls of the present day. It was a considerable period after the establishment of the newspaper before it was recognized as the cheapest, quickest and most effective way of advertising.

In the early period of advertising journalism, the merchant who wanted to proclaim his wares was fond of making his notice cater at the same time to his personal or lyrical vanity. To simply and tersely state the facts, the kind of goods for sale, merits and prices, was hardly thought sufficient. The merchant himself, or some rhymester employed for the purpose, would set forth the excellency and desirability of the goods in jingling doggerel. The effusion often gave only the faintest idea of what was to be bought, but if some odd quirk or queer conceit was woven into the lines the end was attained. It was hoped that while the reader laughed at an epigram, he would remember that Jones' goods were really going at a fearful sacrifice, or that fortunes were to be made by patronizing Smith's store. But it was soon discovered that the public laughed and that was the end of it. The jingling lines gave no reason why one should trouble himself to visit one shop or store more than another.

The newspaper has not attained its present supremacy without a struggle. For a long time it had to divide the honor of the most sedate merchants with all sorts of sonorous and violent devices. Banners, wagons bearing garish signs, harlequins, street bands, processions, strange animals, and divers other attractions have been employed by auctioneers and even merchants. Much of this sort of advertising is still employed by traveling shows, patent medicine vendors, flaring posters, marching elephants, painted mules, the calliope and street parades. On one of the deadwalls of Market street may be seen a group of California's greatest men in the complacent attitude of puffing Pet cigarettes, and in depots and other public places may be seen the portraits of the most beautiful girls as the trademark of some new brand of cigars or tobacco. Even the Maltese cross and other fraternal society devices may be seen doing duty on claret bottles and petroleum cans. Hardly a day passes that we do not learn of some sensational device to attract attention. A New York bootblack could scarcely keep soul and body together till he took it into his head to jump off the Brooklyn bridge, and now he earns \$100 a week in a dime museum. A few days before the charming Sara came to the United States, we had a cock-and-bull story of a duel between a high-toned Frenchman and Italian caused by some criticism of the French actress. The Prince of Wales is one of the best advertising agents of the day in giving London stars a lift into notoriety.

But while all these and various other allurements may be resorted to, the newspaper is bound to absorb the bulk of the advertising patronage of the world. The reason is obvious. It is the chief medium of information. It goes everywhere. It is valuable intrinsically, and its advertising columns reap the benefit of all the thought and money expended on its news and editorial pages. The newspaper has become the public bureau of information. It is the place where everybody looks to find everything. No catch-penny trick or perambulating street device can ever rival that daily and weekly budget of simple, necessary facts, to know which is the intellectual bulwark of millions of people. Recognizing all this, advertising in journals is the most important part of legitimate trade. For saying the most in the fewest words and in the most

striking way habitual newspaper advertisers are pre-eminent. It is only necessary to scan the columns of the RURAL week after week to realize how far the art of placing facts before the public, not only in a way that arrests attention, but that stimulates inquiry and inspires confidence, has been studied and practiced.

Interesting Figures on Fruits.

We have just received the report of the Chief of the Bureau of Statistics at Washington, giving exports and imports of the United States for the eleven months ending June 1, 1887, and the corresponding period of last year. We select first as of especial interest to our fruit-growers the figures relating to importations of dried fruits for the periods described above:

Kind of Fruit.	Pounds.	1887.	1886.
Figs.....	8,723,137	7,218,290	
Prunes.....	90,697,169	64,008,596	
Raisins.....	40,388,273	39,995,725	
	Values.		
Kind of Fruit.	1887.	1886.	
Figs.....	\$487,557	\$505,038	
Prunes.....	2,971,040	1,998,705	
Raisins.....	2,269,456	2,861,619	
Preserved fruits.....	656,706	797,852	
Totals.....	\$6,386,759	\$6,163,214	

This shows that, notwithstanding the respectable figures which our production of these fruits is reaching, the importation of them is increasing. Even reckoned upon the basis of value, this appears, and if figured in weight the increase would be greater, for the prices or valuation per pound is shown to be less this year than last. The deduction would be that the population of the country, or at least the consumptive demand for these articles, is increasing faster than the California production of them. This is a hopeful condition of affairs for California, for it postpones indefinitely the time when our product shall oversupply the demand of this country. Although we look forward to ultimately turning hither the millions which are now going to the Mediterranean regions for these fruits, we can well afford to wait for the victory, which will be all the greater when it comes. To the prune-growers especially the figures are comforting, for, although they may be forced to take comparatively low prices for their fruit, the prospect for actual overproduction of prunes seems quite remote, as the United States imported nearly a million dollars' worth more in 1887 than the year before.

The importation of semi-tropical fruits and grapes also reach interesting figures, as follows:

Kind of Fruit.	1887.	1886.
Lemons.....	\$3,286,639	\$2,182,191
Oranges.....	2,104,643	1,798,971
Other fruits (not bananas).....	1,758,065	1,386,048
Nuts—Almonds.....	517,934	640,186
All other nuts.....	663,386	550,015
Totals.....	\$8,330,667	\$6,528,651

The weight of almonds was 4,547,683 pounds in 1887 and 8,770,836 pounds in 1886.

Thus it appears that during the year ending on the 1st of last June there were brought into the United States nearly \$15,000,000 worth of dried and green fruits and nuts, the production of nearly all of which has gained considerable importance and extent in California. In nearly all cases, as we remarked above, the importation is increasing in spite of California's contributions to the national supplies. It certainly does not appear that California's work in this direction is likely to be overdone, providing we can stand competition with foreign producers in the matter of cost; as to style or quality, we are quite sure that we can excel.

Fruit for the East.

According to telegrams and Eastern exchanges received, the sale of California fruit on the auction plan is progressing favorably. There has been a little brush in Sacramento between the Union and the Bee, or rather the Bee seems to have been doing a little brushing all by itself. The complaint seems to be that the Union officers do not tell what the fruit sells for because the rates are so high that local buyers cannot get any fruit and that the Union is helping buyers by not publishing prices. It is not long since the Union was abused because it would not tell prices because they were so low; now it is abused for not telling them because they are so high. It is hard to please some people, but we imagine if the shippers by the Union get good prices and

quick returns, it will be all right. If they do not do so we shall probably hear from them.

Reports from the East are very favorable so far. On Saturday last Mr. Blowers telegraphed that the receipts for the first five cars in New York were as follows: First car, \$1500; second car, \$1740; third car, \$1503; fourth and fifth cars, \$2700 for the two together. Auction sales have been arranged for in Boston and Philadelphia, as well as in New York. The regular auction days in New York will be Tuesdays and Thursdays through the season. The fruit seems to strike the East just right, after the Florida oranges are gone and before the Northern fruits come in. Mr. Blowers thinks about half of all the fruit shipped from California can be sold to advantage in the Atlantic Coast cities.

The Eastern peach crop this year is reported short. Both New Jersey and Delaware are said to have but one-quarter of a full crop. Eastern peaches will come in about September 1st, and then it will be desirable to act cautiously with California shipments.

The Coming Fairs of 1887.

The season of annual fairs comes on apace, and the notes of preparation are sounding in all directions. Here in San Francisco the directors and agent of the Mechanics' Institute are busy, while the rivalry between them and the promoters of the State Fair has been the occasion of so brisk and extensive a canvass that both exhibitions may be gainers thereby.

The new pavilion at Stockton will be added this fall to the number of fine exhibition buildings put up in the State within a few seasons, and the Mechanics' Pavilion, in this city, is undergoing enlargement.

We give below a list of displays to come, arranged in order of their dates, and shall be grateful for any aid from officers of different associations in filling gaps or correcting errors, as we intend to republish it from time to time for the convenience of our readers:

Bay Dist. Assoc., S. F., Aug. 6 to 13.
S. Clara Valley Agric. Soc., San Jose, Aug. 15 to 20.
Sonoma Co. Agric. Park Assoc., Santa Rosa, Aug. 22 to 27.
Fourth Dist.—Sonoma and Marin—Petaluma, Aug. 29 to Sept. 3.
Eighth Dist.—El Dorado—Placerville, Aug. 30 to Sept. 2.
Thirteenth Dist.—Sac, Yolo, Yuba and Sutter—Marysville, Aug. 30 to Sept. 2.
First Dist.—Alameda, Contra Costa and S. F.—Oakland, Sept. 5 to 10.
Third Dist.—Butte, Colusa and Tehama—Chico, Sept. 6 to 10.
Seventeenth Dist.—Nevada and Placer—Grass Valley, Sept. 6 to 10.
Cal. State, Sacramento, Sept. 12 to 24.
L. A. Co. Pomological—Los Angeles, Sept. 12 to 17.
Ninth Dist.—Humboldt and Del Norte—Rohnerville, Sept. 20 to 25.
Nevada State, Reno, Sept. 21 to Oct. 1.
Second Dist.—San Joaquin, Stan., Merced and Tuol.—Stockton, Sept. 26 to Oct. 1.
Fifth Dist.—S. Clara and S. Mateo—San Jose, Sept. 26 to Oct. 1.
Nineteenth Dist., S. Barbara, Sept. 27 to 30.
Tenth Dist.—Siskiyou, Trinity and Shasta—Yreka, Sept. 28 to Oct. 1.
Sixth Dist.—L. A., S. Bernardino and Ventura—Los Angeles, Oct. 3 to 8.
Eleventh Dist.—Plumas, Lassen, Modoc and Sierra—Susanville, Oct. 3 to 8.
Seventh Dist.—Monterey and S. Benito—Salinas, Oct. 4 to 8.
Fifteenth Dist.—Tulare and Kern—Visalia, Oct. 10 to 15.

Fire! Fire!

Within the past month, newspapers in different parts of the State have published scores of paragraphs like the following:

"A destructive fire broke out this afternoon in a grain-field on the ranch Buenaventura, about three miles northeast of Cottonwood. The heavy clouds of smoke that rolled heavenward drew crowds of people from that town and Anderson, and soon hundreds of spectators were viewing the awful destruction of fences, headers, header-wagons and grain. Full 2000 acres of grain was burned, and we are informed there was but little of the grain and other property destroyed insured."

"Yesterday a fire broke out on the farm of J. Kneebone, south of Grass Valley, destroying a quarter section of grain, and spreading to his son's place adjoining, destroyed a like amount."

"About nine o'clock this morning a fire started at the Branigan ranch, and, driven by a strong north wind, spread rapidly through the hills, devouring everything in its path. The whole country is swept clean from the public road to the Sacramento river, a distance of five miles. Fifteen miles of fencing belonging to

John Barry has been burned. If the wind continues blowing no one can imagine the result."

In many cases the origin of the fire is stated, for instance: "Sparks from a passing locomotive caused quite an extensive fire at the Nadeau Eucalyptus grove at Florence this afternoon. Ten acres of trees were burned down, and about 100 cords of dry cut wood were destroyed. The damage will probably exceed \$5000." Again: "Sunday morning as the train going south pulled up at the depot at Tehama, fire from the ashpan was blown into Supervisor Mooney's wheat-field near the depot. Miss Mattie Tartar jumped into a buggy, drove to town and notified the citizens, who soon rallied and put the fire out before it had gained much headway. The engineers should be more careful in the future."

Again: "There was a fire in the dry grass, about half a mile east of the Woodland depot, Thursday afternoon, that for awhile had a serious aspect. A number of boys had been shooting with a shotgun in the dry grass, using paper wads. Ten minutes later the fire was observed by some person passing. The alarm was given and a brigade of men and boys, armed with wet sacks and buckets, were soon on the field hard at work, and after almost superhuman endeavors, the fire was quenched and all danger averted."

On "Honest John" Baker's Tehama county farm an old man was blacksmithing, when a piece of hot iron flew out the door and set fire to the grass. The flames spread rapidly over several hundred acres, mostly pasture-land, before the rallying neighbors could extinguish them.

This very week a furious fire near Loomis swept over two miles square, burning a large amount of fencing, pasture and woodland, and scorching vineyards and orchards. This blaze was supposed to have been started by careless hunters or campers.

Matches let fall where the sun shines hot upon them and sets them off in the dry stubble, may occasionally be the beginning; but the careless smoker, dropping the match with which he has lighted his pipe, or throwing away the stump of his cigar, is perhaps the most frequent kindler of these disastrous summer conflagrations.

Comment is unnecessary.

The Danger in Wheat Gambling.

We had the satisfaction of warning our wheat farmers when the fever was on them, that selling futures on wheat was a dangerous business. It seems now, according to the *Stockton Independent*, that some from that neighborhood have been caught in rather a peculiar way. We quote:

"Some of the speculative farmers who wanted to catch the top prices then offered for July and August delivery, sold large lots of No. 1 wheat, signing contracts to deliver that grade. They sold at from \$1.75 to \$1.85. Now when they have commenced harvesting they bring in samples of their crop and find it will not weigh up to the standard. They have entered into written contracts to deliver No. 1 wheat, according to the Produce Exchange standard, and let me tell you that there is but little wheat in this section of the State that will weigh up to the standard."

Farmers who made such sales must deliver wheat which will weigh 60½ pounds per bushel, for that is the standard this year. If their weight does not weigh that they have to buy some wheat that is up to the standard to fill their contract. The *Independent* tells of one case like this:

One Stockton farmer, who owns land in this county, in April last sold 500 tons of No. 1 wheat. His crop has been harvested and he can't find one bushel in his own grain that will help to make good his written contract. He is now in the market hunting for wheat that will weigh 60½ pounds to the bushel.

We are sorry when a producer gets into such a trap, but such is always the danger when one goes into gambling. It is no part of legitimate production nor of legitimate trade. If a buyer wants the wheat, taking chances of the growth himself, it is well enough to sell to him, but when a farmer guarantees the weather he does something which his experience should have taught him is dangerous, to say the least of it.

A. T. DEWEY has just returned, with his family, from a vacation in Lake and Napa counties, where he devoted four weeks entirely to recreation.

ENTOMOLOGICAL.

Natural Foes of the Cottony Cushion Scale.

We have given from Prof. Riley's forthcoming report sketches of the life history of the cottony cushion scale, *Icerya purchasi*, which seem to have proved very acceptable to our readers. An esteemed correspondent in St. Helena writes as follows:

I have specimens in my collection that came from trees in Napa City several years ago. These trees were cut and burned, and it may be there are no more *Iceryas* in this vicinity, but, as they are known to have been here, I would suggest the careful watching for them. Your exhaustive articles in the *PRESS* will certainly properly educate readers so they can recognize the pest if it should occur in the future.

It will be acceptable to know that some progress is being made in discovering natural foes of this scale, although it must be acknowledged none yet found have an appetite commensurate with the reproductive power of the pest. The idea of sending a skilled investigator to

Neither Mr. Coquillett nor Mr. Koebele observed any bird feeding upon it. The reason for this exemption is probably the copious secretion of wax, which is doubtless distasteful. Several reliable persons report that ducks and chickens feed greedily upon those scale insects which are dislodged from the trees. On one occasion a brood of six young ducks gorged themselves upon scales which had been washed from the trees with pure water, and on the same day two ducks died. On the day following three more died, while the sixth recovered after an illness of several days. This disastrous effect was probably due to the greed with which the scales were eaten, as they were said to produce no such result with chickens which ate them at the same time.

Predaceous Insects.—The only predaceous insect observed by Mr. Coquillett to feed upon the cottony cushion scale was the larva of a species of lace-wing fly (*Chrysopa* sp.), which was not bred and cannot be named more exactly.

The ambiguous lady-bird (*Hippodamia ambigua*) has been noticed feeding upon the eggs when they were exposed to view by the egg-sac being broken open; but neither this nor any other species of lady-bird was seen to feed upon the adult insect, although commonly attracted by the honey-dew secreted.

Among the predaceous insects found by Mr.

lows: "Upon one occasion (August 25, 1880), I found within the body of a full-grown female [of *L. olea*] a lepidopterous larva. * * * The specimen, however, was lost, and no more have been found since." From the fact that this larva destroys living black scales, we have every reason to believe that it will also feed upon living cottony cushion scales, and will not confine itself, as heretofore observed, to the dead females and their empty egg-sacs.

In his report Prof. Riley gives a full description of this new species.—*EDS. PRESS*: A common Tenebrionid beetle (*Platynus brevicollis* Lec., Fig. 2), was found by Mr. Koebele to occur abundantly among the rubbish at the foot of the trees infested by *Icerya*. Egg-sacs which had been completely eaten out and the eggs devoured were found in close conjunction with several of these beetles, and in consequence a few beetles were placed in a pill-box with female scales and large egg masses. In a few days the eggs were all eaten, but the insects themselves were not disturbed. It is probable that this is not the normal habit of this beetle, yet it may without much question be put down as an occasional destroyer of *Icerya* eggs. The habits of the allied *Epitragus tomentosus*, as described by Mr. Hubbard in his report on "Insects Affecting the Orange," p. 75 (Fig. 36), render this all the more probable. The *Epitragus* was observed to feed upon scale insects of all kinds in Florida, tearing the scale from the bark and devouring its contents, and sometimes also the substance of the scale itself.

The larva of a Dermestid beetle (*Perimegatomus cylindricum* Kirby, var. *angulare*) was also found among the cottony cushion scales, but as it would only feed on dead scales in confinement, it is not likely that it is truly predaceous.

Prominent among the true bugs found upon the infested trees is the large brown *Largus succinctus*, Fig. 3. This is said to destroy the scale insects, although Mr. Koebele could never see it do so. He noticed it feeding upon the honey dew, and on one occasion noticed two immature specimens with their beaks inserted in a male larva of *Icerya*. They ran away on his approach, and the larva was found to be dead; but as there were numbers of other dead larvae about, he did not consider that there was any evidence of the predaceous habits of the *Largus*. On the contrary, he observed this insect often with its beak inserted into young shoots of orange. The other Heteroptera found by him among the scales were the well-known *Piezodorus* sp., *Corizus hyalinus* Fabr (Fig. 4), *Peritrechus luniger* Say, *Beosus* sp., *Lyctocoris* sp., and *Piezostethus* sp. These last five species have been kindly examined by Mr. Uhler, our best authority in the suborder, and he reports the undetermined species as probably new.

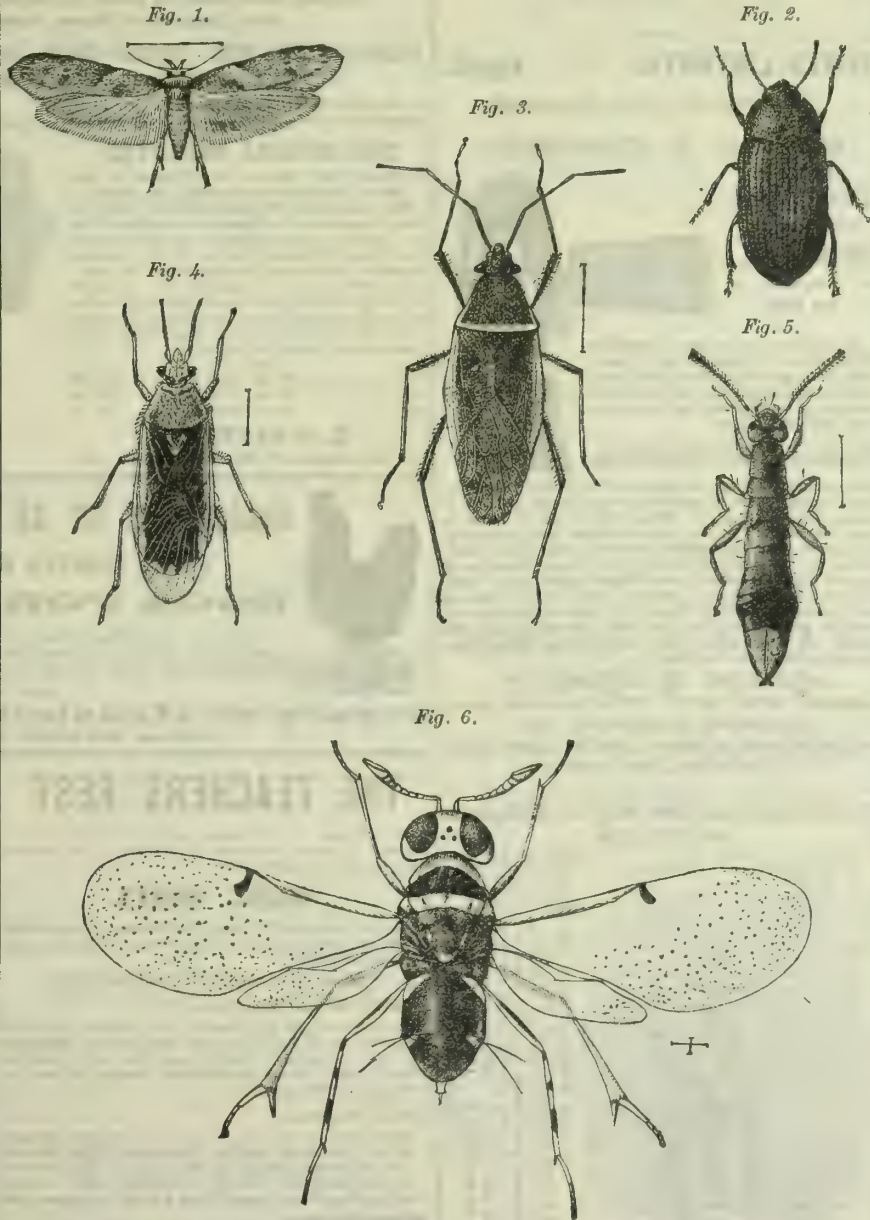
The most efficient destroyer of the cottony cushion scale at Los Angeles is perhaps a species of earwig, family Forficulidae (Fig. 5), neither the genus nor species of which we are able to determine, from the fact that we have only seen immature specimens. According to Mr. Koebele this insect is often met with among the scales, and, from observations which he made, feeds greedily upon the *Icerya* in all stages, tearing open the egg-masses and eating the eggs, and also tearing and eating the mature insects as well as the larvae.

Parasites.—It is a somewhat remarkable fact that no true parasites were ever bred from the cottony cushion scale until the past summer, and still more remarkable that in the course of their careful investigations, extending over a space of six months, neither Mr. Coquillett nor Mr. Koebele succeeded in finding a single parasite upon this insect. From a number of scales, however, sent to Washington by Mr. Koebele November 10th, we bred, on December 8th, two specimens of a small Chalcid, which is, without question, a true parasite of *Icerya*, as the female scales from which they escaped were found each with a small round hole in its back.

This little parasite (Fig. 6) is prettily marked with black and yellow. It is new to our fauna and may have been imported with its host. We turned it over to Mr. Howard for study, and as he finds it necessary to erect a new genus for it, it is named *Isodromus* n. g. Howard.

This genus belongs to the Encyrtinae, and is more closely related to *Homalotus* than to any other described genus. Its structural affinity to this genus is quite marked, but it is well separated by the characters italicized above. It differs in habit also, as *Homalotus* is parasitic upon coleopterous larvae of the families Coccinellidae and Chrysomelidae. The specific name is *Isodromus iceryae*, n. sp. [The report gives full descriptions of the new genus and species.—*EDS. PRESS*]

Importation of Parasites.—Considering the fearful losses already occasioned to California orange-growers by two species (the *Icerya* in question and the California red scale), introduced from Australia, we know of no way in which the Department could more advantageously expend a thousand dollars than by sending an expert to Australia to study the parasites of the species there and secure the safe transport of the same to the Pacific Coast; and the fact that the Commissioner of Agriculture is prevented from doing so by restrictions imposed on the Division of Entomology is a sad commentary on the narrow Congressional policy which seeks to limit and control administrative action in details which can neither be properly understood nor anticipated by committees.



FOES OF THE COTTONY CUSHION SCALE FOUND IN CALIFORNIA.

the natural home of the *Icerya*, when it shall be settled upon, to hunt for parasites, is a good one, and we hope it will be realized. We cannot count too many natural enemies for our imported pests. The facts brought to light by the studies of Prof. Riley and his assistants with reference to predaceous insects found here are interesting, and we give them herewith, with engravings of the insects described. The following is selected from the report mentioned:

Birds.—The natural enemies of the cottony cushion scale seem to be very few in number, not only in California but also in South Africa and New Zealand. In South Africa the only bird which is recorded as feeding upon this scale is the common "white eye" (*Zosterops capensis*), and this is given by Mr. Trimen upon hearsay evidence only: "I have not noticed any of our small birds attacking the *Dortheia*, but Mr. C. B. Elliot tells me that his boys have observed the little 'white eye' * * * pecking at them." From what we have been able to learn of the habits of this bird, however, we are inclined to think that it is attracted rather by the abundant secretion of honey-dew and the minute insects caught in it than by the scale insects themselves.

Koebele and sent to us for study we may mention first the larva of a small moth (*Blastobasis iceryella* n. sp.), Fig. 1, although as yet we are not certain that it ordinarily preys upon the living and uninjured scale insects or their eggs. Like certain other so-called predaceous Lepidoptera, it may be attracted primarily by the waxy secretions of the bark lice, and only incidentally destroy the insects and their eggs.

These larvae were often found feeding in the egg masses of females which has been destroyed by soap washes, and also in sacs, the eggs of which had hatched some time previously, but never upon fresh eggs. One of the larvae, kept in a glass tube with living scales and fresh eggs, fed slightly on the waxy mass, but did not thrive until after the scales died. It then fed upon the dead scales and molted, but died before transforming. Two nearly full-grown larvae fed readily on dead scales which were still soft and passed through their transformations successfully. The same insect fed readily upon the black scale (*Lecanium olea*), in this case eating the living insects and their eggs, forming a silken tube along the twig, and passing from one scale to another, just as does the Coccid-eating *Dakrura* (*Dakrura coccidivora*) in feeding upon the cottony maple scale at the East. This is probably the same insect as that mentioned by Prof. Comstock, Annual Report Department of Agriculture, 1880, p. 336, as fol-

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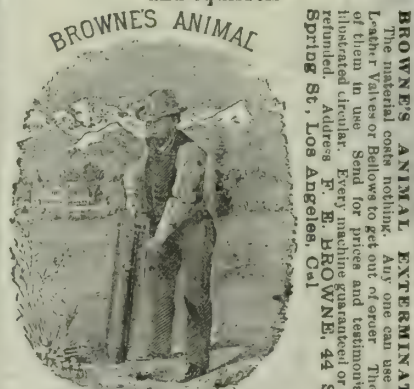
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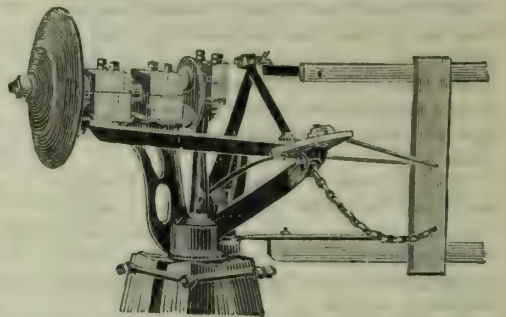
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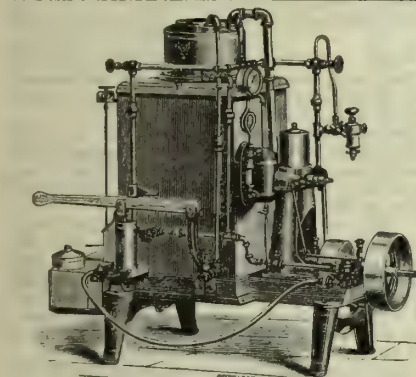


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S. H. MARKET REPORT

NOTE.—Our quotations are for Wednesday, not Saturday, the date the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, July 13, 1887.

The past week has been unusually favorable to harvest work, and farmers have not been slow in taking advantage of it. European wheat advices have reported throughout the week a firm, steady market. To-day's cables are as follows:

LONDON, July 13, 1887.—Cargoes off coast, firmer; cargoes on passage and for shipment, firmer; Mark Lane, firm, steady; Cal. wheat, just shipped, 39s. 6d.; Cal. wheat, nearly due, 39s. 6d.; Liverpool wheat, spot, firm; Liverpool wheat, Cal., 7s. 3d. to 7s. 6d.

Foreign Review.

LONDON, July 11.—The *Mark Lane Express*, in its review of the British grain trade during the past week, says: The wheat crop is making the best possible progress toward maturity, and failing disaster will be of phenomenal quality and quantity. The barley and oat crops are not much behind wheat. Beans are badly infested with aphides. Peas promise to be poor in Ireland. The trade values for wheat continue in favor of buyers, although deliveries have been small. The sales of English wheat during the week are 16,727 quarters at 34s. 2d. against 29,822 quarters at 30s. 9d. during the corresponding period of last year. Foreign wheat is weaker and business is restricted. The arrivals of wheat cargoes numbered 24; three were withdrawn and 21 remained. At to-day's market there was but little inquiry for wheat and values were unchanged. Beans were 6d. cheaper. Other articles were unchanged.

Crops at the East.

CHICAGO, July 10.—The following summary will app ar in this week's *Farmers' Review*: During the last week refreshing rains were experienced quite generally throughout the States of the Mississippi valley, though many unvisited localities suffered from drought. The winter wheat harvest is now so nearly completed as to furnish a safe basis for an estimate. The estimates of yields per acre, reached by summarizing the reports of our correspondents in this issue, are as follows: For 17 counties in Illinois, 17 bushels; 9 counties in Indiana average 15½ bushels per acre; 12 counties in Kansas give 13 bushels, which former reports incline us to think is too high; 4 counties in Kentucky average 11½ bushels; 3 counties in Michigan 13 bushels; 7 counties in Missouri average 19.7 bushels; 12 counties in Ohio, 16 bushels; and 4 counties in Wisconsin, 16½ bushels. Reports on the condition of spring wheat are uniform from Dakota, Nebraska, Minnesota, Iowa and Wisconsin. The lowest percentage of condition as compared with the average crop is 70 from Nebraska, and the highest 78 from Wisconsin. Spring wheat is rapidly approaching maturity and now, in spite of drought and insect injury, gives promise of about three-quarters of an average crop. The same condition will very nearly apply to the condition and prospective yield of oats. Corn generally is in a very promising condition and fully two weeks ahead of the season. There is already some complaint of chinchbug depredations, and there is danger that as spring wheat and oats are harvested the bugs will move in force to the adjacent cornfields, doing much injury.

Eastern Wheat Markets.

NEW YORK, July 13.—12 M.—84½¢ for cash, 83½¢ for July, 83½¢ for August, 84½¢ for September, and 85½¢ for October.

CHICAGO, July 13.—Wheat firmer; cash, 71½¢; August, 72½¢; September, 74¢.

California Products at Chicago.

CHICAGO, July 9.—In dried fruits there are no new developments and no features of interest to note. There is little demand, but the dullness does not affect prices, light stocks holding the market steady. Raisins are a little slow. Apricots to arrive are in firm request. Pitted Plums, evaporated, 10¢@11¢; sun-dried, 10½¢@10¾¢; Apricots, evaporated, spot goods, 22¢@25¢; future delivery, 15½¢@16¢; Prunes, 9¢@10¢; Raisins, London layers, 20-lb. boxes, per box, \$1.40@1.50; loose Muscatel, per box, \$1.25@1.30; California layers, \$1.25@1.30.

CHICAGO, July 12.—Trade is very good in California green fruits. Choice sound fruits are steady as follows: Apricots, half crates, \$1.50@1.75; peaches, 20-lb. boxes, \$1.75@2; peaches, Crawford, 20-lb. boxes, \$2.75@3; plums, Purple Duane, half crates, \$2.25@2.50; plums, Royal Hative, crates, \$2.25@2.50; pears, Bartlett's, \$3.50@3.75; grapes, Sweetwater, 20-lb. crates, \$2@2.50. Stock in soft order sells at less prices. Dried fruit is dull. As soon as the berry season is over, increased demand is looked for. Owing to small stocks prices remain about steady, and, taken all round, the market presents nothing new.

New York Hop Market.

NEW YORK, July 10.—There is no business, except moderate sales of 1886 Germans and Pacifics; Coast crop 1886 best, 21¢@23¢; common to choice, 16¢@20¢; 1885, good to prime, 10¢@13¢.

Eastern Wool Markets.

NEW YORK, July 10.—The wool trade continues light, partly because of warm weather and partly because of a feeling of greater caution since Western growers became a little shaky and express less confidence. The Boston market was dull, manufacturers being unwilling or unable to buy at present quotations. Among sales were: 117,000 lbs Territory at 17¢@25¢; 71,000 lbs Eastern Oregon at 17¢@18¢.

California Products in New York.

NEW YORK, July 10.—Green Fruit—California blue plums and choice apricots, 25¢ @ doz; peaches, 60, 65 cts and \$1 @ doz.

Canned—California pears, \$3@3.25.

Raisins remain unchanged.

NEW YORK, July 12.—California yellow mustard seed, 4½¢@4¾¢ cts. @ lb.

Local Markets.

BAGS—Over 2,000,000 wheat bags were added to the stock the past week, by the arrival of an overdue vessel from Calcutta. The pool, apparently, have hard work to keep values up. The market is quoted at 6¼¢@7¢ for standard size.

BARLEY—The market ruled weak and lower up to to-day, when a large buying interest started up on Call, and values recovered at the morning session 3c on buyer '87. Trading on Call has been quite active throughout the week. Receipts are very heavy, but it appears that the grain is mostly held against sales on Call. To-day's sales were as follows:

Morning Session: Buyer season—100 tons, \$1.19. Seller 1887, new—100 tons, \$1.03½; 100, \$1.04; 200, \$1.04½. Buyer 1887—200 tons, \$1.12½; 200, \$1.12½; 100, \$1.12½; 400, \$1.13½; 200, \$1.13½; 300, \$1.14; 100, \$1.14½; 100, \$1.14½; 100, \$1.14½; 300, \$1.14½; 100, \$1.14½; 200, \$1.14½; 700, \$1.15 @ ct. Afternoon session: Buyer season—100 tons, \$1.21½. Buyer 1887—300 tons, \$1.15; 800, \$1.15½; 500, \$1.15½; 500, \$1.15½; 100, \$1.15½; 200, \$1.15½; 100, \$1.15½; 300, \$1.15. Seller 1887—100 tons, \$1. Seller 1887, new—100 tons, \$1.04½; 100, \$1.04½; 100, \$1.04½ @ ct.

BUTTER—Gilt-edged butter is wanted, but off grades are pressing the market at low prices.

CHEESE—There appears to be a better demand at the lower prices, with distant points coming in as buyers. The market closed steadier.

EGGS—Strictly choice fresh-laid are wanted; other qualities are slow of sale.

FLOUR—The tone of the market appears to be firmer, owing to the strength exhibited by wheat.

WHEAT—Transactions on Call the past week were quite free, with the syndicate taking all offered. The slight decline and sharp upward moves add zest to the traffic and bring in more actual traders. It is claimed that there is a heavy short interest on the market. Contract sales of No. 1 bring more than there is of that grade of wheat in the State. To-day's sales on Call were as follows:

Morning session: Buyer 1887—100 tons, \$1.94. Seller 1887—300 tons, \$1.89; 200, \$1.88½; 200, \$1.88½; 200, \$1.88½; 300, \$1.88½; 2300, \$1.88½. July—300 tons, \$1.89; 100, \$1.89½. August—100 tons, \$1.89. July, new—100 tons, \$1.89½ per ct. Afternoon session: Seller 1887—1300 tons, \$1.88½; 700, \$1.89 per ct.

[COMMUNICATED.]

Market Information.

Cereals.

Cable advices received from England report that heavy rains fell about July 5, which did considerable good to the growing crops. Mail advices are as follows: In the United Kingdom there are reports of intense heat and very little rainfall. Rain is much needed there for the spring grain and hay crops, and the root crops. There has been a drouth in Ireland since the beginning of May. In France the reports of the growing crops indicate about an average output for wheat. The weather has been warmer, with fair amount of moisture, and the very late harvest at one time expected will not, with a continuance of favorable weather, probably be more than ten days to two weeks later than usual. The same may be said of the wheat crop in Belgium and Holland. At the latest postal advices there were serious complaints of the crops in the German empire. Hungary is from recent indications expected to have about an average wheat crop. In several portions of south Russia the prospects for the wheat crop had been impaired by drouth. Wheat exports from north Russia from the opening of navigation to the middle of June had been only a few thousand bushels against about 3,000,000 two years ago.

European dealers are still fighting against high prices, and to do this to better advantage have tools in this country to bear the market, by keeping prices down on the various produce exchanges. In this city, if such be the case, they have so far not succeeded, although aided by a leading morning paper. It can only be a question of a short time when values will begin to appreciate abroad, and high figures be reached before the close of the year. This view is taken by the best informed writers, who base the opinion on the cheapness of money and the statistical position of wheat throughout the world.

Eastern advices report the new grain coming in considerably shrunken, which deteriorates from its value, owing to its producing less gluten. The market at the East has been gradually strengthening, with the visible supply showing a marked decrease each week. Last year farmers held considerable old on the farm, but this year they have none.

Our Oregon advices report harvesting progressing favorably east of the Cascade range of mountains. The yield averages larger to the acre than last year, with the quality greatly improved. Harvesting west of the Cascades has commenced in the more month favored section, but will not become general until later on.

In this State harvesting is becoming more general. Returns coming in report the outturn both in quality and yield very irregular. There will be more shrunken grain than last year, as also more red wheat. From the tenor of present advices it is safe to claim that the standard this year will be below last year. While the standard will be lower, the yield of No. 1 white shipping will not be much if any over one-half of available surplus for export. As there is a large short interest on Call, it may bother them to fill except at very high prices.

The *Chronicle* and one or two more daily papers quote No. 1 shipping wheat at \$1.80@1.82½ per cental, while on Call large buyers stand ready to take all seller '87 wheat offered at \$1.89. So that if No. 1 wheat can be bought in the open market at say \$1.82½ the purchaser can sell it the same day on Call seller '87 at a handsome profit. Seller '87 can be delivered at any time after five days' notice to the purchaser. Such low quotations as \$1.82½ or even \$1.85 are misleading when seller '87 is as high as it is on Call.

Very heavy receipts of barley have sent the market to lower figures. Holders, as a rule, are not disposed to make much of a concession, still buyers in view of heavy receipts hold off. On Call there is a pronounced bear feeling notwithstanding the consumption has largely increased, while the crop this year is all of 125,000 tons less than last year's crop. The quality of the barley is good. Eastern advices

report a shortage this year, with the quality not up to last year. If this is correct then the East will draw quite freely of brewing from this coast.

Oats have a steady, strong tone, under moderate supplies and a good demand. Crop advices from Oregon and Puget Sound are of the most encouraging character.

Eastern advices report a steadily decreasing supply of corn, but owing to the favorable crop reports values do not appreciate. In our market corn is steady. According to the Produce Exchange the stocks on hand in this State on July 1 were as follows in centals:

	1887.	1886.
Wheat.....	2,790,400	1,232,000
Barley.....	798,500	114,820
Oats.....	42,400	31,150
Corn.....	72,330	27,625
Rye.....	1,350	1,050

Exports of wheat from India for the week ending July 2 were 1,700,000 bushels, of which 640,000 bushels were to the United Kingdom and 1,060,000 bushels to the Continent. The total shipments from January 1 to July 2 were 19,580,000 bushels, of which 9,520,000 bushels were to the United Kingdom and 10,060,000 bushels to the Continent.

The *Chicago Daily Bulletin* of July 6 says: There was a carload of No. 2 Spring wheat delivered yesterday in a bunch of 5000 bushels for July delivery, bought at 69½¢, on which the storage was 70½¢. Quantity of wheat on passage to France June 17, reported at 2,800,000 bushels, against 760,000 bushels for the corresponding date last year. Quantity of wheat on passage to Antwerp, June 17, estimated at 640,000 bushels, against 1,760,000 bushels at the corresponding date last year. Quantity of barley on passage to U. K., June 16, reported at 1,040,000 bushels, against 410,000 bushels for corresponding time in 1886.

Chicago telegrams to S. S. Floyd & Co. of this city report that crop returns have been received from every county in Illinois, and also in Indiana, which show an average yield to the acre of 13 bushels, but in Ohio the yield so far reported only averages 12 bushels to the acre.

The New York Produce Exchange *Reporter* says: The United States wheat crop of 1886 was placed at 457,218,000 bushels measure, by weight 444,777,702 bushels, 60 lbs. The quantity left over July 1, 1886, was placed at 70,000,000 bu., of which 50,000,000 bu. were considered as reserve and 20,000,000 bu. added to crop of 457,218,000 bu., making 477,218,000 bu. The home consumption for 60,000,000 population and seed are 335,000,000 bu. The exports, so far, from both coasts, have been 152,330,702 bu. in wheat and flour to all countries, making with home requirements for the year added 487,330,702 bu., which shows that the 50,000,000 bu. reserve has already been drawn upon to the extent of 5,222,700 bu. The visible supply is now about 39,350,000 bu., and includes the reserve stock. If the export movement be not disappointing, there will be a further decrease in it on July 5th, of 2,250,000 to 2,500,000 bu. The quantity in the country outside of the visible wheat is believed to be moderate. The wants of Europe are large; if consumption be normal, the United Kingdom will require from Atlantic ports about 1,000,000 bu. of wheat (flour included) per week for 11 weeks to come. The indications are that there will be no very considerable movement of the new winter wheat crop till about the 10th to 15th of August. The rainfall in the winter wheat belt has for the last three weeks been very small. At 70c to 75c for winter wheat it is not probable that farmers will be free sellers.

Mail advices received to-day from England are as follows: The weather in the United Kingdom has remained warm and summer-like, and entirely favorable for the growing crops, the progress of which is described by most of the agricultural reports as really wonderful, compared with a fortnight ago. In France the improvement in the wheat crop has been equally favorable, and now that the blooming period is passing under favorable auspices, what seemed like a small average crop a month ago will probably prove to be a full one. In Germany, although vegetation is very backward generally, there are very few complaints. In Hungary, the wheat crop, according to the latest estimate of the Minister of Agriculture, promised to be a full average on 54.9 per cent of the total area, above an average on 38.9 per cent, and below an average on 6.2 per cent. The outlook is therefore decidedly better than last year.

Feedstuff.

On last Thursday the mills advanced the price of both bran and middlings. The cause of the advance is said to be due to the shutting down of several mills for repairs, and also the increased demand. In other ground feed there are no changes to note.

This paper, early in June last, took the ground that hay will be high throughout the season; and all present indications point to this view being correct. The market is higher for all grades of new, under a good demand and strong holding.

Fruits.

Yellow Crawford peaches make a better showing, and as the price recedes the more common peaches lose favor and consequently are hard to sell even at low prices.

The better varieties of plums are coming in quite freely, but as yet they are not any too ripe, which necessitates concessions except to purchasers filling distant orders.

Pears are in good supply, but as yet they are not very choice.

Cherries are about gone and not quoted. Currants are hanging on unusually long, that is, the supply is quite large considering the length of time they have been in the market.

Raspberries are shaded to find quick custom.

Blackberries are in liberal supply, necessitating low prices to clean up large consignments.

Apricots continue to come in heavily, causing low prices to rule. The canners continue to buy freely.

Apples are improving in quality, but as yet the more choice varieties have not put in an appearance.

Strawberries are fairly steady, with canners still buying at the lower quotations.

Cantaloupes are gradually settling in price under more liberal receipts.

In dried fruits no new of this season is offering except apricots, which have a wide range, according to quality. Considerable are being shipped to the East.

Grapes are coming in more freely. The demand

is improving, owing to the quality being much better. Orders from up north are coming in for the better varieties, causing the price to rule fairly strong at the close.

Watermelons continue to come in sparingly.

Live-Stock.

The consumption of meats continues light, owing to the large number of San Franciscans absent, and also to the heavy supply of fresh fruits. Beef cattle are barely steady at quotations, although prices in the interior are reported to be well maintained. Mutton sheep are offering at shaded prices. Hogs are very scarce and wanted in small quantities. In horses there is nothing doing in draft animals, as the demand appears, for the moment, to be satisfied. Roadsters and matched teams are wanted, as are general utility horses. For these there seem to be ready buyers always at hand.

The following are the wholesale rates of slaughterers to butchers:

BEEF—Extra, 7¢@7½¢; first grade, grass fed, 6¢@6½¢ per lb.; second grade, 6¢; third grade, 4½¢@5½¢.

LAMB—Ewes, 5¢@5½¢; wethers, 6¢@—c.

LAMB—Spring, 7¢@8¢.

VEAL—Large, 6¢@7¢; small, 6¢@8¢.

PORK—Live hogs, 4¢@5¢ for heavy and medium; hard dressed, 7¢@7½¢ per lb.; light, 4½¢@5¢; dressed, 7¢@7½¢; soft hogs, live, 3½¢@4¢. On foot, one-third less for grain or stalled, and one-half less for stock running out.

Vegetables.

Potatoes ruled easy up to Tuesday, when a steadier, stronger tone set in under a freer demand for the more choice.

Onions are fairly steady, with an improved call reported for the better matured.

Cucumbers, egg plants, green okra and peppers are in freer receipts, with buyers favor.

Tomatoes continue to hold up well. Receipts barely meet the trade call.

String beans and peas are without essential change. The quality is as a rule poor.

Green corn is coming in more freely, causing prices to shade off very materially.

Miscellaneous.

The tonnage movement compares with last year at this date as follows:

	1887.	1886.
On the way.....	287,902	323,571
In port, disengaged.....	106,020	31,961
In port, engaged.....	18,416	39,101

Totals.....412,338 394,633

The above gives a carrying capacity as follows: 1887, 659,740 short tons; 1886, 631,412 short tons; increase over last year, 28,328.

The small supply of fine merino and crossbred wools causes light trading in our market. The Eastern market takes the finer grades at from 1 to 3 cts per lb higher prices than last year, but the coarser grades are slow.

In hops, holders are firm in the belief of better prices. English advices report a smaller crop this year, as do Belgium advices; but Germany and Nuremberg will have a fair average. New York advices report that the yield in that State will be one-half of the crop of 1885, which was 158,000 bales. New York advices report the brewers lightly stocked with hops.

Poultry has ruled steady and firm throughout the week.

Beans are dull and heavy, as are seeds.

Hams and bacon are advancing. Quotations are ¼¢ per lb higher, with another advance looked for soon.

Large speculative movements have been made within the past few days in canned corn, canned peas, canned peaches and canned tomatoes, which have caused prices to advance quite sharply.

San Francisco, July 13, 1887.

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, July 13, 1887.			
Apples, bx com.	30 @	50 @	100 @
do choice.....	50 @	100 @	100 @
Apricots, bx.....	25 @	45 @	16 @
do Royal.....	35 @	50 @	10 @
Bananas, bunch.....	2 @	3 @	2 @
Blackberries, ch.....	3 @	5 @	10 @
Cantaloupes, cr.....	4 @	5 @	6 @
Cherries wilt bx.....	40 @	60 @	10 @
do black bx.....	50 @	75 @	10 @
do white bx.....	40 @	60 @	10 @
do Royal Ann.....	30 @	50 @	10 @
Cherry plums.....	30 @	50 @	10 @
Oranapples.....	— @	— @	— @
Cranberries.....	10 @	12 @	50 @
Currants ch.....	2 @	5 @	10 @
do Mission.....	2 @	5 @	10 @
Gooseberries.....	2 @	5 @	10 @
do black.....	75 @	100 @	2 @
do white.....	40 @	60 @	10 @
Grapes.....	25 @	100 @	1 @
do Rose Peru.....	— @	— @	— @
do Muscat.....	— @	— @	— @
do Tokays.....	— @	— @	— @
Isabel.....	— @	— @	— @
Wine, Zinfandel.....	— @	— @	— @
do Mission.....	— @	— @	— @
Limes, Mex.....	11 @	— @	— @
do Cal. box.....	— @	— @	— @
Lemons, Cal, bx.....	2 @	3 @	3 @
do Sifly, box.....	6 @	— @	— @
do Australian.....	— @	— @	— @
Nectarines box.....	— @	— @	— @
Oranges, Com bx.....	1 @	1 @	1 @
do Cho'ce.....	2 @	2 @	2 @
do Navel.....	3 @	4 @	4 @
do Panama.....	— @	— @	— @
do back.....	25 @	40 @	15 @
Crawford, bx.....	50 @	75 @	10 @
do back.....	— @	— @	— @
do choice.....	— @	— @	— @
Pears bx.....	30 @	75 @	10 @
do choice.....	— @	— @	— @
do Bartlett, bx.....	1 @	1 @	1 @
do Mission.....	— @	— @	— @
Jap, bx.....	— @	— @	— @
Pineapples, dos.....	4 @	5 @	10 @
Plums box.....	— @	— @	— @
Pomegranates, b.....	— @	— @	— @
Prunes bx.....	— @	— @	— @
Quince bx.....	— @	— @	— @
Raspberries ch.....	4 @	6 @	10 @
Strawberries ch.....	3 @	7 @	10 @
Watermelons 100.....	— @	— @	— @

RAISINS.			
do black, 100 lb.....	2 @	2 @	2 @
do white, 100 lb.....	2 @	2 @	2 @
do Cal. 100 lb.....	1 @	1 @	1 @
do Layers, 100 lb.....	1 @	1 @	1 @
do Loose Muscatel, 100 lb.....	1 @	1 @	1 @
do Valencia, 100 lb.....	1 @	1 @	1 @
do Layers, 100 lb.....	1 @	1 @	1 @
do Sultan, 100 lb.....	1 @	1 @	1 @
Fractions come 25, 50 and 75 cents higher for halves, quarters and eighths.			

VEGETABLES.

Artichokes, dos.....	— @	— @	— @
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Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, July 13, 1887.

BEANS AND PEAS.		POTATOES.	
Bayo, etc.	1 90 @ 2 50	Paper shell.	19 @ 20
Butter.	1 75 @ 2 00	Brazil.	11 @ 13
Red.	1 80 @ 2 00	Peanut.	9 @ 11
Pink.	1 25 @ 1 50	Filberts.	4 @ 5
Large White.	1 90 @ 2 00	Hickory.	7 @ 8
Small White.	1 75 @ 2 10		
Lima.	1 75 @ 2 25	Burbank.	— @ —
Wild Peas, blk eye.	1 00 @ 1 05	Early Rose.	— @ —
do green.	1 00 @ 1 12	Cuffey Cove.	— @ —
do Miles.	1 25 @ —	Jersey Blues.	— @ —
		Petaluma.	— @ —
		Tomatoes.	— @ —
		River reds.	— @ —
		Humboldt.	— @ —
		do Kidney.	— @ —
		Chile.	— @ —
		do Oregon.	— @ —
		Pearlons.	— @ —
		Salt Lake.	— @ —
		New Potatoes.	50 @ 1 00
		POULTRY AND GAME.	
		Hens, doz.	6 00 @ 8 00
		Roosters.	5 50 @ 11
		Broilers.	3 00 @ 7
		Ducks, tame.	4 50 @ 6
		do Mallard.	— @ —
		do Sprig.	— @ —
		Geese, pair.	1 00 @ 1 50
		do Goslings.	1 25 @ 1 50
		Wild Gray, doz.	— @ —
		Turkeys, B.	18 @ 20
		do Dressed.	— @ —
		Turkey Feathers.	10 @ 30
		tail and wing.	— @ —
		Salp. Eng. doz.	— @ —
		do Common.	— @ —
		Doves.	— @ —
		Quail.	— @ —
		Rabbits.	1 00 @ —
		Hares.	1 25 @ —
		Venison.	— @ —
		FLOUR.	
		Extra, City Mills.	4 95 @ 5 70
		do Country Mills.	4 45 @ 5 45
		Superfine.	3 70 @ 4 45
		GRAIN, ETC.	
		Barley, feed, cbl.	1 05 @ 1 12
		do Brewing.	1 15 @ 1 25
		Oatmeal.	1 45 @ 1 03
		Oatmeal, doz.	1 45 @ 1 03
		do Coast.	— @ —
		Buckwheat.	1 00 @ 1 20
		Corn, White.	1 15 @ 1 25
		Yellow.	1 10 @ 1 20
		Small Round.	1 20 @ 1 30
		Nebraska.	1 07 1/2 @ 1 15
		Oats, milling.	1 75 @ 1 80
		Choice feed.	1 60 @ 1 65
		do good.	1 50 @ 1 57 1/2
		do fair.	1 45 @ —
		do black.	— @ —
		do Oregon.	— @ —
		Rye.	1 25 @ 1 50
		Wheat, milling.	— @ —
		Gilt edged.	1 87 1/2 @ 1 92 1/2
		do (hoes).	1 82 1/2 @ 1 87 1/2
		do fair to good.	1 77 1/2 @ 1 80
		Shipping choice.	1 83 @ —
		do good.	1 80 @ —
		do fair.	1 75 @ —
		HIDES.	
		Dry.	14 @ 16
		Wet salted.	7 1/2 @ 8 1/2
		HONEY, ETC.	
		Resewar, B.	20 @ 22
		Honey in comb.	10 @ 13
		Honey in comb.	— @ —
		do fancy.	13 1/2 @ 14 1/2
		do dark.	3 1/2 @ 4 1/2
		HOPE.	
		Oregon.	17 1/2 @ 22 1/2
		California.	15 @ 22 1/2
		ONIONS.	
		Pickling.	— @ —
		Red.	40 @ 65
		Silverskins.	60 @ 85
		NUTS—JOBBER.	
		Walnuts, Cal. B.	13 1/2 @ 14 1/2
		do Chile.	— @ —
		Almonds, hshl.	5 @ 7
		Soft shell.	18 @ 19 1/2
		Southern Coast.	11 @ 18 1/2

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR THE WEEK ENDING JULY 5, 1887.

365,958.—BRIDLE BIT—H. Baldrige, Los Angeles, Cal.
365,908.—MOSAIC WORK—E. Chatain, S. F.
366,103.—EXTRACTING SILVER—O. Hofmann, Alameda, Cal.
366,007.—ROLLER ATTACHMENT FOR BOATS' GUNWALES—P. S. Katsenys, Astoria, Ogn.
366,011.—BEER COOLER—Liddicoat & Utzinger, Astoria, Ogn.
366,123.—POOL TABLE ATTACHMENT—X. Margheri, S. F.
365,930.—VERMIN ERADICATOR—Chas. Meeker, Albina, Ogn.
365,849.—POCKET-FRAME CLAMP FOR POOL TABLES—A. G. Nygard, S. F.
365,851.—BOTTLE CASE—Henry Palmer, S. F.
365,938.—BUTTON-HOLE GAGE—Deia Phillips, Los Angeles, Cal.
365,869.—BEVEL AND SQUARE—Shaw, Cutbirth & Platt, Los Angeles, Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates and in the shortest possible time.

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BERKSHIRE SALES.—The transcript from the last entry in the Berkshire Record, which is sent us by Phil. M. Springer, of Springfield, Ill., secretary, has the announcement of the sale of Carmelita 17,272, Vulcan, 17,273, Mollie 17,274, Major 17,275 and Hily 17,276, by Andrew Smith, Redwood City, Cal., to John G. Wright, San Francisco, Cal.

PURCHASING AGENCY.—We invite the attention of ladies in the interior to Mrs. F. E. Smith's card, which appears in another column.

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PACIFIC COAST WEATHER FOR THE WEEK.

(Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.)

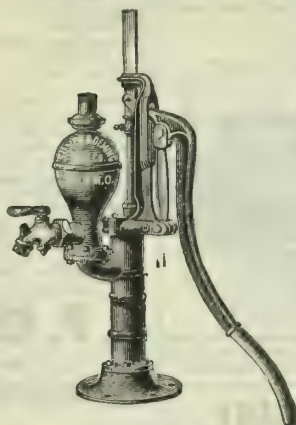
DATE.	Portland.		Red Bluff.		Sacramento.		S. Francisco.		Los Angeles.		San Diego.	
	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.
Thursday.....	.00	72 Nw	Cl.	.00	100 N	Cl.	.00	82 SW	Cl.	.00	63 W	Cl.
Friday.....	.00	78 Nw	Cl.	.00	108 N	Cl.	.00	85 SW	Cl.	.00	61 W	Cy.
Saturday.....	.00	72 Nw	Cl.	.T	94 N	Fr.	.00	80 S	Cl.	.T	61 SW	Fr.
Sunday.....	.00	68 N	Cl.	.00	86 S	Cl.	.00	74 S	Cl.	.00	62 W	Cl.
Monday.....	.00	62 Nw	Cl.	.00	86 S	Cl.	.00	74 SW	Cl.	.00	60 W	Cl.
Tuesday.....	.00	66 S	Cy.	.00	88 S	Cl.	.00	78 S	Cl.	.00	60 W	Cl.
Wednesday.....	.00	62 Nw	Fr.	.00	86 N	Cl.	.00	72 Nw	Cl.	.00	66 W	Cl.
Total.....	.00						.00			.07		

EXPLANATION.—Cl. for clear; Cy., cloudy; Fr., fair; Fy., foggy; — indicates too small to measure. Temperature Wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

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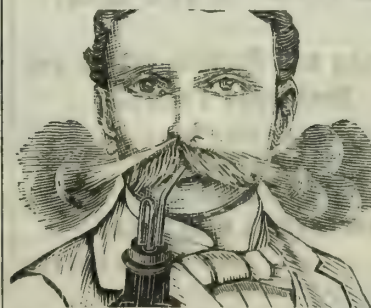
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NEW MEXICO STARTING A "BOOM."—A dispatch from Las Vegas states that at a meeting of the Bureau of Immigration of New Mexico, held there on the 11th, it was decided to publish a large edition of a pamphlet on New Mexico, correcting false notions of the Territory and setting forth its advantages. The pamphlet will be distributed by Secretary H. C. Barnett of Santa Fe. Only a very small portion of the Territory is covered by land grants, and fully nine-tenths of New Mexico is open to settlement. Crops are in fine condition and there has been less irrigation than any other year heretofore. Immigration is steadily increasing, and there is active dealing in real estate in the larger towns.

NEVADA STATE FAIR.—We are glad to note that our Nevada friends propose to make an unusual effort to draw out a display of their resources and achievements at the State Fair, which will be held in Reno the last week in September. Especial attention will be given to the Pavilion exhibit. Two premiums are offered for county exhibits; Washoe county being ruled out from competition for the first place because, we suppose, of its proximity. It would be a good idea to have a grand rally of Nevada people and products this year.

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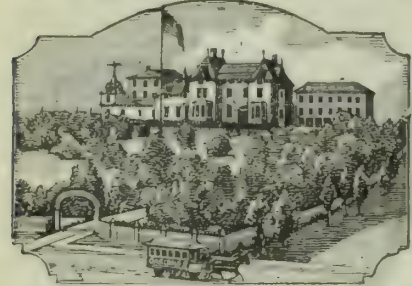
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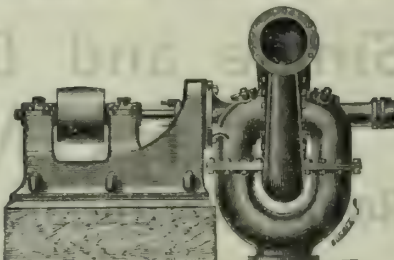
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NITROGENOUS SUPERPHOSPHATE.

UNIVERSITY OF CALIFORNIA, Nov. 3, 1886.

DR. J. KOHNIG—Dear Sir: I have analyzed your sample
 of "Nitrogenous Superphosphate," with the
 following result:

Soluble Phosphoric Acid.....	12.90 per cent
Inverted Phosphoric Acid.....	.96 "
Insoluble Phosphoric Acid.....	2.83 "
Pota h.....	2.23 "
Ammonia.....	1.87 "
Nitric Acid.....	2.95 "

The above amount of Nitric Acid is equal to 0.85
 per cent Ammonia, therefore, total of Nitrogen calcu-
 lated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vine-
 yards, orchards, gardens, farms, and I recommend its
 use by the cultivators of the soil generally, in Cali-
 fornia. Yours truly,
 DR. E. A. SCHNEIDER.

University of California, College of Agri-
culture.

BERKELEY, Nov. 20, 1886.

DR. J. KOHNIG, San Francisco—Dear Sir: I take pleas-
 ure in adding my testimony to that of Dr. Schneider as
 to the high quality of the "Nitrogenous Super-
 phosphate" Fertilizer, analyzed by him at your re-
 quest. It is a high-grade article, and as such re-
 turns the user a better money value than a low-grade

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fertilizer. It is especially well adapted to use in
 California, on account of the predominance in
 it of Phosphoric Acid, which is generally in small
 supply in our soils. Yet it is desirable that "com-
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 and yours is of that character in furnishing
 Potash and Nitrogen as well. Very respectfully,
 E. W. HILGARD.

The value of this Fertilizer consists in the large per-
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In ordinary soils the following quantities will be found
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 dens, Lawns, House Plants, etc., a light top dressing,
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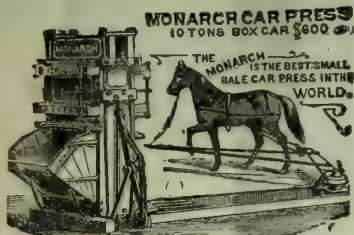
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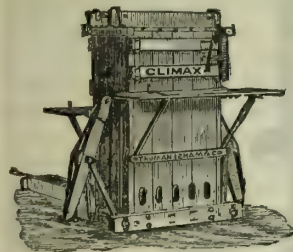
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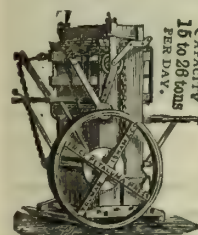
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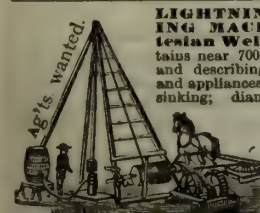
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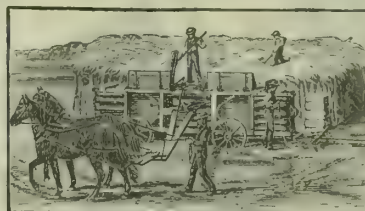
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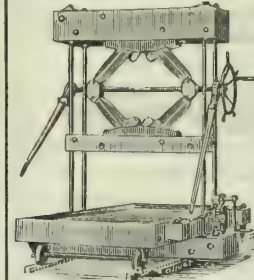
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Has two baskets, by which you can fill the second basket while the first one is under the press, thereby doing double the amount of work that can be done on any screw or lever press in the market that use only one basket, for this reason: While my press is working continuously the other kinds are doing nothing during the time they are emptying and filling their basket.

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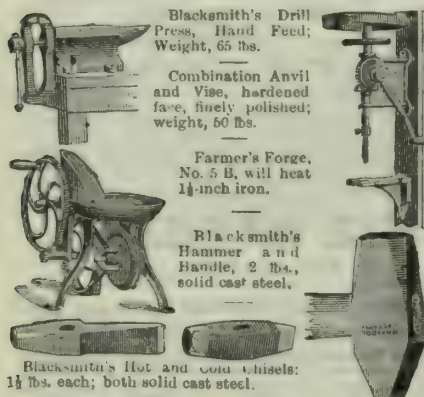
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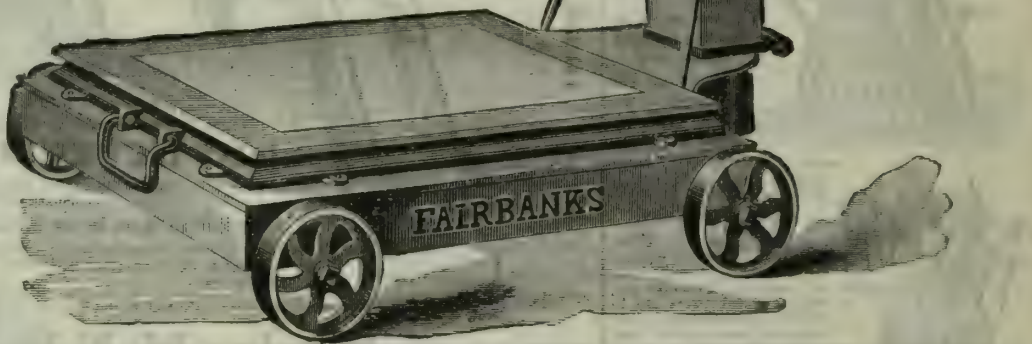
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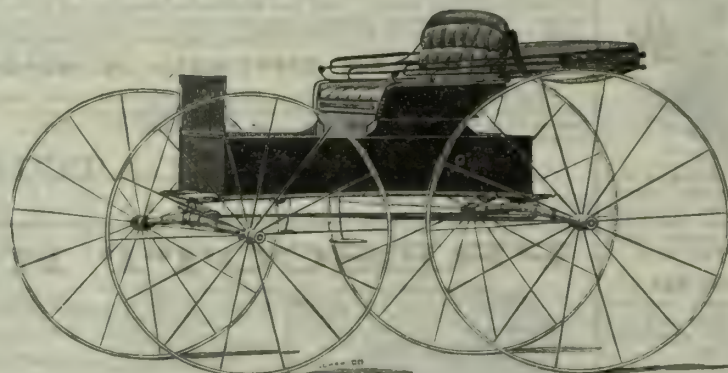
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The German Savings and Loan Society.

For the half year ending June 30, 1887, the Board of Directors of the German Savings and Loan Society has declared a dividend at the rate of four and thirty-two one-hundredths (4 32/100) per cent. per annum on term deposits and three and sixty one-hundredths (3 60/100) per cent. per annum on ordinary deposits, payable on and after the 1st day of July, 1887. By order.

GEO. LETTE, Secretary.

DIVIDEND NOTICE.

OFFICE OF THE HIBERNIA SAVINGS and Loan Society, San Francisco, July 1, 1887.—At a regular meeting of the Board of Directors of this Society, held this day, a dividend at the rate of 3 1/2 per cent per annum was declared on all deposits for the six months ending June 30, 1887, payable from and after this date.

ROBERT J. TOBIN, Secretary.

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Vol. XXXIV.—No. 4.]

SAN FRANCISCO, SATURDAY, JULY 23, 1887.

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A Decision on Levees.

A case has just been decided by the Supreme Court of this State which affirms the right of individuals or corporations to build levees along the banks of water-courses, even though there may be indirect injury to certain low-lying lands. The action was brought to abate and remove as a public nuisance a levee erected by defendant along the west bank of the Sacramento river and across a place on said bank called "Wilkins' Slough," and to recover damages for the overflowing of plaintiff's land on the other side of the river, about two miles below, alleged to have been caused by said levee. The action came to the Supreme Court on appeal from a lower court, which gave judgment for defendant, and the Supreme Court affirms this judgment.

The decision is of considerable length, and describes all the conditions existing. It is not necessary for us to recite them. It may be remarked, however, that the court reviewed the legality of levees, and held that to grant the prayer of the appellant would be to condemn all levees which have been built from time immemorial along the banks of streams. It holds if the levee on Wilkins' slough be declared a nuisance, then the levees in front of the cities of Colusa and Sacramento, which preserve millions worth of property, including the Capitol buildings and grounds of the State, can be removed at the suit of any owner who will not protect himself, and who can show that the swell of the river is increased in times of flood by levees either above or below him, and the whole system of reclamation can be defeated. On the other hand, the building of levees has the sanction of law, in fact that the State may not only control and levee its banks for the purpose of preventing the adjoining country from overflow, but may compel riparian owners to maintain such levees at their own expense. This being the case, the defendant whose lands are injured by water which is indirectly brought upon them, must find his relief in leveeing also.

The counsel for the appellant argued that the doctrine that one land-owner on a water-course cannot dam it so as to flood the land of his neighbor above. But the court holds that appellant is not a riparian owner upon Wilkins' slough. His land is two miles away, and divided from it by a large navigable river. He has no interest in whatever rights land-owners on Wilkins' slough—if there were any—might have as between themselves. It holds also that Wilkins' slough—as between appellant and respondent at least—is not to be treated as a watercourse within the legal meaning of that word. It is simply a conduit by which, occasionally, some of the flood-water of the river escapes into the lower lands adjoining. This same office is performed by every other low place along the bank; and every other part of the levee could be removed as a nuisance if that part of it which is at Wilkins' slough can be so removed.

PURIFYING THE FAIR GROUNDS.—It is good to note how the sentiment in favor of ruling out the immoral element from our fair-grounds, and making them thoroughly decent, gains headway from year to year. In different parts of Sonoma county petitions have already been circulated asking the managers of the Petaluma and Santa Rosa Fairs not to permit any intoxi-

CALIFORNIA SILK.—A quantity of silk, reeled at the filature of State Board, was lately sent to R. & H. Simon, silk manufacturers at Union Hill, N. J., to be made into flags, and the firm writes Mrs. Rienzi, the secretary, as follows: "Of the California silk, the material of which your flags are made, we have this to say, that nothing better in raw silk exists to our knowl-

The Smyrna Fig Problem.

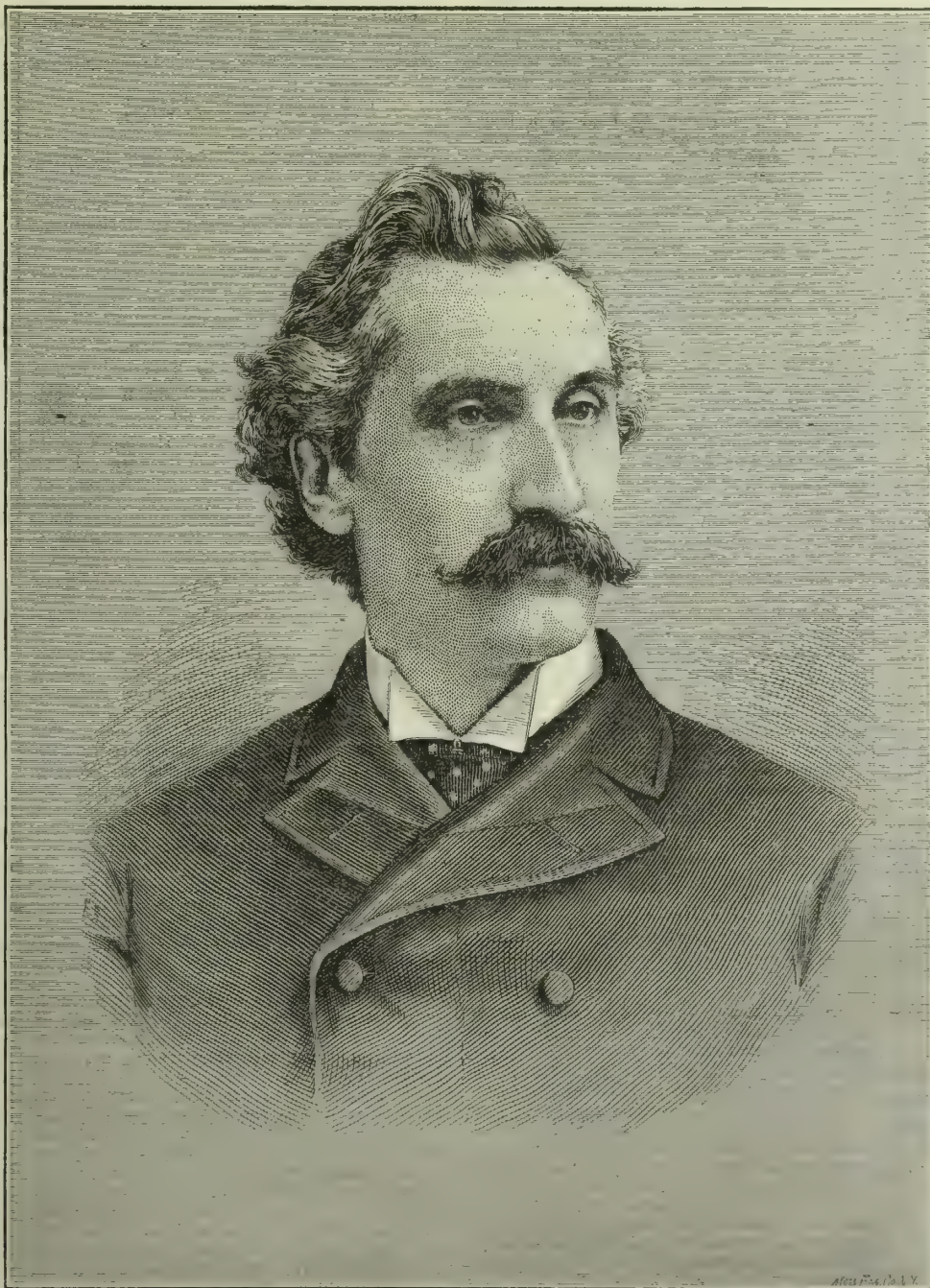
Will it not be sad if we have to look upon the "genuine Smyrna fig" as an *ignis fatuus* which has shone before the eyes of our horticulturists for years, and impelled to great expenditure and adventure for naught? We have had figs from Smyrna in numbers difficult to count, and yet we have believed, unless recent enterprises yield it, that we had not yet secured the true Smyrna fig, which looks so fine in dried form and sells so well. We have given the wily Asiatics credit for wonderful insight and cunning in foiling every effort put forth by California-Yankee ingenuity to seize and bear hence the priceless variety which makes their town famous the world around. We have thought they guarded their treasure with individual and Governmental skill and prowess, and we had only a few weeks ago an account of how the latest California argonaut, seeking the golden fig, had to steal aboard ship at night to save his bacon and the fig cuttings he had obtained by bribing even the faithful. All these things seem strange when we are told by the horticulturists of the Department of Agriculture that there is really no genuine Smyrna fig, but that figs in Smyrna are "like oranges in Florida, consisting of many varieties, but seldom true to name." We half believed as much, and we mistrusted that the Smyrnans were sharp enough to supply us with such nondescript varieties whenever we sought to obtain cuttings of them; but now we are told further "that from previous importations of Smyrna figs nothing more satisfactory could be obtained from there than what is to be found now in California." We are not sure of that, for there is reason to believe that some of our more recent acquisitions may prove better than we have had before, in fact some growers are sure that we have secured the prize.

The history of our fight for the fig will be interesting, and we are not desirous that it should end. If we fight for better varieties and for better ways of treating the fruit they bear, we shall yet accomplish with the fig what we have done with the raisin, the prune and other fruits—that is, produce the very best. This being so, we are glad that still further introductions are to be made, for Col. Colman, Commissioner of Agriculture, writes to Mr. Lawson that the Department will be able to send to Professor Hilgard of the Agricultural Department at Berkeley, by next November, several fig cuttings of an excellent variety, and will be pleased to do so.

These cuttings will no doubt be first multiplied as much as possible and then offered for trial to any one who still cries *excelsior* with the fig.

A FIRE in the business portion of Hanford, on the 12th, destroyed property to the value of \$150,000.

FURTHER disasters by earthquake are reported from the Mexican State of Sonora.



PROF. C. V. RILEY, U. S. ENTOMOLOGIST.—See page 65.

cating drinks to be sold on the grounds during the progress of the fairs; and at a recent meeting of directors of the Sixth District Association, it was voted, on motion of L. J. Rose, that hereafter no gambling games be allowed at fairs, and that auction and "Paris mutual" pools be sold only at a special stand 100 feet from the grand stand. This decision causes great consternation among gamblers, who have always reaped a rich harvest on such occasions.

In strength, luster and touch, it compares favorably with the best products of Europe and Asia."

MISS DOROTHEA L. DIX, famous as a friend of prisoners, and for her general philanthropy, has just died at Trenton, N. J. She was more than 80 years of age.

THE lamb crop in Nevada this year will compare favorably with that of any other year.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Let California Try Quinoa and Coca.

EDITORS PRESS:—A plant that should have a trial in the agriculture of California is the quinoa (*Chenopodium quinoa*), a cereal indigenous in the higher districts of Peru, and extensively cultivated there before and since the Spanish conquest. The grain prepared for the table in various ways similar to the methods of cooking beans, is regarded by the Peruvians and by many travelers as a delicacy. It was tried in Germany on a small scale and was cultivated with success, but did not give satisfaction on the table. Tschudi, from whose book of travels in Peru I learn these facts, says: "It is to be hoped that the cultivation of the quinoa will become general in Europe, for the plant would be of great utility in districts where the potato rot prevails. We all know that potatoes and tea when first introduced in Europe were found very offensive to the palate by many people who afterward accepted them gratefully. Like them, there is reason to believe that quinoa will become an article of food consumed by many civilized nations."

To the potatoes and tea may be added the tomato and maize. Within my own recollection, there was a strong prejudice among many people in Ohio against the tomato. It was avoided by them as poisonous, and when proved to be edible it was denounced as nauseous. Hominy, green maize and maize cakes are now considered in parts of Europe to be unfit to be eaten except in periods of famine. The German verdict against quinoa should not be accepted as final. Let California give it a trial.

Another Peruvian plant that deserves the consideration of enterprising farmers in a climate which, like ours, is favorable to every vegetable of the temperate zone, is the coca (*Erythroxylon coca*) which has recently become prominent in medicine. Tschudi says:

"The Indians assert that coca is the best remedy for that difficulty of breathing felt at great elevations; and my own experience agrees with their statement. While I was in the high mountains, 14,000 feet above the sea, when about starting out to hunt, I always drank a strong infusion of coca leaves. Then I could climb all day after the game without more trouble of respiration than I would have had on the lowlands. Neither did I feel any such cerebral excitement as is common among Europeans who drink coca. Perhaps this was because I drank it only in the cold Para, where the nerves are less susceptible than near the sea. But after taking the coca, I felt no desire to eat at the ordinary mealtime; it seemed to postpone my hunger."

Tschudi elsewhere says that coca is in the highest degree nutritious, and that numerous Indians have reached great age, several more than 130 years, though using coca regularly every day after the age of ten. He admits that its excessive use in mastication has an injurious effect on the human system; but he does not say anything of injurious effect upon the senses of smell and taste, which, according to a letter recently published in a New York journal, are entirely destroyed by the frequent use of coca.

JOHN S. HITTALL.

[The quinoa plant has been growing on the Experimental Grounds of the University for several years, and seed has been offered in the annual distributions of the University. Seed can be had this fall by all who would like to try the plant. At Berkeley the plant has been injured somewhat by the larva of a fly which mines between the upper and lower epidermis of the leaves. Perhaps in colder parts of the State this fly would not flourish. We should like to have fuller trial given to a plant which is as useful as Mr. Hittell shows in his letter.]

The Elephant Potatoes.

EDITORS PRESS:—I would like to know if you or your readers know anything of the Elephant potatoes. They were sent out a few years ago by the San Francisco Bulletin, and with us have proved to be the most delicious of their kind, but land suitable for them we did not have, and the few we could raise were so very good most of them had to be eaten. This year's crop is now harvested, and consists of two and one half sacks. Most of them will be kept for seed, unless after inquiry others are found to have them in plenty. Inquiry among the potato sharps at some of the San Francisco commission houses failed to discover them. They seem to be an early kind, but are good keepers. The seed of this crop was kept from June to the following April with no trouble. A dodge that is new to the writer was accomplished by taking the sprouts to plant. They yielded a good crop of small Elephants.

St. Helena.

R. E. W.

CAPITAL PUNISHMENT BY ELECTRICITY.—The Senate of Pennsylvania has passed a bill providing for the infliction of capital punishment by electricity. There are several devices in existence designed for such work.

THE GARDEN.

Treatment for Potato and Tomato Diseases.

Hon. N. J. Colman, Commissioner of Agriculture, sends us the following copy of a circular prepared by F. Lamson Scribner, Chief of the Section of Vegetable Pathology, concerning treatment for potatoes and tomatoes affected by blight and rot:

In Circular No. 3 of this Section, addressed to the vineyardists of the country, it was suggested that some of the preparations therein described might be found useful in preventing potato "blight" and "rot," this suggestion being made upon the knowledge of the fact that the fungus which causes the mildew of the vine is very similar in character to that which produces the diseases named above. The published evidence of experiments made in France in 1886, in the treatment of potatoes and tomatoes for "blight" and "rot" with the Bordeaux mixture, gives additional weight to this subject and renders it highly probable that by the application of preparations containing sulphate of copper we will be able to prevent, or at least to greatly diminish, the ravages of one of the worst enemies of the American farmer.

Directions for the preparation and application of the remedies thought most likely to prove successful are here presented, and it is earnestly recommended that they be given a thorough trial in order to demonstrate their supposed value.

Liquids.

(1.) *Eau Celeste, blue water* (the "Andou-naud process")—Dissolve one pound of sulphate of copper in 3 or 4 gallons of warm water. When completely dissolved and the water has cooled, add 1½ pints of commercial liquid ammonia, then dilute to 22 gallons. The concentrated liquid should be kept in a keg or some wooden vessel and diluted when required for use. Apply in clear weather with a suitable force pump having a fine spraying nozzle, which will spray the plants thoroughly but not drench them. Make the first application when the plants are in bloom, the second a week or ten days later, and, if the weather be such as will favor the development of "rot," a third and perhaps a fourth application should follow within about the same intervals.

(2.) *Copper Mixture of Gironde, Bordeaux Mixture*—Dissolve 4 pounds of sulphate of copper in 16 gallons of water; in another vessel slake 4 pounds of lime in 6 gallons of water. When the latter mixture has cooled, it is slowly poured into the copper solution, care being taken to mix the fluids thoroughly by constant stirring. It is well to have this compound prepared some days before it is required for use. (The sulphate of copper ought to be purchased in a powdered state, as it dissolves with difficulty in the ordinary crystalline form.)

This liquid, slightly thickened because of the lime, may be applied with small brooms or whisks made of slender twigs, which are dipped into the compound and then switched over the plants so as to thoroughly spray the leaves. This method is wasteful and tedious, however, and where one has a considerable area to cover, it would be economy to procure a spraying pump. The essential features of a good machine are ease and rapidity of application with economy of material.

Follow the same general directions in making the applications as are given under No. 1.

Powders.

(3.) *Sulphatine* (the Estève process)—Mix 2 pounds of anhydrous sulphate of copper with 20 pounds of flowers of sulphur and 10 pounds of air-slaked lime.

(4.) *Blight Powder*—Mix 3 pounds of anhydrous sulphate of copper with 97 pounds of flowers of sulphur. This amount will be sufficient for one application to five acres of potato plants.

Powders possess the advantage over the liquid remedies of requiring less labor in transportation and of being more easy of application; consequently they will be preferred to the liquids should they prove equally efficacious.

For applying the powders, which ought to be done when there is no wind and when the leaves are wet with dew or rain, the primitive arrangement, made of tin and constructed like a large pepper-box, or rather like an inverted funnel with fine wire gauze fastened over the lower end, and which, when filled with the powder, is held over the plants and shaken, is efficient and at the same time simple and inexpensive. Only enough of the powders, especially of the sulphatine, should be applied to be simply visible upon the leaves, as heavy doses may burn them.

Owing to the continual motion of the leaves of potato and tomato plants, by which both surfaces are liable to receive the spores of the fungus, the applications ought to cover both sides. This can best be accomplished by the use of a bellows with an extension nozzle, enabling the operator to direct the blast.

The degree of success attending the use of these compounds will depend, more or less, (1) upon their careful preparation, (2) the time of application, (3) the more or less intelligent manner in which they are applied, (4) the atmospheric condition existing at the time or which may follow the applications, (5) the

number of treatments made, and (6) the purity of the lime and sulphate of copper used.

The following observations are essentially the same as those recently published by the French Minister of Agriculture, in circular of similar import to this:

The experiments should be conducted in such a manner that the vines or plants treated and those left untreated (to serve as control experiments) may be comparable; they ought to be of the same variety, cultivated at the same time and in all respects alike. The digging of the treated and untreated plants ought to be made simultaneously, for it has been proven that the tubers may be infected at the moment when they are taken from the ground, and that the chances of infection are much greater in the early morning when the air and ground are damp than later in the day when there is less moisture.

At the moment of digging, count the rotten tubers found in the soil and also those which are spotted only. The weights of the crops from the treated plants and from those not treated should be determined, and they should be preserved separately during the winter but under identical conditions, for the purpose of learning if there be any difference between them in respect to infection.

Much may be accomplished in the prevention of potato rot by renewal of seed, selection of varieties, and especially by planting only in light and well-drained soils; also, perhaps, by following certain systems of cultivation. But the evidences we have of the serious losses occasioned by this disease throughout the potato-growing regions of the United States render it imperative on the part of the Government to exercise all possible efforts for its prevention, and I respectfully recommend the immediate distribution of this circular, urging those who suffer directly from the ravages of the diseases named to experiment with the remedies and report to you the results obtained.

HORTICULTURE.

The Apricot in the Upper San Joaquin.

EDITORS PRESS:—Judge W. C. Blackwood, in his essay read before the State Horticultural Society at its last meeting, is very much in error in some of his statements in regard to the culture of the apricot in California. He thinks the soil and climate of the coast counties better adapted to its growth than are those of the interior. My experience by practical experiments and close observation in this State, reaching over a period of about 30 years, leads me to conclusions quite reverse. Having been engaged in horticulture most of this time, I have had ample opportunities for observing and experimenting with the apricot, both in the north and south coast counties and in the counties of the interior of this State. I do not hesitate to say, without fear of successful contradiction, that there is no part of this State where the apricot grows to so large a size, attains so fine a flavor and is so good a producer as in the Upper San Joaquin.

It is an indisputable fact that the damp seafogs of the coast counties during the ripening season materially injure the flavor of the fruit, particularly in Los Angeles county, where the fogs are often very heavy and continuous. The apricot requires a dry atmosphere and but little irrigation. Artificial irrigation, if properly conducted, does not develop the gum or any other disease, as Mr. Blackwood says it does. A single case of injury has never been known in the Lucern valley, or so far as I know in any other part of the Upper San Joaquin.

The soil of the Lucern valley is of a peculiar porous character which permits of a perfect system of irrigation without flooding in a single instance. Ditches running water 200 yards apart will furnish an apricot orchard all the moisture it requires.

I have never known a healthy apricot tree in the Lucern valley to become diseased and die from any cause; the scale-bug will attack any other kind of fruit tree there before it will an apricot.

For the last four years three-fourths of the apricots handled in the Los Angeles city markets are shipped from Visalia. To gain some idea of how my orchard was producing this year, I weighed the product from five trees 10 years old and planted 22 feet apart. They yielded 3780 pounds with at least 700 pounds wasted in different ways, as from getting too ripe, etc. It is but fair to say that this is about an average yield. Two of the trees were Moorpark, two Peach, and one of the Royal variety.

In respect to varieties, Mr. Blackwood speaks favorably of the Royal and discouragingly of the Peach. In this country the Peach apricot grows to twice the size of the Royal, is of just as good a flavor, is just as good a producer, and it thins itself while the Royal does not. The Peach apricot is upon the whole the best variety cultivated in the State or in the interior; at least it does the best.

It seems to me that our leading horticulturists of the Bay counties are not informed as they should be regarding the advantages of the Upper San Joaquin for fruit-growing, and I would recommend that they give us a call when convenient and see what we are doing. F. H. JEWETT.

Hanford, Tulare Co.

THE APIARY.

Experiments with Bee Forage.

One of the works of the apiarian connected with the U. S. Division of Entomology has been an investigation of the fitness of various plants for bee forage. Though it is not at all likely that all the plants found valuable by Eastern bee-keepers will succeed here, it will be interesting to our apiarists to know what their Eastern compeers are doing in the line of providing pasturage for their bees. From the forthcoming report we therefore make the following extracts:

If excellence in the bee is the chief factor in successful honey-producing, next in logical order is abundant, persistent and cheap bee pasturage. Abundant pasturage is the amount necessary to satisfy the requirements of the number of colonies kept within a given area. Persistent pasturage is that which contemplates a variety of perennial honey-bearing flora of hardy constitution and rugged habits, whose terms of blooming follow each other in succession continuously from early spring to late fall, thus lengthening out the season in which bees may gather surplus honey. Cheap bee pasturage may be such as is furnished from natural sources produced in forests or by self-propagating plants growing in waste places, or upon lands of little value, and requiring little or no labor. Or, cheap bee pasturage may be secured by cultivating fruit and field crops, the blossoms of which are valuable for honey-bearing.

As the forests of the country disappear, and the waste lands are being reclaimed, as the necessity for other honey-producing resources is felt, as the industry assumes more importance, and as the influence of competition is more sharply felt, great interest is shown in the subject of bee pasturage. Enforced idleness and the consequent waste of time, stores and energies sometimes result from a failure of the flowers to secrete nectar, even though the honey-bearing flowers are blooming in abundance; but usually the reason why the time is so short in which bees are able to store surplus honey is the lack of abundant pasturage. I have not had the time or the means to devote to bee forage that the importance of the subject demands, but I have made a beginning in this department of experimental work which I hope to continue.

Among all the trees and shrubs which are cultivated generally throughout the United States by fruit-growers, the raspberry is commonly conceded to possess more value to bee-keepers than any other. A quarter of a mile from this station a market-gardener has four acres of raspberries. These bushes continued to bloom for 10 days, and during that time, with the exception of two or three rainy days, a continuous procession of bees could be observed going and returning to and from the apiary, and a fine showing of honey was made in the hives, and the honey was of superior quality.

On account of the superior quality of its nectar, the ease with which the plant is propagated, its adaptation to all kinds of soil, and its value as a forage plant for grazing, white clover has, until of late years, stood without a rival in the estimation of honey-producers. About 20 years ago, Alsike, or Swedish clover, was introduced into this country, and since then has been thoroughly tested both as a honey plant and also for hay and pasture for all kinds of stock.

Mr. J. M. Hicks of Indiana says: "Alsike clover has no superior as a honey-producing plant, yielding the best and richest honey known, and as a hay crop it is not surpassed, often producing three tons of good hay per acre. The stems and stalks are much finer than those of common red clover, and cattle, horses and sheep feast on it, eating it clean without waste. As a pasture for all kinds of stock it has no equal. It will grow on all kinds of land, clay or sandy, and does not freeze out as easily as red clover. It is quite similar to red clover in appearance. The first crop each season is the seed crop. The seed is about one-third the size of red clover, and four pounds is sufficient to sow an acre. The bloom is a beautiful pale pink color. I have no hesitancy in saying that Alsike clover will produce 500 pounds of the richest and best honey per acre in a good season. I would recommend every bee-keeper to sow at least a few acres of Alsike clover."

Mr. W. Z. Hutchinson of Michigan says that it will pay to raise Alsike clover for honey alone upon land worth \$50 per acre.

Mr. C. M. Goodspeed says: "I have grown Alsike clover on my farm, and watched its habits closely. It is very hardy, of extra quality of hay, and a heavy seeder, reaching in rare cases 10 bushels per acre. In this locality the second growth seldom yields much honey, but the first growth just 'swarms with bees' for about three weeks, or from the time the rich blossoms open until the seed is ripe. In my locality it begins to yield honey shortly after white clover, and continues well into the basswood season. It yields twice as much honey as white or red clover."

Mr. D. A. Jones of Canada says: "I think too much can scarcely be said of Alsike clover as a hay and honey crop, and many of our

farmers are waking up to the fact that it is to their interest to cultivate it largely in preference to almost any other crop. Red clover will soon be a thing of the past, as Alsike clover-seed is now in great demand, not only for seeding purposes, but also for use in dyeing. I am informed that large quantities are being shipped to Europe for that use."

Mr. A. I. Root of Ohio, and Mr. L. C. Root of New York, both speak of Alsike clover as the most valuable variety of clover for hay and pasturage, and recommend its cultivation as being of the first importance to bee-keepers. Statements testifying to the unequalled value of Alsike clover, both for hay and grazing purposes, and as a most valuable honey plant, might be indefinitely multiplied. I cannot too strongly urge the bee-keepers of the United States to provide abundance of this forage for their bees, both by sowing the seed on their own premises and also by inducing their neighbors to cultivate this variety of clover as the best for all purposes.

Sweet clover (*Melilotus alba*) abounds in this locality. This is a hardy plant of wondrous persistence, continuing in bloom from about July 1st until killed by frost. It is adapted to almost any kind of soil. In this part of Illinois it grows in rich soil by the wayside or in deserted stone quarries with equal luxuriance. As the plant will grow without any cultivation in byways and waste places, wherever the seed can obtain a foothold, and is a perennial, it is rightly reckoned among the number of excellent and cheap bee-forage plants.

Sweet clover will endure drouth well. During the long drouth of last season, bees in this neighborhood would have been entirely without resources for many weeks together had it not been for sweet clover. The quality of the honey is excellent, and under ordinary conditions the yield is altogether satisfactory. Much apprehension has been felt among farmers lest it become a noxious weed. Observing how readily the seed is carried in the mud on wagon-wheels and horses' feet in the spring, when the roads are bad, and the entire space in the highways is used for travel, belief has obtained that the fields will soon be invaded. Careful and continuous observation of the facts for five years past has convinced me that fears of trouble from this source are groundless. In but one instance have I seen sweet clover invade a plowed field, and that was for a distance of three rods on both sides of an old road leading into the field, and the seed had been carried in on wagon-wheels. This plant, being a biennial, is easily exterminated when desirable. I would recommend bee-keepers to provide an abundance of this forage by scattering the seed in waste places and by the roadside. Sweet clover is much more sightly and useful, and less objectionable in every way, than the weeds which ordinarily cover the roadsides.

Pleurisy-root (*Asclepias tuberosa*) is a honey-bearing plant indigenous to nearly all parts of the United States, but its growth has not been encouraged for the reason that its value to the honey-producer has not been generally known. The plant is a perennial; the top dies and rots, a new growth springing up each year. It is commonly regarded as a harmless prairie-weed. The deep, red blossoms hang in clusters. The plant is very hardy, and of a rugged growth, growing luxuriantly in all kinds of soil. The honey is of the finest quality both as to color and flavor. Mr. James Heddon of Michigan, speaking of pleurisy-root, says:

"If there is any plant to the growing of which good land may be exclusively developed for the sole purpose of honey production, I think it is this; I would rather have one acre of it than three of sweet clover. It blooms through July and the first half of August, and bees never desert pleurisy for basswood or anything else. The blossoms always look bright and fresh, and yield honey continuously in wet and dry weather. Bees work on it in the rain, and during the excessive drouth of the past season it did not cease to secrete nectar in abundance." I have had some observation and experience with the plant, and, having secured seed, I expect to test it in different kinds of soil next season.

For two years past I have cultivated a plot of motherwort (*Leonurus cardiaca*) and I prize it highly as a honey plant. Bees work on it continually all day, and every day, unless it is raining quite hard. The summer of 1885 it continued in bloom six weeks. Last summer it bloomed, but was soon ruined by drouth.

At the annual meeting of the North American Bee-Keepers' Society, held at Detroit in December, 1885, a committee, of which I was a member, was appointed by the association to investigate the merits of a new plant being cultivated by Mr. Chapman of New York, who was present and represented that the plant was of unusual value to honey-producers. Being instructed by you so to do, I met with other members of that committee on July 28th, and our report was published.

Bee-Farming in South Africa.

The Cape Times of May 20th has the following interesting paragraph: The success which attends bee-farming in South Africa is affirmed by Mr. H. Lawrence, one of the largest bee-farmers in Natal, who is now on a visit to Cape Town for the sake of his health. In Natal this industry is being carried on on a somewhat large scale, and that, too, Mr. Lawrence assures us, with very remunerative results. This gen-

tleman has had very large experience in bee-farming in California, Australia and Natal, and upon that experience he states distinctly that no better climate than that of South Africa could be desired for the successful prosecution of this industry. Owning over 260 hives of bees in Natal, Mr. Lawrence states that all the year through the yield of honey per swarm is eight bottles per month. This yield he considers would be maintained in the Cape Colony during the summer months, but that in the winter it would be about half that amount. All the honey produced by him is sold to a Natal firm at the rate of 9d. per bottle, and it is then shipped to Europe, where it is resold at the rate of some two shillings. The industry can be instituted at a very trifling cost, and can be kept up without much expense, for, as Mr. Lawrence points out, there is in this climate no expenditure required for the feeding of the bees. The hives used by him are the American patent reversible, and the honey is subsequently extracted by a process which leaves the comb intact, and thus admits of its being replaced in the hives for repletion of the cells. Mr. Lawrence expresses his surprise that, with conditions so favorable, this industry has not been undertaken on a large scale in the Cape Colony, where he is assured that it could be carried on at a considerable remuneration. He is quite prepared to afford gratuitously any information and advice in his power to those who might desire to give the matter a trial, and to explain everything requisite for starting a bee-farm. What Mr. Lawrence states he would like to see ultimately brought to pass would be a very general extension of the bee culture throughout South Africa, so that finally the producers might effect a combination in order to export their honey direct, and thus reap the full benefits derivable from this industry.

THE DAIRY.

How Good Butter is Spoiled.

The Dairy and Food Commissioners of Ohio in a recently issued circular say: "Our Commission firmly believe that a large majority of the butter made by farmers is good butter, but is ruined when transferred to the dealers' hands and is done in this manner: It is received mostly in country stores and placed in filthy, frowy, rancid boxes or places and stored in cellars thoroughly impregnated with vicious odors of rotten potatoes, coal oil, fish brine, pork brine, and every other foul odor that comes from decayed vegetables kept for sale at such stores. Genuine butter will lose all its good flavor in a very few hours if put in any such place.

"But the next fatal step of the dealer is to take all varieties of colored butter and rework them together, mixing and crushing until he secures an even color.

"He then packs his mass of salve into tubs or firkins. It is no longer butter, the granulation of butter being all spoiled by this second and unnecessary working, which leaves simply grease as the result. In this ruined condition it reaches the consumer through the city commission-houses, and, of course, is pronounced unfit for table use, and possibly for cooking purposes. How can this be remedied? In two ways. The consumer must purchase direct from the farmer in suitable sized packages, so that no second working need be made, or the dealer must reform. No dealer should buy butter of the farmer unless it is put in convenient sized shipping packages when made, and in amounts of 10 to 50 pounds each, according to size of dairy, and unless it is at all times good, fresh, sweet butter; and no more roll butter should be received than the retail market demands. This is practical, and the entire make of butter can be brought to these terms.

"Next, no dealer should handle a pound of butter until he first secures a room to keep it separate from all other goods having any unpleasant odor. A cheap up-ground, artificial cellar is best, where the air is pure and well ventilated but can be kept cool.

"Roll butter should be kept on earthen plates, and these should be scalded and kept sweet and clean all the time. Any merchant who will handle butter in this manner need never lose one cent, nor will any consignment sent to reliable city dealers as packed by the farmers, fail to bring the full fair market price. Nor will consumers ever complain. The shade or color is not so material as to have good, fresh, sweet butter."

Clothilde Since Her Victory.

EDITORS PRESS:—Your readers will doubtless be interested to know how the Holstein-Friesian cow Clothilde has deported herself since she won the sweepstakes butter prize at the New York Cattle and Dairy Show.

On May 6th, eight days after calving, she was shipped to the show and was on the cars two days and nights. After being in the showing on Tuesday, her butter test was commenced the same evening, May 10th. Her milk record for the 24 hours was 63 pounds 1½ ounces, and her butter record 2 pounds 7½ ounces, thus giving her the prize.

Returning home, we shipped our cattle at New York on May 16th, and in 24 hours on cars she gave 82 pounds 4 ounces of milk. Her

yield continued increasing until May 31st, when she gave in one day in three milkings 101 pounds 2 ounces. Since then she has given in one day 100 pounds 6 ounces. Two days ago she completed a week's test for butter. During the seven days of the test she gave 665 pounds 14 ounces of milk, or an average of 95 pounds 2 ounces per day. From this milk was churned 28 pounds 2½ ounces of butter, 23.66 pounds of milk making a pound of butter. During the week she was in heat and was bred to Netherland Prince. She ate about 12 pounds of grain per day, consisting of two parts of cornmeal, two parts wheat-bran, one part ground oats, with a little oilmeal. She had good pasture, a little green rye when she would eat it, and plenty of pure water—nothing more.

SMITHS, POWELL & LAMB.

Syracuse, N. Y.

Apples for Dairy Stock.

We have a good many poor apples in this State at present, owing to the inroads of the codlin moth, and possibly some of our readers may be thinking of their food value for farm stock. The Boston Ploughman recently gave a review of the subject, from which we take the following: The feeding value of apples is not large, in Prof. Arnold's opinion. He classes them with mangels, turnips, cabbage, and the like. Their food properties are mostly carbohydrates, or heat producing, their protein being only about one-half of one per cent, and their nutritive ratio about 1 to 30; and hence they are most effective when fed with more nitrogenous food, like clover, though they may be fed sparingly with grass. They have a higher value than is indicated by the weight of their food constituents, on account of condimental qualities and from having a large per cent of those constituents in a condition to be at once absorbed and appropriated without waiting for any special action of the stomach.

If hay be used as the unit of measure, apples compare with it and other common feeding stuffs as follows, per hundred pounds of each: Hay, 50 cents; cornmeal, \$1.12; oatmeal, bran, and middlings, \$1; potatoes, 29 cents; sugar-beets, 19 cents; parsnips and carrots, 18 cents; cabbage, 17 cents; apples, ripe, 16 cents; turnips, 16 cents; rutabagas, 15 cents; mangels, 14 cents; pears, 13 cents. Prof. Arnold's estimate is that good ripe apples have a feeding value of not less than eight cents per bushel of 50 pounds, and are as good for other stock as for milk cows. He thinks it is as much of a loss for any one who has stock to consume them to waste good apples as to waste good roots. When fed with reason and appropriate food, they are health-inspiring as well as nutritious, and are only injurious when fed immoderately.

He states that an experiment in feeding three cows with moderately sour apples, ripe and mellow, for several weeks, at the rate of 12 to 20 pounds to each cow daily, gave him a finer flavored butter than he ever saw from grain or grass. He says he has known others to feed them in larger quantity and for a longer time with satisfactory result, and their butter to be not only fine flavored, but to possess remarkable keeping quality, and the stock to remain perfectly healthy. He has likewise proved them to make excellent milk for cheese. The managers of cheese factories have noticed an improvement and increase of milk when their patrons' cows have been fed moderately with apples. This testimony in regard to the feeding of this fruit to stock is timely and valuable, and merits careful consideration from farmers everywhere.

Butter on the Farm.

There are many ways, says an Eastern exchange, by which the butter produced on the farm might be improved in quality and quantity, and the proceeds increased from 20 to 50 per cent. Thus a farmer who takes to town only \$5 worth of butter a week gets \$260 a year; if he can add 25 per cent to that he gets \$325, and with a gain of 50 per cent he gets \$390, and the extra \$130 would buy a good many things wanted in the household and on the farm; and yet by a little further effort he can make the amount fully double the original \$200 and have \$520 without additional cost of money or labor.

A part of what would conduce to this end is stated by a correspondent to another paper thus:

"Since 1870 I have weighed all my milk night and morning. My best cow gives 8000 to 9000 lbs. of milk per year. I have three or four that do that. I have 10 that give 7000 lbs. Cows that give less than 5000 lbs. I sell. A cow yielding 5000 lbs. of milk a year will, at 22½ lbs. of milk to one pound of butter, yield 222 2/3 lbs. of butter; but at 16 lbs. milk to a pound of butter it will be 312½ lbs. butter, a difference of about 90½ lbs. of butter in favor of proper feeding, which 90½ lbs. multiplied by the price per pound the farmer receives, say 30 cents, equals \$27.10, which the farmer loses each year. Farmers lose by low feeding. High feeding gives greater results."

This weighing of the milk, testing the cows, and knowing to a dollar what one is doing is a great help to the dairy farmer, and for that matter to every farmer. It enables him to get rid of the poor milkers and to replace them with good ones; and the latter cost no more to keep or to handle than the former. Then he can

improve his produce by breeding to a bull of a good milking strain, and thus add additional quarts to each head daily. Again, he can study what feed is best calculated to increase the flow of milk. He can save ice, and thus keep his butter in better condition and take it to the ice itself.

He can get with this extra gain the best implements instead of using the poorest and meanest; and with improved pans, churn, creamer and worker, make his butter worth 10 to 15 cents a pound more, and the people to run after him for it.

It is no mean thing for the people to say, "Such a farmer makes the best butter brought to this town, and we indeed cannot get all we want, for everybody wants it." Such a man takes a pride in having the best cows, breeding to the best bull, making the most butter, having the name for the very best, and getting the highest price. But how many neglect all of these points and make the poorest and meanest stuff that goes to a market!

FORESTRY.

A Curious Tree.

In the Elk River valley, a few miles out of Eureka, there is a natural curiosity, which the Standard describes as follows: It is a fir tree whose roots straddle a prostrate redwood 100 feet from its upturned roots, at which point the body of the redwood measures 6 feet in diameter. The redwood was evidently blown down by the wind. The roots of the fir tree come from the ground on both sides of the redwood—two main roots on either side—and the four coming together on top of the tree as it lay on the ground, form the body of the fir tree, the trunk of which is 4½ feet in diameter 4 feet from the top of the log, upon which it is securely held by lateral roots running into the ground. This redwood tree, when standing, could not have been less than 350 feet high, judging by the proportions of the part now remaining, which by actual measurement is 150 feet, the end of the redwood trunk extending 50 feet beyond where the roots of the fir straddle it.

We took pains to measure the main roots of the fir where they come up and form the body of the tree, and found them to be from 16 to 20 inches across the top and over 2 feet through.

In building a logging road some 12 years since, a section of the redwood was cut out to allow the passage of teams, and the wood was found to be in a perfect state of preservation, and it remains solid and sound to this date. Can some student of natural history tell us how many years it took for the fir tree to acquire the size of 4½ feet in diameter 4 feet above the roots, and then let us know how long this giant redwood has been lying on the ground?

WANTS AREOROUS HEDGES.—The view of the surrounding country from the highlands around Reno is grand. Beautiful green fields and pleasant-looking homes dot the valley and form a natural panorama pleasing to the sight of any one who can see beauty in the unfoldings of Dame Nature. But one thing is lacking to embellish the otherwise fascinating picture, and that is the notable scarcity of trees.

The farmers in this locality will find it materially to their advantage to inclose their fields, and in fact their entire farms, by a systematic hedge of trees. These trees could be set such a distance apart as to answer the purpose of fence-posts, to which wire fencing could be attached, thereby insuring an inclosure permanent in its character, and to which no expense, in the shape of resetting posts, would henceforth be incurred. Hardy trees, such as the locust or cork elm, would be admirably adapted for such work and would combine the ornamental with the useful. If this plan was adopted, in a few years' time this valley would not only be beautiful, but would be permanently inclosed. A few trees set out every spring by each farmer will soon do the work. Such a move would also be profitable, inasmuch as the trimmings from the trees when they become large would furnish an abundance of the finest kind of firewood. (This is a suggestion that our farmers will do well to consider.—Reno Gazette.)

FOREST-PLANTING FOR ARIZONA.—The Phoenix Herald thus pleads for arboriculture: The cultivation of forest trees scarcely occupies enough attention among land-owners in our valley. There should be at least 20 acres of forest set out on every quarter section, and the result would be both beneficial to our climate and provide for an emergency that will be upon us before we are prepared for it, viz.: the exhaustion of the natural growth of firewood. It will be but a short four or five years more till mesquit firewood, about this valley, will be a thing that has passed into the original elements, and the necessity for something to take its place will be pressing and firewood will soon double or triple in price. The present supply of cottonwood is limited, and moreover it will require two or three cords of cottonwood to go as far as a single cord of hardwood. There is no time to be spared in this matter. The sooner we begin the raising of timber the sooner will we be able to protect ourselves against an inevitable scarcity of wood.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Next State Grange Meeting.

Many farmers and their wives, sons and daughters are looking forward with glad anticipations to Tuesday, October 4th, when the State Grange opens at Santa Rosa. There are hundreds more who ought to be in the ranks of the P. of H. looking happily forward to that event.

Surely there is much more to attract Patrons to these meetings than to ordinary gatherings of classes or clans. Plans are to be discussed not only for the material advancement of members but for the richer benefits that elevate the mind and soul, and help the world along. No body of men and women is known to meet who greet each other with more kindly feelings and heartfelt good will.

The social exercises are also very attractive and seem to be enjoyed more and more every year by those privileged to attend.

The literary program is almost invariably instructive and entertaining, and increases in importance from year to year.

It is already time that brothers and sisters all over the State should be preparing to do their best to make the coming meeting a success beyond all that have gone before it. Let those who have business to present for consideration have it carefully prepared in such a way that it can be considered intelligently and fully in as brief a space as possible. Those who will speak and occupy the valuable time of the session should enrich their minds by due study and reflection on the themes most likely to be discussed.

Proper thought and research should be had beforehand to bring forward for candid and thorough consideration such questions as will tend to advance the special needs of farmers and Grangers and to prepare them the better to act unitedly, and in confidence to guard their rights against the aggressions of the individuals and corporations who unjustly oppress them in their industrial pursuits.

Many spirited and valuable essays, as well as highly entertaining original and selected contributions, have been presented through the literary committee of the past few sessions, and there seems to be no reason why members of the State Grange of 1887 should not expect as rare, if not a better, treat than ever before from its many talented and dutiful writers.

Let all do their best, even at considerable sacrifice, to make the coming session in this and all respects a gratifying success. Those who cannot come can, with loyal and generous effort, send at least some thoughts and kindly expressions to benefit and encourage not only those who do go, but the thousands who will read the inspiring sentiments contributed in the widespread reports of the occasion.

The Committee on Literary Exercises for 1886 individually requested to be excused. But no new committee was appointed at the last session, and recently, upon being reminded of the fact, Worthy Master Johnston reappointed the old committee, adding Sister Maria B. Lander, with the strongly-expressed wish that all shall serve, at least for the present term. We hope his wishes will be unreservedly complied with and their united efforts rewarded with excellent success, to the gratification of all.

Literary contributions and suggestions for aiding the literary entertainment can be addressed for the committee to any of the following members, or to the care of Secretary J. Chester: A. T. Dewey, S. F.; J. D. Hoffman, Lodi; A. P. or E. Z. Roache, Watsonville; Mrs. James Marsh, Stockton; Maria B. Lander, Martinez.

Titles and Taxes.

(Written for the RURAL PRESS by J. W. M.)

It's hardly in a body's power
To keep at times frae being sour,
To see how things are shared;
How best o' chieles are whyles in want
While cuifs on countless thousands rant,
And ken na how to wait.

—Burns.

There have appeared occasionally in the RURAL PRESS articles written in opposition to the theories of Henry George, socialism and anarchy so called, and, as far as I can recollect, there has not appeared one defensive or apologetic.

It cannot be that among the numerous readers of the PRESS there is not one who shares Henry George's views on land titles and taxes, and is able also to give a reason therefor. It cannot be that the PRESS will accord space to one side only, or that its readers care only for one side. We are told that the Czar of all the Russias has a paper printed for his own perusal, in which nothing of fact appears which would be displeasing to his Imperial Highness, or suggestive of anything but universal contentment in his dominions, despite his ever present body-guard and the staring letters "Siberia" on the map of Russia. We expect this from a Russian autocrat, but from the sovereigns of America we expect better things, and if I offer my ideas on these vexed questions, though varying from generally received opinions, I hope to find a place and a patient hearing, and that not even

one timid soul will mail those terrible words, "stop my paper," in consequence—like a true autocrat of America.

Against the oft-repeated statement that land is the only real and secure property, we have now the slogan of a new political party. *Man has no property in land.* So used have we been to the idea of land as property, that when we hear it first controverted we treat the attempt as idiotic, hardly believing it possible for a sane mind to seriously entertain the idea.

Yet the most serious, deepest and ablest thinkers of the age had thought earnestly on the subject, and arrived at the same conclusion as Henry George, almost before he was born.

In 1841 we have Ralph Waldo Emerson placing the following language in the mouth of a radical: "I find this vast network which you call property, extended over the whole planet. I cannot occupy the bleakest crag of the White hills or the Alleghany range but some man or corporation steps up to me to show me that it is his. Now, though I am very peaceable, and on my private account could well enough die, since it appears there was some mistake in my creation, and that I have been *missent* to this earth where all the seats were already taken, yet I feel called upon in behalf of rational nature, which I represent, to declare to you my opinion, that if the earth is yours, so, also, is it mine. All your aggregate existences are less to me a fact than is my own. As I am born to the earth, so the earth is given to me, what I want of it, to till and to plant, nor could I without pusillanimity omit to claim so much. * * * Besides, I know your ways, I know the symptoms of your disease. To the end of your power you will serve this lie which cheats you. Your want is a gulf which the possession of the broad earth would not fill. Yonder sun in heaven, you would pluck down from shining on the universe, and make him a property and a privacy if you could, and the moon and the North Star you would quickly have occasion for in your closet and bed-chamber."

In like manner we can call on Herbert Spencer, who in his *Social Statics*, published in 1850, but actually written in 1842, says: "Equity, therefore, does not permit property in land. For if one portion of the earth's surface may justly become the possession of an individual, and may be held by him for his sole use and benefit, as a thing to which he has exclusive right, then other portions of the earth's surface may be so held, and our planet may thus lapse altogether into private hands. Observe now the dilemma to which this leads. Supposing the entire inhabitable globe to be so inclosed, it follows that if the land-owners have a valid right to its surface, all who are not land-owners have no right at all to its surface. Hence such exist on earth by sufferance only. They are trespassers. Save by the permission of the lords of the soil they can have no room for the soles of their feet. Nay, should the others think fit to deny them a resting-place, these landless men might equitably be expelled from the earth altogether. If then the assumption that land can be held as property involves that the whole globe may become the private domain of a part of its inhabitants; and if, by consequence, the rest of its inhabitants can then exercise their faculties—can then exist, even—only by consent of land-owners; it is manifest that an exclusive possession of the soil necessitates an infringement of the law of equal freedom. For, men who cannot 'live, move, and have their being' without the leave of others, cannot be equally free with others." And much more to the same import.

From John Stuart Mill I will add a few short extracts: "When the 'sacredness of property' is talked of, it should always be remembered that any such sacredness does not belong in the same degree to landed property. No man made the land. It is the original inheritance of the whole species. Its appropriation is wholly a question of general expediency. When private property in land is not expedient, it is unjust. * * * The claim of the land-owners to the land is altogether subordinate to the general policy of the State. The principle of property gives them no right to the land, but only a right to compensation for whatever portion of their interest in the land it may be the policy of the State to deprive them of."

These quotations are made to show that the notion that land is not property is not simply a whim of Henry George nor the idle vapors of scheming demagogues, but an idea which has engaged the attention of the best and wisest. But a sound argument is in itself as good from the pen of Henry George or the humblest scribbler as it is from John Stuart Mill or any other writer of repute, and the only reason for quoting their language is to get a respectful hearing.

I maintain with these writers and with Henry George that no man possesses a valid, 'exclusive claim to one foot of land anywhere. Whatever improvements may be made on land, they are made on the people's land, the people's property, and not on individual property, and for the holding and using of such improvements the holder must contract with the people; for if I use that which belongs to others, I must make terms with those parties if I wish to be honorable and just. The land is the entailed inheritance of every one born on the earth, and this birthright can neither be sold, bartered, taken nor given away.

I have already occupied space enough, and if this much is granted me I will ask for more in

which to show the consequences of this principle when it shall obtain among the people as a basis of action and law, that instead of anarchy and ruin it will be productive of universal justice, prosperity and peace.

Tulare, July 4, 1887.

Grange Work and Progress.

(Prepared Weekly by M. WHITEHEAD, National Lecturer.)

Since the publication of the census report of 1880, we have heard much said about the wonderful increase of wealth in our favored land, and at no period in our history as a nation has this wealth been piled up so rapidly. By far the greatest proportion of this wealth is grown out of the ground. We might almost say it is created by the labor of our farmers, but it does not stay with us. Who gets it? Those who for years past have been controlling legislation and by unjust laws and unequal taxes are taking from us what of right is ours. Here are a few figures to study and to think about, while gathering our harvests for this year.

By the census of 1850, the estimated value of farms in the United States was \$3,271,575,000. In 1860 they were valued at \$6,535,000,000, showing an increase of more than 100 per cent. In 1870 the value of the farms was estimated at \$9,262,000,000, showing an increase during the decade of \$2,627,000,000, or less than 40 per cent. In 1880 the value of the farms was estimated at \$10,197,000,000, being an increase during the decade of \$935,000,000, or only a fraction over nine per cent. When it is remembered how many millions of acres of new land were taken up and developed into farms in these later periods, the actual decrease in value can be plainly appreciated. In the one State of Pennsylvania the census of 1880 shows that the farms of the State lost, in the ten years between 1870 and 1880, over sixty-three millions of dollars of their value.

Of many more figures that might be given in this same direction, let us look at those of our live-stock. The value of the live-stock in the United States in 1850 was estimated at \$544,000,000, and in 1860 at \$1,089,000,000, being an increase during the decade of \$545,000,000, or more than 100 per cent. In 1870 it was estimated at \$1,525,000,000, being an increase during the decade of \$435,000,000, or less than 40 per cent. In 1880 it was estimated at \$1,500,000,000, being a decrease during the decade of \$25,000,000. Truly, thoughts for thinkers! How else can we stop this steady backward tending of agriculture, except by a thorough organization and education of farmers everywhere, such as the Grange offers?

The growth and prosperity of the Grange at the present time is in no way the result of excitement or of any wave of popular feeling which is passing over the country. It is the legitimate result of calm, deliberate thought among intelligent farmers who have looked the situation over, examined the Grange platform, and decided that they will not only assist in the work which the Grange is doing, but that they will become recipients of the educational, social and material advantages which are enjoyed by the members of the Order.—*Rural Vermont.*

PROGRESS.—Three more new Granges; one each in Ala., Cal. and N. Y.

GOV. ROBIE, as Master of the Maine State Grange, has printed a brief history of the Order in Maine. The number of Granges, and their aggregate membership, since the State Grange was formed in 1874, have been as follows: 1874, 70 Granges, 2000 members; 1875, 136 Granges, 5000 members; 1876, 225 Granges, 12,000 members; 1878, 140 Granges, 8215 members; 1880, 119 Granges, 7039 members; 1881, 8549 members; 1886, 199 Granges, 14,531 members.

The first co-operative store in Texas was established by the Grange in Bell county in 1875. There are now in the State 150 retail stores in successful operation, besides a large wholesale house in Galveston. Every one of these co-operative stores that has started on a cash basis and stuck to it has succeeded; while in nearly every instance where they have attempted to do a credit business, they have been failures.

DURING the past six months the Order has been steadily increasing in Vermont, and is growing in popularity day by day. The printed discussions of educational, economic and other questions are drawing the attention of not only thinking farmers, but of progressive men of other classes, to the Grange. It has a wider scope and a deeper meaning than a superficial glance at the Order would show.—*A. M., Vermont.*

GILEAD GRANGE, Mich., has received 32 new members since May 1st, and expects to reach 200 before the year closes.

OAK HILL GRANGE, Maine, has received 60 new members since March 1st.

Let every heart and hand unite
In the benignant plan,
The noble purpose, just and right,
To aid our fellow-man.

Eden Grange.

At a meeting of Eden Grange on the 9th inst., "Committee" writes the *Haywards Journal*, the question of receiving Grange reports upon the condition of the crops and the prospects of harvest was brought up. In the earlier times of the Grange these reports were a prominent feature; and afterward they afforded a more direct information of the localities of the State. They were more instructive to the members than the general reports of the country. The aggregate of the reports was then sought for by the Department of Agriculture in preference to all others, and that department, through the present Commissioner of Agriculture, now Master of a subordinate Grange at Wash-

ington, D. C., is now soliciting the renewal of these reports.

It was suggested that a committee be appointed to prepare such reports at each meeting, each member of the Grange being required to obtain data in his or her locality to be given the committee. This is intended to comprehend individual facts as to area planted, kind of crop, yield per acre, market value on the ground and the comparison of these with former years. Under this system, as formerly conducted, each member obtained a better and more thorough acquaintance with his or her neighborhood, so educating themselves in affairs that more immediately concerned them.

Comments were made upon the present condition of crops in Alameda county. The condition was generally favorable compared with other localities, yet much short of the usual abundance. One member stated that recently, looking from his farm, he counted 160 stacks of hay, but that morning there were but 10, showing the comparative shortness of the crop and the extraordinary demand.

It was agreed by the fruit-growing members that the auction system of selling fruit gave promise of a better market in the future. The acting Overseer expressed the belief that if the farmers of Alameda county appreciated the worth of Eden Grange to its membership they would certainly apply for admission.

The Worthy Master Away From Home.

[NUMBER 2.]

(Written for the RURAL PRESS by MRS. WM. JOHNSTON.)

The plank was lowered and we were permitted to step ashore. Carriages had been provided, and we were soon driving through the streets of Honolulu to the Royal Hawaiian hotel, where comfortable rooms were assigned us. Soon our trunks were delivered in good shape and a nice luncheon served, to which most, if not all of us, were ready to do justice.

After a good bath and change of clothing most of the party took a stroll through the hotel grounds, which cover a block. The building itself is large, including, with the cottages attached, about 100 rooms. It is three stories high. The first floor contains sleeping apartments. The second is reached by two broad flights of stairs on the outside, meeting in the middle of building and joining the balcony—the rear corresponding with the front. Here you enter a wide hall, extending the full length of the hotel, from veranda to veranda, crossed in the center by another hall leading to the parlor, dining-room, office and some sleeping-rooms. The third floor has sleeping-rooms exclusively. All of these apartments are furnished with stationary washstands, abundantly supplied with the best of soft artesian water, which is very warm, necessitating the free use of ice. The rooms are well kept and the service generally is good.

In the evening the King's band gave a concert to the guests. The band occupied a large permanent stand erected for it near the front of the hotel, while the guests were provided with chairs upon the verandas and benches placed across the driveways, which, for the occasion, are closed to teams by means of ropes stretched across the street entrance and strung with lanterns. The hotel was illuminated from the first floor to the observatory, the front being hung with about 250 Chinese lanterns fantastically arranged. The brilliant electric lights toned down by the milder gleam of torches dotted over the lawn, the gaslight from the inside, the soft, dry, balmy air, the great variety of tropical trees, plants and flowers, all so beautifully blending with the charming music, made it seem truly a fairy-land or a foretaste of the heaven we all hope some day to enter. The musicians, untiring in their efforts to add to the pleasure of the evening, continued their entertainment until the approach of the "wee sma' hours," and before retiring made the Americans happy by rendering in charming style the good old tune of "Yankee Doodle." I could but compare it to some of the concerts given by Sacramento people to Eastern tourists who honor us with a visit. But all pleasures of this world have an end, and so did our first entertainment upon the Hawaiian islands.

The next morning found us, after a good night's rest, ready at 10:45 A. M. to start to the King's Palace, which was but a block away. The distance being so short, we walked, arriving promptly at 11, and were received by the King's Chamberlain at the door, after safely passing the guard at the gate. The ladies of the party remained standing in the hall, while the gentlemen were taken to a side hall to lay aside their hats and canes. When they returned all were conducted to the King's room. The W. G. M., Atkinson, upon being presented, introduced each one to his Royal Highness, who in return bowed gracefully as we passed. We formed a circle around the elegantly furnished room and gazed at his Highness about five minutes, he returning the compliment, after which he retired from the room, without our hearing the sound of his voice.

The Chamberlain informed us that we were at liberty to look around and enjoy ourselves in any way we desired. From this room we strolled out into a wide hall, upon the walls of which were hung portraits of all the past kings and queens of the kingdom. Crossing this, we entered a room immediately in front of and divided by sliding-doors from the dining-room, in

which were hung the portraits of the present King and Queen.

Here also we found the great feather robe. It was about the size and shape of a buggy robe, but is indeed a marvel. At first glance you would think it was made by some ingenious housewife by pulling bits of cloth through canvas. There were but two colors in it, red and yellow—the shades found upon the wings of California blackbirds—the former color predominating, being the cheaper feather. The yellow feathers cost \$1 apiece, as there are only two of that shade in one bird. The natives kill these birds and use them to pay their taxes with. So great has been the effort to obtain these feathers that the birds have become almost extinct.

For a description of the dining-room I will refer my readers to the account of the King's table given in the Bible, for I could think of nothing else while passing through it and examining the silver upon the tables. The workmen were engaged upstairs putting in the electric light, so we were not invited up, but were informed that the King wished us one and all to leave our autographs in his great register, which we did. We were granted the privilege of strolling through the grounds and gathering flowers, and then passed out from the palace grounds through another gate. The evening was spent by the gentlemen of the party in Masonic work in their Lodge, while the ladies were again entertained by the band.

(To be Continued.)

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

ORCHARD WITHOUT IRRIGATION.—Oroville Register: Mr. Joseph Farnan, who owns a ranch south of Oroville, has been experimenting for the past three years with fruit, and is convinced that fruit trees on his land need no irrigation. He has some of the finest four-year-old apricot trees in the State, and they have not received a drop of water except rain-water. His peach trees are doing finely and his grapevines cannot be excelled. If any one wants to see fine trees growing without irrigation we hope he will drive down to Mr. Farnan's and take a look at his splendid young orchard.

HAY.—While grain-hay is not nearly so abundant as last year, yet there has been cut in Butte and Yuba an immense amount of alfalfa, which to a certain extent will take the place of grain-hay.

A VETERAN.—The first mowing machine ever introduced into Butte county, as far as we have been able to ascertain, was by P. R. Hutchins in 1859; it is owned and run at the present time by Wm. Flowers of this county, and does good work.

Calaveras.

REMARKABLE VINES AND TREES.—Lodi Sentinel: On the ranch of F. Hubert, near Burson, is an apricot tree measuring 7 feet 5 inches in circumference. It is a seedling, planted March 10, 1857. Mr. Hubert says the fruit is of superior quality, and that this year he will gather 1500 pounds from this one tree. John Wildermuth, whose ranch is two miles northeast of Campo Seco, is quite proud of six fig trees planted in 1857, the trunks of which range from 6 to 7½ feet in circumference. From them he dries three crops of figs, aggregating 20,000 pounds, each year. He has a special process of drying the fruit, which on that account brings top prices. From these six trees the proprietor realizes over \$1000 per year. Geo. W. Cutter of Campo Seco has a number of orange trees which average over 3000 oranges to the tree. This fruit took the first premium at the State Fair for excellence of flavor. Matson & Williamson of Stockton own a piece of land near Burson on which grows a delicate grapevine 4 feet 5 inches around the trunk on the surface of the ground, and 4 feet 4 inches 5 feet above the ground. It then divides into two branches, each 2½ feet in circumference, both of which have entwined themselves around a huge oak, which now appears literally loaded with grapes. If trailed upon an arbor it would reach over 300 feet.

Contra Costa.

BRUSH-BREAKING.—Antioch Ledger: James O'Hara is clearing off the chaparral on the tract recently sold by him to Erdman, Sussman & Martin. He has had a roller made with which he breaks the growth down, pushing it with the horses as a header is worked. He is able to clear off a large tract daily in this way. When the chaparral is broken down he fires it, and the demolition is complete.

Fresno.

GOOD BARLEY.—Republican, July 15: Elmer Humphrey is the fortunate owner of one of the best yields of bald barley in the county. From 38 acres of land near town in the Fresno colony, he thrashed last week 800 sacks of barley, each sack containing 2½ bushels. The heavy yield is traceable to good plowing and sub-irrigation.

PROFITABLE COTS.—W. A. Cowan has in his orchard 200 three-year-old apricot trees which came into bearing this year. From these trees he gathered about eight tons of fruit, 8600 pounds of which were dried, making 1710 pounds of dried fruit. This was sold at from 11 to 15 cts. per lb., amounting to \$210 for the dried fruit. The green fruit was sold for \$83, bringing the total up to \$293. The cost

of gathering and drying amounted to about \$40. Mr. Cowan's experience is that it takes 4½ pounds of very ripe fruit to make a pound when dried, and the less ripe required 5½ pounds for a pound when dried.

Humboldt.

A STALWART SHORTHORN.—The Eureka Standard notices the arrival in that city of a band of magnificent working cattle—15 steers and two bulls—from the ranch of L. C. Tuttle near Garberville. They had been purchased by the Occidental Mill Co., and were on the way to Ryan's slough. One of the bulls, a full-blooded Durham, tipped the beam at 2010 pounds, and was reckoned "the largest ever seen in Humboldt county."

Inyo.

ANOTHER PIECE OF "DESERT."—Independent: This year Gustave Sanger, on his place at Alvord, planted 300 acres in wheat, oats and barley, alfalfa seed being put in with the grain. The grain will average one ton per acre. The alfalfa has come up very thick among the grain. Mr. Sanger also planted a large number of shade and fruit trees, and all are making rapid growth. The land is neither better nor worse than thousands of acres along Owens river.

Los Angeles.

EDITORS PRESS:—We are having exceptionally cool, pleasant weather. A little fog mornings, enough to toughen hay, makes it bale splendidly. Good barley hay is selling for \$12 to \$14 per ton. Hay is nearly all stacked and baling is being rushed with all possible speed. Heading is nearly all done, but as yet I have not seen a thrasher in this part. Apricots sell here for one cent per pound, delivered to the canners, while near San Francisco they fetch 1½ cents. Why is it so?—D. J. O., Spadra, July 16th.

San Benito.

GOOD CROPS.—Hollister, July 17: The thrashers are now all busy and grain is turning out much better than was expected. In many places the crop is larger than that of last year. Many ranchers who had expected only half a crop are getting from 20 to 30 bags an acre. Fruit is doing well. Four new driers were started near Hollister last week. The apricots and peaches are unusually fine. The vines are heavily laden.

San Bernardino.

FRUIT CROP.—Ontario Record, July 13: The general tenor of all our fruit reports is the same—a most flattering showing for citrus fruits; good prospects on both the Muscat and Sultana grapes; on deciduous fruits, especially the apricot, a great unevenness that in some degree can be accounted for as a result of the youth of the trees.

BUCKWHEAT.—Riverside Press, July 16: D. H. Burnham on Magnolia avenue a few weeks ago sowed his entire orchard to buckwheat for the purpose of fertilizing and enriching the ground. It came up, flourished, and to-day has passed the season of bloom and is loaded with a fair crop of buckwheat. It has been generally supposed that buckwheat would not do well in California. We shall watch this experiment with interest. The crop does not appear to drain the moisture unnecessarily from the trees.

San Diego.

HORTICULTURISTS IN COUNCIL.—Union: The regular quarterly meeting of the San Diego County Horticultural Society was held at Lodge hall, Poway valley, July 6th. There was a full attendance of members and visitors. The meeting was very interesting. Fruit-growing and fruit pests were discussed at length. The hall was handsomely decorated with flowers, evergreens and branches laden with fruit. A table reaching across one side of the hall was filled with choice fruit for all, for which the ladies of Piermont are entitled to the credit. After the meeting, the fruit was placed at the disposal of those in attendance. Five new members were added to the list. The next regular meeting will be held at the schoolhouse in El Cajon valley in October.

San Joaquin.

LODI WATERMELONS.—Sentinel, July 16: The first ripe watermelons we have seen this year were left at our office by Messrs. John Acker and J. D. Huffman. Their patches are reported to be in fine condition. S. Ferdun shipped four crates of watermelons from here last Thursday. This is the first shipment of the season. Mr. Ferdun will be ready to send away a carload in about 10 days.

THE MOKELUMNE CANAL.—Record-Union, July 18: C. E. Grunsky, Deputy State Engineer, has gone to take charge of the engineering work for the Southern California capitalists who recently bought the Mokelumne Irrigation Co.'s property. The survey will be commenced to-day and pushed without delay. Mr. Grunsky will remain at the works for three weeks and be assisted by E. E. Tucker. On the completion of the survey, contracts will be let for building a canal to take a large body of water from Mokelumne river and run over rich lands in the northern part of San Joaquin county.

San Luis Obispo.

GRAIN AND LEGUMES.—Morro Cor. Tribune, July 6: Heading is about half done in this section and a two-thirds crop anticipated. Beans are looking well, several hundred acres being planted with them this season.

LAS TABLAS ITEMS.—Cor. Tribune: C. Beaver's vineyard is two years old. I am well acquainted with the vineyards of Napa and

Sonoma counties, and this vineyard in growth and thriftiness is equal to any I ever saw there. His corn, squashes, peas, beans and melons look finely. J. Beaver has a fine garden and young orchard—apples, pears, peaches and Bulgarian prunes, the latter excelling all others in growth; they appear to have found a congenial soil and climate here. He has very fine melons, vines and the largest black-eyed peas I have ever seen. Mr. White tells me that the ground has never been tilled since the seed was planted. If we can raise such vegetables and orchards without cultivation, what would they be if well tilled?

Santa Clara.

FATAL BOILER EXPLOSION.—On Tuesday of last week, Alex. Gordon's thrashing machine was at work on the Randol ranch, Mountain View, when the boiler attached to the engine blew up, killing A. T. Carr, the engineer, and Louis Saliceto, the fireman. Carr was at his post and had just started the engine for the day's work when the explosion took place. The engine and boiler were lifted and thrown 400 feet, passing over the separator and lodging against a tree. At the inquest it was in evidence that the engine was 20 years old, and an examination of the firebox showed that there was not a bolt in the crown-sheet head, and there were scales on the inside and outside. The coroner's jury returned a verdict to the effect that Carr and Saliceto came to their deaths by an explosion of a defective engine boiler.

THE CHEESE FACTORY.—San Jose Mercury: The stockholders met at the factory Saturday, July 8th, to hear the report of the directors in regard to the business of the factory for the past year and to elect directors. R. McCubbin, James Southerland, W. H. French, J. R. Billings and L. P. Alexander were chosen directors for next year, and organized by electing J. Southerland president, W. H. French treasurer, and L. P. Alexander secretary and salesman. A dividend of \$4 per share was declared on each share, the value of the shares being \$50. From the annual statement the following figures are taken: Pounds of milk received, 1,465,957; pounds of cheese made, 147,250; which as compared with former years, under the management of former cheesemakers, shows a gain of about 10 per cent in the amount of cheese from the same amount of milk. The cheese commands the highest market price, and the weekly sales at present in Santa Clara and San Jose are larger than at any time in the past history of the factory. Within the past year the factory has been put in complete repair, including new vats and also by the introduction of steam pipes into the curing-room, which is a new departure in the manner of heating, and much superior to the old method, as it gives an even temperature in every part of the room. It is believed to be the only factory in the United States so heated, the idea being original with Mr. J. M. Bigger, the present superintendent.

GRAIN EXCELLENT.—Gilroy Advocate, July 16: The barley crop of the valley runs far beyond the expectation of the farmers. Phelps Bros. ordered 1000 sacks for theirs, but found on thrashing that they needed 600 more. Indeed, all grain is plump and heavy and gives more to the acre than was anticipated a few weeks ago. Ordinary sacks filled with barley stored in the mill this week average 112 pounds to the sack—a good indication of the quality of the grain.

Solano.

PICKERS AND CUTTERS.—Cor. Vacaville Reporter, July 14: The crew on J. W. Gates' ranch are entitled to the cake for big work in drying apricots. Tuesday was the last day of the season; consequently the cots were small and decidedly mixed, which fact should be borne in mind. William Jones cut and spread on trays 780 pounds; Wm. Cummings 832½ pounds; Mrs. Wooderson 801 pounds. Messrs. Barr and Wooderson carried in from the drying ground, sorted and sacked 460 trays of dried fruit, which were immediately filled by the cutters with fresh fruit. The cutting for the day amounted to 5505½ pounds, which was all sulphured and spread on the drying ground by Messrs. Allmen and Hester. Among the pickers Wm. Robnett took the lead, he having 117 baskets to his credit—his average for the season was 95 baskets per day.

Sonoma.

CROP NOTES.—Petaluma Courier, July 13: The thrashers are now at work. While to all appearances the grain crop was never better, it is found upon thrashing that the berry, by the few days of recent hot weather, has shriveled, and in consequence the yield in pounds will not be so great as was anticipated a short time since. The corn, potato and vegetable crops are promising. So likewise is the fruit. The prospective yield of the latter is unusually large, but between the Petaluma cannery, the Petaluma fruit-drier and outside demands, all of it can be disposed of profitably.

Tulare.

THE ARMY WORM has made its appearance in several alfalfa fields in the vicinity of Woodville. J. H. Grimsley informs the Times that about two weeks since he was congratulating himself over the prospect of raising about \$3000 worth of seed from his 120-acre field, but the little worm came along and cleaned him out entirely. Tule river flows through his place, and a few days since he had occasion to cross the dry bed of it, which was literally covered with the worms. They appear to be increasing, and are moving northward. Two generations of this pest appear each summer. Their ravages

may be checked, in a measure, by surrounding the field where they are found with a double furrow, or a ditch, and crushing those that fall in.

Ventura.

WALTER FRUIT-DRIERS.—Free Press, July 15: The Walter fruit-drier owned by A. N. Barnes has a capacity of two tons daily, while S. R. Thorpe's has a capacity of eight tons. The construction of these driers is simple, the under part being of iron and brick, and the remainder of wood. A shaft extends through the drier, to which is fastened a driving-wheel, and is moved by turning a crank. Also two spider-wheels keyed on the same shaft on the inside to support the cases which hold the fruit. These cases pivot as the wheels revolve and are kept on a level. This brings the trays on which the fruit is dried to a wide door at one end of the drier, where they are easily removed and are replaced by others. The drier is so constructed that it separates the hot air from the vapor, and the air is superheated over and over, thereby creating a continual circulation throughout. This drier is the result of years of experimenting, until its inventor believes he has reached perfection in its construction and usefulness. It is rapid in its work; it will dry anything without scalding or burning; the fruit is taken out at the same place where it goes into the drier; it is either permanent or portable, and is particularly valuable to owners of small orchards. It dries whole pears and prunes, preserving their shape; nothing better can be found for drying raisins, and instead of evaporating, it preserves the jelly of fruit.

SESPE ITEMS.—Free Press, July 15: The honey crop in this neighborhood has proved a total failure. The bee-keepers prepared to extract the 1st of June, but were unable to do anything at it on account of the unfavorable weather. The fruit is getting ripe and those little busybodies, the linnetts, are beginning their ravages. They are a terrible pest that every one must fight if they expect to have any marketable fruit. The Sespe ditch is coming on apace, but will be no benefit to crops this season.

ARIZONA.

FURNISHING HORSES TO CALIFORNIA.—Semi-Tropic, July 10: One hundred and fifty horses were taken through Colton on a special freight train this morning. They were from the ranges of Arizona and were being taken to Los Angeles for sale. They were nearly all young and some of them were extraordinarily handsome and would have made fine carriage horses but for the disfiguring brands on their hips. It is said that Arizona will at no distant day be able to furnish horses for all Southern California.

NEVADA.

EDITORS PRESS:—At H. Springmeyer's ranch, near Genoa, I found them all busy haying. Mr. S. has 200 acres in alfalfa, which will produce seven tons to the acre—worth \$13 per ton delivered in Carson. Fred Danberg has several hundred acres in alfalfa which yields three crops a season. Haying is two weeks later than usual in Nevada this year.—F., Mason Valley, July 16th.

OREGON.

WEALTH OF GRAIN.—A telegram from Portland, 19th, says that F. S. Rowe, manager of the O. R. & N. Co. has just returned from an extended trip over all the lines of the company and reports the grain crop in the inland empire the largest and best in the history of the country. Every field of fall and spring wheat, barley and oats will yield a full crop, something never known before, and this section will furnish 450,000 tons of grain for export.

SHORT FRUIT CROP.—Willamette Farmer: There is no remembrance of any year when the fruit yield in Oregon has been so small as the present. We hear of some districts where the cold rains and frosts of May did not cause destruction; but such sheltered spots are few and the general report says there is little or no fruit growing. The loss of the apple crop will be most severely felt of all, for there is almost a total failure of that most valuable of all fruits, and old orchards that have never failed before are now barren.

WASHINGTON TERRITORY.

GRAIN SAMPLES.—Walla Walla Union, July 16: Judge J. D. Laman has received several fine samples of grasses and grain grown in the valley, to be placed on exhibition in the Northern Pacific exhibit car, which that company intends to send all over the East for advertising purposes. Particularly fine are those furnished by John Scott, Club and Blue-stem wheat, which will average between 45 and 50 bushels to the acre. He has also a sheaf of oats which will harvest over 75 bushels to the acre. The Agricultural Society has a sample of oats going 70 bushels to the acre. Hon. P. J. Kelly of the Umatilla county portion of the valley has sent in samples of Club and White Landreth Club wheats which go 50 and 60 bushels to the acre. John R. Hood sends in a sample of fall-sown Club wheat which goes 50 bushels. Fred Stine sends in a sample of Club and Chili wheat, mixed, which will go over 50 bushels to the acre, and W. R. Hammond a sample of barley which averages 60 bushels for a field of 160 acres—a first-class yield in any country.



Is it Worth While?

Is it worth while that we jostle a brother,
Bearing his load on the rough road of life?
Is it worth while that we jeer at each other
In blackness of heart—that we war to the knife?
God pity us all in our pitiful strife.

God pity us all as we jostle each other;
God pardon us all for the triumphs we feel
When a fellow goes down 'neath his load on the
heather,
Pierced to the heart; words are keener than steel,
And mightier far for woe or for weal.

Were it not well in this brief little journey
On over the isthmus, down into the tide,
We give him a fish instead of a serpent,
Ere holding the hands to be and abide
Forever and aye in dust at his side?

Look at the roses saluting each other;
Look at the herds all at peace on the plain—
Man and man only makes war on his brother,
And laughs in his heart at his peril and pain;
Shamed by the beasts that go down on the plain.

Is it worth while that we battle to humble
Some poor fellow-soldier down in the dust?
God pity us all! Time oft soon will tumble
All of us together, like leaves in a gust,
Humbled, indeed, down into the dust.

—Joaquin Miller.

Her Poor Cousin.

"Really, Corinne, you are too harsh with your cousin; remember she is the child of your dead father's sister."

"I can't help it, mamma; the girl is a burden to us and you know it."

"I should think she was rather—a help," said Mrs. Stanley, toying idly with her fork and knife. "She certainly dresses your hair for you and performs other little duties that you could not do yourself."

"Oh, I know she tries to earn her board and clothes, which is only right and proper, but I think she ought to keep more with the servants, where she belongs. I was going to tell you that I have accepted an invitation to see 'Faust' with Mr. Bronson this evening."

"His attentions are becoming very marked, Corinne. They say he is worth about a hundred thousand a year. Would you marry him if he asked you?" said Mrs. Stanley, putting emphasis on the "if," for she knew her daughter had been angling for the millionaire.

"How do you know that he has not asked me already?" said Corinne with a laugh, and then the conversation ended.

Meanwhile pretty Louise Lynn sat in her small hall bedroom in the great Fifth-avenue house, and wondered why her lot was so hard. Silently she recalled a face she had loved long ago. It was the old, old story. They had exchanged passionate vows to each other. At her father's former country-seat their names were carved on the same tree; there they had sworn, with clasped hands, to be true to each other forever. But the course of true love had not run smoothly. Her father, unwilling that Louise should become the wife of a poor man, had forbidden their meetings. A knock at the door interrupted her musings. Corinne had sent for her to dress her hair.

"You really would make a capital maid," Miss Stanley remarked, as she surveyed her costume in an opposite mirror when thoroughly dressed for the opera. "Marie," glancing toward her French femme de chambre, "will have to look out for her laurels. Here, Louise, just carry my white merino cloak downstairs, won't you, while I follow?"

Miss Stanley and her cousin had been in the dining-room about five minutes, when the former glanced impatiently toward a clock on the mantel, exclaiming, "It is certainly very odd that Mr. Bronson doesn't make his appearance."

Just then a ring was heard at the door. As it was not answered immediately, Corinne turned to her cousin and said, "Louise, go to the door."

"Is my position in this house that of a mere servant?"

Louise spoke the words in tones with a faint, almost imperceptible quiver; otherwise her demeanor was perfectly calm.

"Yes," was the unhesitating answer. "You are merely a domestic servant—nothing more."

"Very well; in that case I will obey."

She left the room with a stately step, though her wounded heart was beating passionately.

With a steady hand, too, she unfastened the hall door.

A gentleman was standing outside.

"Are Mrs. and Miss Stanley at home?" he asked politely.

His voice made poor Louise's heart beat quicker than ever.

"Ashton!" she exclaimed. "Can it be you?"

"Louise!"

The gentleman had caught her hands in both of his and stood gazing eagerly into her face.

"Oh, Louise," he went on in tremulous

tones, "what miracle is this? I have sought for you ever since my return, but to no purpose. And now to find you here! I can scarcely believe my senses!"

"You could not have cared much for me," poor Louise said, through her tears, "because—because you have never written me a line since—since—"

"Written you, Louise! I wrote a dozen times."

"Then the letters miscarried, for I never received them. Ah! I know my father's death—my change of address—"

But at this moment they were interrupted by the appearance of Corinne on the scene.

"For heaven's sake, Louise, what is the meaning of all this?" she cried. "I was not aware," she added scornfully, "that you aspired to know Mr. Bronson."

The angry speaker's face was livid with consternation and rage.

"Mr. Bronson!" ejaculated Louise, astonishment overcoming every other feeling.

"Yes! Mr. Bronson," said Corinne, mimicking her.

"What does this mean, Ashton?" asked Louise, turning to her lover.

"I am now known, dearest, as Mr. Bronson, after a distant uncle, whose fortune I inherited, and who wished me to take his name. The accession to this estate brought me back from California to search for you—but in vain."

There was a moment's silence, and then Louise, as she looked at her cousin, said:

"And so your grand Mr. Bronson, cousin Corinne, was all the while my dear old Ashton," and she proudly clung to his arm. She could not restrain a slight exultation in her tone.

"Yes, darling!" said Mr. Bronson, pressing her arm, "and I am sure your cousin will congratulate us. I certainly owe her much for having given a home to my treasure."

Did Corinne congratulate her cousin? She was obliged to do so outwardly, at least, for Louise and Mr. Bronson were married a month later. But there are some smiles that mean frowns, and we fear Corinne's were such.

A Novel View Point.

It has often been remarked that the wealthiest man gets no more than his board and clothes, after all. All the rest are outside accessories to his life which he can enjoy only as he is educated up to them.

A pleasing anecdote, in which this fact was prominently brought out, is related by the New York Tribune, concerning the well-known surgeon, Dr. George F. Shady.

The doctor has a pleasant country-house on the Hudson, some seven or eight miles north of Kingston, known as "Pine Ridge." He formerly spent his summers there, and, being fond of driving, owned a team of fleet-footed sorrels. With these he would spin over the hard country roads at a lively gait almost daily, usually driving himself.

While driving on Albany avenue in Kingston, on his way home one afternoon, being alone in the buggy at the time, he was hailed by a newsboy who, mistaking him for a coachman, shouted:

"Say, John, can't you give a fellow a lift?"

"How far are you going?" asked the doctor.

"Only out to General Smith's," replied the boy.

The urchin sprang to the seat beside the driver, and the conversation ran as follows:

"Whose rig is this?"

"Dr. Shady's."

"Oh, yes, he's the feller from New York. He lives in Flatbush, by the river. I heered of him. Do you work for him?" asked the boy.

"Yes," said the surgeon.

"What does he give you?"

"My board and clothes."

"Gosh, is that all? Well, he gives you pretty good clothes, though," said the boy, hastily inspecting the driver's make-up. "But you could get more'n that. Major Cornell's coachman gets \$30 a month and found. Think of that!"

"But the major is a rich man, and can afford it," said the driver.

"How long have you been with the doctor?"

"Ever since I was a boy."

"Never worked for anybody else?"

"No."

"What do you do for him?" continued the interviewer.

"Oh, everything he asks me to do. I wash and dress him, black his shoes, sometimes clean his horses, harness them—in fact, I am his man of all work."

"Is he so old, then?"

"No, he's about my age."

"Then he must be a lazy chap, anyhow."

After a brief pause came this poser from the boy:

"Do you like the doctor?"

"Sometimes I do and sometimes I don't. Occasionally I get so disgusted with him that I feel like running away."

"Why don't you?"

"Oh, it's no use, I cannot. I have to be satisfied."

"Well," indignantly ejaculated the boy, "I think you're a big fool."

"But here is General Smith's," said the doctor.

"All right. By, by, John," sung out the boy, as he alighted upon the road.

Thoughts.

[Written for the RURAL PRESS by "NETTLE."]

Love for one being cannot be confined to that particular soul; it will overflow on our friends. This overflow is a test of love.

The more we love a person the less, as a rule, we feel like talking when in his presence. The very consciousness of being near him is all-sufficient.

What more may man ask than to be a child of God?

If he who criticises cannot by his criticism benefit either others or himself, he is doing no good, but is 'creation's blank.'

Wouldst thou have thy burdens lightened? Help thy brother in his need and tenfold shall it be returned thee.

Wise people realize how little they know, but the most ignorant persons think wisdom is concentrated in them.

God has planted two seeds in each soul. One of these seeds is love of earth, the other love of truth. He allows man to choose which shall grow at the expense of the other, for both cannot be masters. Foolish man too often gathers to himself straws from the muck-heap of worldly and beastly pleasures, never looking up to see the handle of truth he might grasp and thereby attain divine heights which would ever lead him to still higher, broader visions.

Pleasures, cares of dress, and subsistence absorb the attention of man's priceless soul, engross his thoughts, till his stunted spirit knows no purer aim than to eat, drink, and pamper the body. The gems of purity, love, truth, flash their gorgeous rays before some people's eyes in vain, for what care they for the body's demands and delights? A new hat, the dance-floor, gossip, all yield gross, absorbing pleasures to them, and would one tell these blind followers of foolishness of greater triumphs, think you belief would find place in their dull souls? We cannot do without the "cumbrous clay" habitation of the soul, but we can devote less time to pleasuring it, and should find our real joys in the higher realms of truth. Believe me, I do not underestimate bodily duties. I am particular in the care of my person, and feel it a duty to try, as far as reasonable, to make myself agreeable; but just as the condition of the plate we eat from—though there may be little excuse for uncleanness—is not as important as what we eat, so we should, at the same time that we take good care of our bodies, remember also that the life is more than meat. Our narrow souls should reach eagerly for the true wisdom, for the culture that broadens the sympathies, for the toleration induced by contact with different minded men, while at the same time we are necessarily but mechanically serving the body. Yet each person must investigate for himself before he will fully accept these words. Would that our body-weighted, earth-burdened souls could cast off all low impressions, could free themselves from thoughts of all but truth, the truth that includes God! Each individual soul outvalues space, outweighs matter; and shall we spend more time on the transient case that envelops it than we shall to expand, strengthen, purify our one lasting gem? The wise spirit values soul greatness more than the total of earth's treasure.

Haywards, Cal.

Roughing It in California.

J. S. Tibbits of Santa Rita, an occasional contributor to the RURAL, writes to an Eastern exchange as follows:

People living at the East, surrounded by all the comforts and conveniences of civilized life, can have but a faint idea of the inconveniences and discomforts to which many are subject, or subject themselves, here at the West. To see people living in dug-outs and caves, or in tents, as I have seen them in Colorado, and in rude board cabins or in booths of cypress boughs, as I have seen here in California, would seem to Eastern dwellers in luxury as a little rough. But this is more apparent than real, for thousands of well-to-do persons are living at the West in just such habitations and enjoying themselves hugely, too. I have by no means seen nor experienced the rough habits of the '49ers, but such as I have experienced may not be altogether uninteresting to your readers.

Last winter, while engaged in working for a wealthy ranchman, I boarded with the men who were at work on the place. We occupied a rude cabin, formerly used for a barn. Benches were constructed on one side, filled with straw, in which we slept. I had a scant supply of straw under me, plenty of blankets over me, and a "right smart" supply of bedbugs and fleas all about me. Under such circumstances I did not oversleep myself. Our cook was a gentleman who had been reduced from affluence to penury. He was by no means a model cook, and if "cleanliness be akin to godliness," he was sadly lacking in the latter virtue. He would come in from his hunting expeditions and without washing his hands commence preparing our meals. He always had a pipe in his mouth, the ashes from which would fall in plentiful showers into the food, forming a conglomeration not found in any cook-book. Under these circumstances you may be sure I did not gorge myself with food.

For upward of a year I have been living all alone, doing all my work, indoors and out, myself, having neither wife, cat, dog, rat nor

mouse to disturb me. Part of the time I occupied a small room, 7x14 feet, partitioned off from a barn, doing my cooking by a fireplace outside. I pride myself on becoming quite an expert cook, though I now and then make slight mistakes, such as putting a lot of common starch into my flour instead of baking powder; putting half a pound of ground coffee into my pancake batter instead of flour; letting a black sooty pot fall into a pan of stew, throwing the gravy all over me; and pouring some cold water into my stew when I was cooking some dumplings, causing them to fall so that it was about impossible to stick a fork in them. But these are mere incidents, liable to occur in any well-regulated family.

While thus living by myself I have demonstrated the following important matters: First, that a person can live, and live well, on less than one dollar a week for food; second, this voluntary exile from the busy scenes of the world, with its freedom from care, anxiety and grinding toil, is conducive to one's peace of mind and devotional feelings; is a powerful exorciser of the demon of despondency and melancholia, and is promotive of both health and happiness.

In conclusion, I can say with Burns:

"Let others love the city,
And gaudy show at sunny noon;
Give me the lonely valley,
The dewy eve and rising moon."

Cabbage-Garden Epics.

EDITORS PRESS:—Joaquin Miller has made a discovery! He finds that with books of poetry the world is amply provided, while the stock of good, solid cabbageheads is somewhat slim. He deems the cabbage-garden poet equally needful to mankind with the ink-slinger of honeyed words and measured rhymes. He even graciously concedes priority to him of the cabbage garden. I say "cabbage-garden poet" advisedly. We are too apt to forget that the real meaning of "poet" is simply "maker." And only last Sunday I heard Bishop Wingfield remark that "the poetry of action is nobler than the poetry of language."

Now I feel proud of the "poetry of action" displayed by thousands of our California farmers! I feel proud of their cabbage-garden epics! I feel proud of the poetry of Felix Gillet, who has converted a barren hill into a fertile paradise, propagating and producing all things pleasant to the eye and good for food! I feel proud of the poetry of Messrs. Hatch and Briggs, and Coates and Shinn, and their myriad compeers. Through faith they have wrestled with doubts, and difficulties, and discouragements, and have triumphed gloriously. They have issued their poetry by the carload; cherries and peaches, and prunes and pears, bound in boards and lettered in black, to the entertainment and delight of millions of our good friends East!

It is high time our farmer poets were better known and appreciated. There's about as much genius required by a farmer poet as by an ink-slinger. Your book poet may sing of the sweetness of the young lamb's voice or thrill the heart with the touching tragedy of little Boopet, but the heroine is the farmer poet's darling and the young lamb's voice is the voice of the first-ling of her father's fold. Your book poet may stalk in solitary state through the "forest primeval" by day, but at night "forest primeval" is a gruesome subject and cold comfort unless the farmer poet's clearing be at hand, and the welcome and welcoming light of his hospitable cabin radiate through the dark. Your book poet rhymes about flowers and bowers and showers, and brooks and nooks and crooks; your farmer poet lives in them and by them and with them.

Now, though, as the apostle of cabbage-garden poets, I thus magnify my office, God forbid that I should depreciate or undervalue book poets. Few live more in their company than I. By their favor I have the best society always at command and revel in its wit and wisdom. That complaint so fearfully prevalent, "the blues," otherwise classed as lonesomeness, dullness or mopeomeness, finds in me no congenial void in which to develop root or branch, and I gratefully acknowledge my obligation to that invaluable specific, printers' ink.

But I want the farmer poet to get his due meed of the world's appreciation and applause. I want to have his volume considered. He spreads it wide open by the highway-side, in the lovely valley, on the lonely hilltop, by the rippling stream. He that runs may read it. The lines are fair, writ in rows of greenery and blossom, in purple cluster, in rosy, golden fruit, in seas of waving grain. They speak of enterprise and energy, of science and skill, of law and order, of loving labor and tender care, of nature's harmonies and heaven's bounty. Aye, more! They speak of patient continuance in well-doing, of conquest by obedience, of victory through self-denial. What more do the ink-slingers tell us?

Boys! and book poets all! Take off your hats, and "Three cheers for the cabbage-garden poets of California!"

EDWARD BERWICK.

Carmel Garden, July 14, 1887.

DEFINITION written by a small girl of San Mateo: "Tunnels are hollow holes running under the ground."

To Prepare Rose-Scent Jars.

'Tis a pity that so few housekeepers, comparatively, know the never-ending satisfaction to be derived from the possession of a rose-scent jar, yet, at the cost of a little painstaking, they are within the reach of the majority.

Nothing gives more subtle, delightful perfumes to an apartment than one of these jars, which should be opened every morning after the necessary cleaning and dusting is finished, for an hour, and then carefully closed.

All your friends will ask: "What gives your rooms so delightful a fragrance?" It is such a pure yet delicious odor that it charms every one.

The preparation of the rose-stock should be detailed to the care-taking member of the family who never forgets anything.

Gather the rose petals in the morning, let them stand in a cool place, tossed up lightly for an hour to dry off; then put them in layers, with salt sprinkled over each layer, into a large covered dish—a glass berry-dish is a convenient receptacle. You can add to this for several mornings till you have enough stock, from one pint to a quart, according to size of jar; stir every morning, and let the whole stand for 10 days. Then transfer it to a glass fruit-jar, in the bottom of which you have placed two ounces of allspice, coarsely ground, and as much stick cinnamon, broken coarsely. This may stand now for six weeks, closely covered, when it is ready for a permanent jar, which may be as pretty as your ingenuity can devise or your means purchase. Those with double covers are the best, and very pretty ones in the blue and white Japanese ware (I believe the dealers call it kaaga), holding over a quart, can be bought for 75 cents.

Have ready one ounce each of cloves, allspice, cinnamon and mace, all ground, not fine, one ounce of orris root bruised and shredded, two ounces of lavender flowers and a small quantity of any other sweet-scented dried flowers or herbs; mix together and put into the jar in alternate layers with the rose-stock, add a few drops of oil of rose geranium or violet, and pour over the whole one-quarter of a pint of good cologne.

This will last for years, though from time to time you may add a little lavender or orange-flower water, or any nice perfume, and some seasons a few fresh rose petals. You will derive a satisfaction from the labor only to be estimated by the happy owners of similar jars.

MINOR MORALS FOR MARRIED PEOPLE.—

The last word is the most dangerous of infernal machines. Husband and wife should no more strive to get it than they would struggle for the possession of a bombshell. Married people should study each other's weak points, as skaters look out for the weak parts of the ice in order to keep off them. Ladies who marry for love should remember that the union of angels with women has been forbidden since the flood. The wife is the sun of the social system. Unless she attracts there is nothing to keep heavy bodies, like husbands, from flying off into space. The wife who would properly discharge her duties must never have a soul "above buttons." Don't trust too much to good temper when you get into an argument. Sugar is the substance most universally used through all natural products! Let married people take a hint from this provision of nature.

THE SEED OF THE SEEDLESS.—The old joke comes around once more. Last week, says the *Valley Echo*, we received a letter from Sonoma county, the writer of which stated they were going to try growing orange trees, and having heard of the famed Riverside Navel, and wishing to plant the choicest kind, desired to know the name of some party who kept Riverside Navel orange seed for sale, and the price per ounce. Who can furnish a supply? Don't all speak at once.

A GENUINE SURPRISE-PARTY, says the *Anaheim Gazette*, was given Mr. and Mrs. Ed Newhan of Placentia last week. Mr. N. has been sick for several months. He had his fine crop of barley cut with a reaper, but had not been able to haul it together. Last Friday several of his neighbors, with wagons, teams and hands, drove into his field and commenced loading and hauling his grain into stacks, and continued the good work until the sun went down. Such surprise parties have the true ring, and commend the neighborhood.

TO THE POINT.—In the White mountains one summer Henry Ward Beecher drove a passenger-wagon from the Twin to the Crawford, just for fun. In turning around his team became tangled and his wagon bid fair to tip over, when a Portland and Ogdensburg conductor, looking out of a chamber window of the hotel, shouted: "Let go your leaders, you old fool." "That's good advice, young man," was Mr. Beecher's calm reply, as he followed it.

CANON WILBERFORCE says that down in Maine the whisky is locked up before it can get into men. In this State it gets into men before it is locked up—and the men are locked up with it.

YOUNG FOLKS' COLUMN.

A Bit of Green.

[Written for the RURAL PRESS by AUNT SUSIE.]

"O Johnny! look! look! See this bit of green. I must have it to take to mother," calls out a dirty, ragged little newsboy named Tom, and both boys get down on the pavement and try to pull up a few blades of grass that have struggled through the cracks in the paving-stones of a busy street in a large city.

You boys and girls who live in the country and see great fields of grain waving in the wind and ripening in the sun have no idea what it is to the poor little children in the cities to see a few blades of grass; but I have seen them clap their little dirty hands and jump up and down for joy.

"Well," says Johnny, "there are four pieces, just two for each of us, but I'll give you mine because your mother is sick, and you know the grand folks uptown always have flowers and

lost your pennies?" "No, sir," answers Tom. "I'm getting a bit of green for mother, so she can look at it while she is sick in bed; it will make her almost think she can see grandpa's fields again." Just then Tom looked up and says, "See, I have three pieces, and I found four this morning." Something in his eyes and the tone of his voice makes the old man's heart beat faster than usual, and he quickly asks, "What is your name, little boy, and where do you live?"

"My name is Tom Jones, and I live way downtown in a tenement-house, and mother is awful sick. Buy a paper, sir?"

"Yes; I'll take all you have left, so you can go home and show me where you live."

So on they go, and at last reach Tom's home. He goes in the room, and says, "Mother, here is some more green, and a gentleman to see you."

The sick woman starts up in bed as the gentleman stands beside her. One look is enough; she calls "Father!" and he exclaims, "Emma, is it possible?" and folds her in his arms. Tom stands by dumb with astonishment, then all at once a happy thought comes to him, and he exclaims, "Are you grandpa?" "Yes,

him upstairs to bed, and looks in once more to see if his daughter is comfortable in the neat, pretty little room she used to sleep in long ago. The rest and good care she has soon restores her to health and strength, and the happy days go quickly by. Tom, of course, goes to school, but on Saturdays has fine fun on the farm; he has some chickens—all his own—and takes much good care of them; has a pony to ride that follows him all about, partly for love and partly for the sugar he gets now and then.

One day Tom ran in the house and said: "Do you know, mother, I believe grandpa found us and brought us here and made you well, just because I stopped that day to find you a bit of green. I'm awful glad I did. Do you suppose if some other little boy should find some grass he would find a new grandma and grandpa and a nice place like this?"

"I hope so, dear," answered his mother; "anyway, it is always best to take a 'bit of green' or a ray of sunshine as they come."

DOMESTIC ECONOMY.

MOLASSES CAKE.—One cupful of sugar, one cupful of butter and lard, mixed, two cupfuls of molasses, one teaspoonful of ginger, one teaspoonful of nutmeg, one teaspoonful of cinnamon, one-half teaspoonful of cloves, a little salt, three-quarters of a cupful of strong coffee and two eggs. Beat all together, add four cupfuls of flour, after mixing well, add one-half cupful of boiling water, in which one teaspoonful of soda has been dissolved. Adding a few currants, raisins and a little citron makes it almost as good as fruit cake.

FLOUR PUDDING.—One quart of sweet milk; wet and stir smoothly into a little of this cold milk six tablespoonfuls of flour. When the remainder of the milk boils, stir in this wet flour, boil ten minutes more and set away to cool. When cold, add the well-beaten yolks of six eggs, then the whites, which have been beaten to a foam that will pile up; now beat this into the cold pudding until it all looks even and light. Bake another half-hour and serve hot.

CHEESE OMELET.—Butter and cut in quarters a sufficient number of slices of stale bread to line a medium-sized pudding-dish. Over this grate a little dry cheese or cut it in small pieces; add another layer of bread, then cheese, and so on until the dish is nearly full. Make a custard of one pint of milk, two eggs, and a little salt. Pour this over the bread and cheese and bake a half-hour in a quick oven.

SAGO PUDDING.—Take half a cupful of sago, put in a stewpan with a pint of milk and the yolks of two beaten eggs; keep stirring until the grains are transparent, then they are done; take from the stove and flavor with a teaspoonful of vanilla or lemon. For frosting, beat the two whites of the eggs with a cupful of powdered sugar; flavor with vanilla or lemon.

STRAWBERRY ICE.—Take two quarts of strawberries, put them into a muslin bag, dip in hot water, and squeeze out the juice until nothing but the pulp remains. To every cupful of juice add three tablespoonfuls of sugar and the same amount of cold water; put in a freezer, pack in ice well salted and covered with bran, and freeze. Serve in tiny glasses or deep saucers.

SCRAMBLED EGGS.—Break six eggs into a bowl, and season with salt and pepper. Pour into a heated skillet, containing one tablespoonful melted butter, and as the eggs cook, turn them up constantly from the bottom. Serve when slightly dried. The eggs should never be stirred, only the yolks broken, as they will present a better appearance than when beaten.

CREAM CAKE.—Half-cup butter, two cups sugar, three eggs beaten in one cup sweet milk, three cups flour, three teaspoonfuls baking powder. Cream for filling: One pint milk, let come to a boil; add half-cup flour, one cup sugar, two eggs; boil a few minutes; flavor with lemon or vanilla and a lump of butter. This makes six layers.

FRENCH ROLLS.—Of light bread dough, take as much as will make one loaf. Work into this one egg, one heaping tablespoonful of lard, two of white sugar. Set in a warm place to rise. When light, work down, knead again; when very light and puffy, roll out. Cut with biscuit cutter. When raised, bake 20 minutes in a quick oven.

BUTTERMILK MUFFINS.—Beat hard two eggs into a quart of buttermilk, stir in flour to make a thick batter, about a quart, and lastly a teaspoonful of salt and the same of soda. Bake in a hot oven in well-greased tins. Muffins of all kinds should only be cut just round the edge, then pulled open with the fingers.

GINGER COOKIES.—One cup of molasses, one cup of sugar, one cup of butter, one teaspoonful salt, two dessertspoonfuls ginger, one teaspoonful soda, one-half cup warm water poured on soda, then put in molasses and stir well before putting in the other ingredients.

OYSTER FRITTERS.—Make a batter of one cup flour, half teaspoonful baking powder, pinch salt, two eggs, one cup milk; dip each oyster in this batter and fry in hot lard, as for doughnuts.

DRAWN BUTTER.—Half a teacupful of butter; two tablespoonfuls of flour; rub all together and pour into a pint of boiling water; add salt. Serve with boiled meats.



GRANDPA'S STORY.

my child, I am," he replied; and after giving Tom a good hug, in spite of his ragged jacket, he says, "Now, Tom, do you know where to buy some bread, meat, tea and other good things?" "Oh, yes, I know where to get them, if I only had some money. I have to pay for my papers, and shall only have 15 cents left; that won't buy much."

"Here is some money, Tom. Now go." So off he goes, as happy a little boy as the city contains, rich or poor. As soon as he is out of the room, father and daughter ask and answer many questions. It is the old, sad story—a farmer's daughter, tired of the country, going to a city for employment, marrying and being left alone and destitute. Her father calls in a doctor, and he finds she is not really ill, only weak and exhausted from lack of proper food and shelter. Her father says she and Tom must go back to the farm with him, as he is only in the city on business for a few days.

When they start, Tom is such a proud, happy boy, dressed all in new clothes. His mother leans back in her seat on the cars, pale and weak, still much better for the medicine and food she has had and the comforting thought of once more being at home, though she was too proud to let her parents know how much she needed help. It is quite a journey; but at last they get out at a quiet little station and find a comfortable country wagon waiting for them, as her father has telegraphed home the good news. They ride through shady lanes and cross merry little streams that seem to dance along happier than ever, and Tom is nearly wild with delight. At last they reach such a comfortable looking farmhouse, and in the doorway stands an old lady with open arms to receive the long-lost daughter. In a few hours Tom has been all over the place, and, tired out, falls asleep in his chair at the supper-table. Grandpa carries

green things when their folks are sick and dead; so you take these."

Tom is so delighted to have the grass he does not notice that it is not very cheerful to have Johnny compare his sick mother with "folks that are dead," so he runs home, and we will follow him. He goes on and on till he comes to a tenement-house, climbs up the dirty, rickety stairs and stops a moment to get his breath, he has run up so fast; then carefully opens a door and walks in on his toes so as not to make a noise, and leans over a bed in which lies his sick mother. He finds her awake, and says: "O mother! you will be well now. You said yesterday if you could see grandpa's green fields again it would make you well. This isn't a whole field, mother, but it is four pieces of green; just look!" and he proudly holds up the tiny blades of grass. The sick woman raises her head, and takes the bit of green, saying, "My dear boy, where did you get these?" Then Tom tells her, and says: "Now, mother, I must go and sell my papers, and if I can, I'll get you some more grass." So he puts his treasures in her feeble hand, and goes out. He is a bright-eyed little fellow, and in spite of his rags and dirt, seems different from the ragged urchins about him. He has sold nearly all his papers, when, as he stands calling out, "Last 'd'shun evenin' Post," he spies some more grass, and down he goes on his knees for it.

Just then a kindly, good-natured old gentleman comes along and says, "Look here, little chap, how do you expect to sell your papers if you stay down there, poking among the stones? What is the matter? Have you



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Orange Seed—C. W. Reed & Co., Sacramento.
Agents Wanted—H.
Ostriches—E. Cawston, Los Angeles, Cal.
Pacific Bank—R. H. McDonald.
Dress Reform—Mrs. M. H. Ober.
Swine—T. Hogan, Martinez, Cal.
Christian Science Institute—S. E. Bradshaw.
See Advertising Columns.

The Week.

During the week the usual heat wave has struck all the region east of the Missouri and Mississippi rivers. From north to south in this area heat like that from a furnace has raged. At Washington the mercury went higher than it has since the Signal Service was established, except in one instance. From all large centers of population have come reports of fatal prostrations by the score, and the event has proved nothing less than a general calamity. Records of heat have been 102 at Washington, 100 at Cincinnati, 100 at Pittsburg, 95 at Philadelphia, 102 at St. Louis, 104 at Raleigh, 103 at Charleston, and so on. Any one who knows the Eastern climate will understand that such degrees of heat are frightful in their effects.

From our southeast, in Arizona and New Mexico and adjoining Mexican States, there have been unusual phenomena of a different and more acceptable form, though injury has been wrought. There have been rainstorms, unprecedented in amount and untimely, which have washed out railways, flooded and destroyed crops on lowlands, made city streets water-courses, and in short have interfered seriously with business, travel, and industry.

With these unwelcome visitations in mind,

the Californian becomes more joyful in his heritage in this goodly land. His harvest proceeds without injury to product or laborer; his personal comfort is without alloy. He fears not heat nor untimely storm, but secure, with the broad ocean to furnish breezes to fan him, and the high mountains to shield him from sweep of winds, he beckons the heat and storm-oppressed to share with him an area which fortunately is large enough to make millions happy.

The Barley Outlook.

It is reported that barley is being eagerly gathered in by those who believe all the available supply for 1887-8 will be more than covered by requirements, and that barley will be good stuff to own before the season is over. Purchases in the country are said to be a good deal above city equivalents, which certainly indicates that the purchasers have faith in the situation. This agrees well with our own understanding of the outturn of the present harvest, and of the requirements of the next 12 months, which will certainly be far in advance of any similar period in our history. The *Herald of Trade* of this city seems to have a correct view of the situation, and supports it by computations which will be of interest to our barley-growing readers. The figures are about the same that have already appeared in our columns and the grouping of them to show the present complexion of the barley prospect is striking. The following is the barley supply for each year named, in cents:

	Crops.	Stocks.	Total.
1878-79.....	7,475,000	147,598	7,622,598
1879-80.....	8,250,000	806,500	9,056,500
1880-81.....	7,360,000	908,000	8,268,000
1881-82.....	5,070,000	595,000	5,665,000
1882-83.....	4,500,000	162,000	4,662,000
1883-84.....	7,060,000	820,000	7,880,000
1884-85.....	8,100,000	640,000	8,740,000
1885-86.....	5,900,000	608,000	6,508,000
1886-87.....	10,060,000	114,850	10,174,850

The totals of the above give the available supply at the beginning of each crop season, and to get the quantity consumed it is only necessary to deduct that shipped each season. For four seasons past the following is given, which will convey a fair idea of the consumption in the State:

Season.	Supply.	Shipped.	Leaving.
1883-84.....	7,880,000	399,271	7,480,729
1884-85.....	8,740,000	480,654	8,259,346
1885-86.....	6,508,000	219,886	6,288,114
1886-87.....	10,174,850	925,664	9,249,186

Now, to get the consumption, we give the above balance, less the quantity carried over into the following seasons:

Season.	Supply.	Stock.	C'n's mp'n.	Av prices.
1883-84.....	7,480,729	640,000	6,840,729	.94 1/2
1884-85.....	8,259,366	608,000	7,651,366	.97
1885-86.....	6,288,114	114,850	6,173,264	\$1.28
1886-87.....	9,249,186	798,000	8,451,186	1.00

The above totals of consumption show a wide variance, but the important fact of prices must not be overlooked. Each year of free consumption the average price by season shows that feed in our market was low.

The consumption of feed barley in California is rapidly increasing, as the table above shows. In this city the increased use of last year over the preceding one is shown as follows:

	Receipts.	Shipped.	Balance.
1885-86.....	1,115,075	219,886	895,189
1886-87.....	2,200,870	925,664	1,275,206

Taking the difference in the quantity on hand in this city on July 1, 1886, from that on hand July 1, 1887, and deducting it from the increased balance as given above, and still the consumption in this city last season was 21 per cent more than the season of 1885-86.

The great increase in feed barley consumption in the country must be obvious to all. The vast addition to our horse-power through the extended planting and cultivation of orchards and vineyards, the growth of interior towns with their manufacturing interests, etc., all have required a large increase in the numbers of work animals—in fact some estimate that the numbers have quite doubled within a short period.

This year's barley crop must be short; the hay crop is also short. These facts coupled with the increased consumption would indicate a year of good prices for barley and other feed grains.

"INSTINCT AND INTELLIGENCE," the article on manifestations of mind in animals, compiled by Dr. Dawson for our Veterinary department last week, is too interesting to be overlooked by the general reader.

Valuable Eucalypts.

As we announced in the last *RURAL*, the Board of Forestry Commissioners has been in session this week in this city. Various matters have been brought forward of which we shall give reports hereafter. President Abbot Kinney gave at one of the sessions an account of the several species of eucalyptus which the Board has now growing in seed-beds at Santa Monica, and as several of them are new to the State we propose to enumerate them and add notes of the characteristics and values of each, which we draw from the writings of Baron Von Mueller and other authorities on the Australian flora. We have often remarked that there are other and better eucalypts than those most widely distributed in this State, and we desire by this notice to call general attention to this fact, in the hope that propagators may take steps for the introduction and trial of other species.

One of the species which is now growing at Santa Monica is *Eucalyptus calophylla*, or "Southwest Australian red gum." It has the advantage of a greater proportion of foliage to trunk than other eucalypts. It occasionally has a trunk 10 feet in diameter. Baron Von Mueller says when grown on alluvial land it is free from resin, but on stony ranges it yields copiously the gum "kino." Its wood is esteemed for rafters, spokes and fence-rails, but soon decays underground, and is, therefore, of little account for posts, etc. The bark is used for tanning as a mixture with wattle bark from the acacias. The seed-cups are also said to possess the tanning principle.

Another species is *Eucalyptus resinifera*, which is the "red mahogany" eucalypt of South Queensland and New South Wales. It is a superior timber tree, the wood being prized for strength and durability. Von Mueller says it has proved itself the best adapted eucalypt for a tropical climate, but it is not so rapid a grower as some other species.

The *Eucalyptus rostrata* is a species which we have heard much about in this State, and is what we supposed we were generally growing under the name of "red gum;" but it has proved that perhaps most trees which we supposed were *rostrata* were really *viminialis*, which is a more tender species, and this may account for the disappointment which some have experienced in planting the "red gum." The true *rostrata* is a very hardy species, said to stand quite prolonged inundation of its roots and to thrive even on slightly saline ground.

It was found to thrive in India where our common "blue gum" (*globulus*) and other species failed. We desired in this State a variety more hardy than the *globulus*, and hence the disappointment we have had by getting *viminialis* instead of *rostrata*. The latter is a tall tree sometimes reaching 200 feet in its native land, but it has a more spreading habit than most of the tall eucalypts. The timber is very hard, heavy and durable; excellent for posts, railway-sleepers and the like—in fact this timber is the one solely chosen by the Government of Victoria for railway and bridge purposes. It is also employed by shipbuilders for a host of uses. Next to the jarrah from West Australia it is said to be the best for resisting the attacks of sea-worms, teredo, etc.

The last of the four species which Mr. Kinney says are doing best in the Santa Monica plantation is the *Eucalyptus corynocalyx*. This is the "sugar gum tree" of South Australia, a timber tree sometimes reaching 120 feet in height and 5 1/2 feet in diameter of trunk. The wood is said to be of good quality, but the tree is not of very rapid growth. It has the peculiarity of being something of a forage plant, for Baron Von Mueller says it is the only eucalypt except *E. Gunnii*, which has a foliage that attracts cattle and sheep, which browse on the lower branches, saplings and seedlings.

Such are some of the trees which the State Board of Forestry has growing. We trust they may thrive. In another column may be seen a resolution adopted by the Board looking to the acceptance of tracts of lands in different parts of the State where forestry stations may be established. This is of the highest importance. To have well-set groves of trees, each one with its name and nativity inscribed near it, will be to furnish all the people of the section an opportunity to study for themselves what trees promise to do best, and therefore which they had better choose for their own

planting. It will be an opportunity for object lessons in arboriculture which will be of inestimable value to the State.

Bad Environment.

That poor old alleged poker-player and convicted boodle-briber, Jacob Sharp, now meditates over his past life under the shadow of the State prison. That he has been justly convicted and sentenced there cannot be a shadow of doubt. And yet it may be a serious question whether he is not as much a victim as a criminal. "A victim," in the language of the *New York Standard*, "of that greed of gain born of the fear of want, which sanctifies the getting of wealth by any means, provided the successful man can keep out of the penitentiary." He was a sharp, shrewd, business man who had set his heart on procuring a franchise for a Broadway street-railway. It could only be had by bribing the Board of Aldermen. They were a lot of scoundrels for sale and Sharp bought them. He acted under the advice of a highly respectable law firm that would have kicked a Bowery street tramp down the elevator who had come to them to learn how he could safely crack a safe or burglarize a house. He acted on a principle that largely obtains in the Board of Trade rooms, in railroad offices, the privacy of bank parlors, political rings, and even among many leaders of fashionable churches, that there can be little or no harm to buy a man who advertises himself for sale. During an election a few years ago a saloon-keeper on the flanks of a mountain boasted he could control 40 votes.

"Go and buy him," said a leading politician of this State, "or the other side will get him; only be careful the log you sit on while conducting the negotiation is not hollow." There is no hiding the fact that the feeling prevails that the crime attaches to the bribe-taker and not the bribe-giver. This is the sort of atmosphere in which Jacob Sharp, down there in New York, lived, moved and had his being. It was the regular tradewind that blew up Wall street, down Broadway, and had carried many a man into the desirable haven of a marble front on Fifth avenue and a front pew in a stylish church. Is it strange that this old man, whose conscience perhaps was naturally a little elastic, should come to the conclusion that if these aldermanic scoundrels were willing to fill their pockets with boodle it was no concern of his?

Now it is well that Jacob Sharp should go to prison. It is well for Chicago to prosecute the boodlers who have disgraced the lake city till the last one of them is arrayed in striped pants. A suit has been started in this city that is likely to uncover the guilt of bribery in fixing three or four jurors in a recent case. This jury-fixing business has long been the curse and scandal of the courts, and we hope there will be no mawkish hesitancy in probing it to the bottom, no matter who it hurts.

But let not society roll up the white of its eyes in holy horror whenever a respectable citizen or good deacon kicks in the dash-board and runs away with his stolen plunder to Montreal or some other city of refuge. Society is largely responsible for this state of things. Judges may read homilies from the bench, grand juries indict, preachers declaim, and politicians vociferate, but this evil will go on, for where the carcass is, the vultures will gather. And it is not strange. We worship success, giving no heed as to the means. Poverty is the only devil that is feared in America, and the millionaire's palace our ideal of heaven. A man may have no more brains or conscience than a hyena, be a moral leper in broadcloth, but if he has a good bank account, society invites him to dinner, the pew doors fly open, and all the pretty girls regard him as a splendid "catch." And what is the consequence?

"Each for himself, and the devil take the hindmost" has become the law of trade. No matter whose life-preserver you seize so you get ashore. Our boys and girls grow up in this atmosphere. They are taught by example, if not precept, to reverse the successful man and avoid the men who have failed. And what can we expect to come of such a school but Tweeds, Jacob Sharps, Chicago boodlers, San Francisco jury-fixers, and the whole swarm of saloon politicians, election bribers and legislative corruptionists? We must make the tree good if we expect to gather good fruit. Do men gather grapes of thorns and figs of thistles?

A Fine Guernsey.

We do not hear as much of the Guernseys as we would like, although there are some fine animals in this State, notably the Yerba Buena herd of Henry Pierce. As a matter of fact, our stock-breeding readers generally do not contribute, as freely as we desire, the results of their experience and thought on matters connected with their business. Our live-stock interests are growing creditably, our dairies are putting in new and improved machinery, and our herds are being constantly improved by selection in breeding and by the introduction of well-bred animals. All these enterprises should prompt those engaged in them to compare notes and experiences for their own benefit, and to let the public generally know how much of life and achievement there is in their industry.

The engraving on this page will please all who have an eye for a good dairy cow, for whatever may be the individual preference for breeds, there is a harmony of points and outlines which pertain to all the best dairy animals. This is the "dairy shape," which has been considerably enlarged upon by some writers. Whatever may be the distinctive characteristics of the different breeds, there is something which makes all our best dairy breeds akin. There is, in the minds of most advanced breeders, an ideal of perfection, and they endeavor to develop their animals toward it. One of the first educational efforts of the young stockman is to fill his mind's eye with a correct ideal. He can do this best by actual study of the best animals. Animal portraiture is a help toward this end for those who have not the opportunity for comparative study of many animals, and it is to help form correct ideals as much as to celebrate the fame of individual animals or breeds that we aim to present upon our pages really good portraits of the best breeds.

This week we have an excellent portrait of a Guernsey cow—an imported animal purchased on the Island of Guernsey for \$1000 by I. J. Clapp of Kenosha, Wisconsin. Her name is Rosebud 1037, and the artist shows her young calf beside her. The butter yield of Rosebud when four years old, was in seven days 17 lbs. 10 oz. on grass and a daily feed of six quarts oats, bran and cornmeal. This cow has taken four prizes in England and several in this country. Mr. Clapp is well known throughout the country as a Guernsey breeder. There are in his herd about 40 pure-bred animals.

A STEAM WAGON.—In a machine shop at Auburn, Me., can be seen a novelty in the shape of a steam wagon, now in process of construction. The machine will have all the appearance of a common Concord wagon, with the exception that a part of the boiler and its covering will show above the body of the wagon. All the motive power will be concealed under the flooring. The power will be furnished by two small engines of about three-horse power. The boiler is made from iron pipe in spiral form. The wagon body contains two seats, easily holding three each.

A CERVINE TROTTER.—A young elk that has been trained to trot, and can go a mile in three minutes, caught the notice of a *Gazette* reporter at Reno last week. It was on its way to this city for a red-rubber stamp man, who bought it at Ogden for \$70, and will use it to draw his delivery wagon and the attention of the public.

Consumption and Production of Fruits.

The consumption of fruits of all kinds in the United States is enormous and constantly increasing. It is much greater than most people have any idea of. The fear that there will be an overproduction, except temporarily and in some specialties, is groundless. There seems to be a great rush just now into growing apricots, which, if continued for several years, might possibly result in overproduction; but it would only be temporary, if at all. The demand would soon come up to any reasonable degree of production. In the matter of prunes there is also a great increase in the area of trees; but the fact that there were no less than 30,000 tons of this fruit imported last year gives such a margin to draw from that our producers need have very little fear of overproduction. In the matter of citrus fruits, although the area of their cultivation is rapidly increasing, those sections of the country where the climate and soil are peculiarly well adapted to their growth need have no fear from overproduction, so long as proper attention is paid to the quality. The area best adapted to this culture, even in Southern California, is somewhat limited. No doubt large quantities of

Fruit for the East.

Since our last writing the California Fruit Union has sent two special ten-car fruit trains eastward. The first left Sacramento July 13th. The fruit consisted of Bartlett pears, peaches, plums and grapes. Strong & Co. sent four carloads; Gregory, Barnes & Co., two; Porter Brothers Co., two; and the other two carloads were made up by growers in the vicinity of Vacaville. The fruit is assigned to points east of Omaha, and the railroad company promised to put the train through on passenger time. The pears, peaches, etc., are from the down-river fruit section, in Sacramento county, and the grapes are from Vacaville. The first fruit train last year was forwarded on June 24th. This was found to be too early, however, and shippers have waited this year until the fruit has attained perfection. That shipped on the 13th was in prime condition.

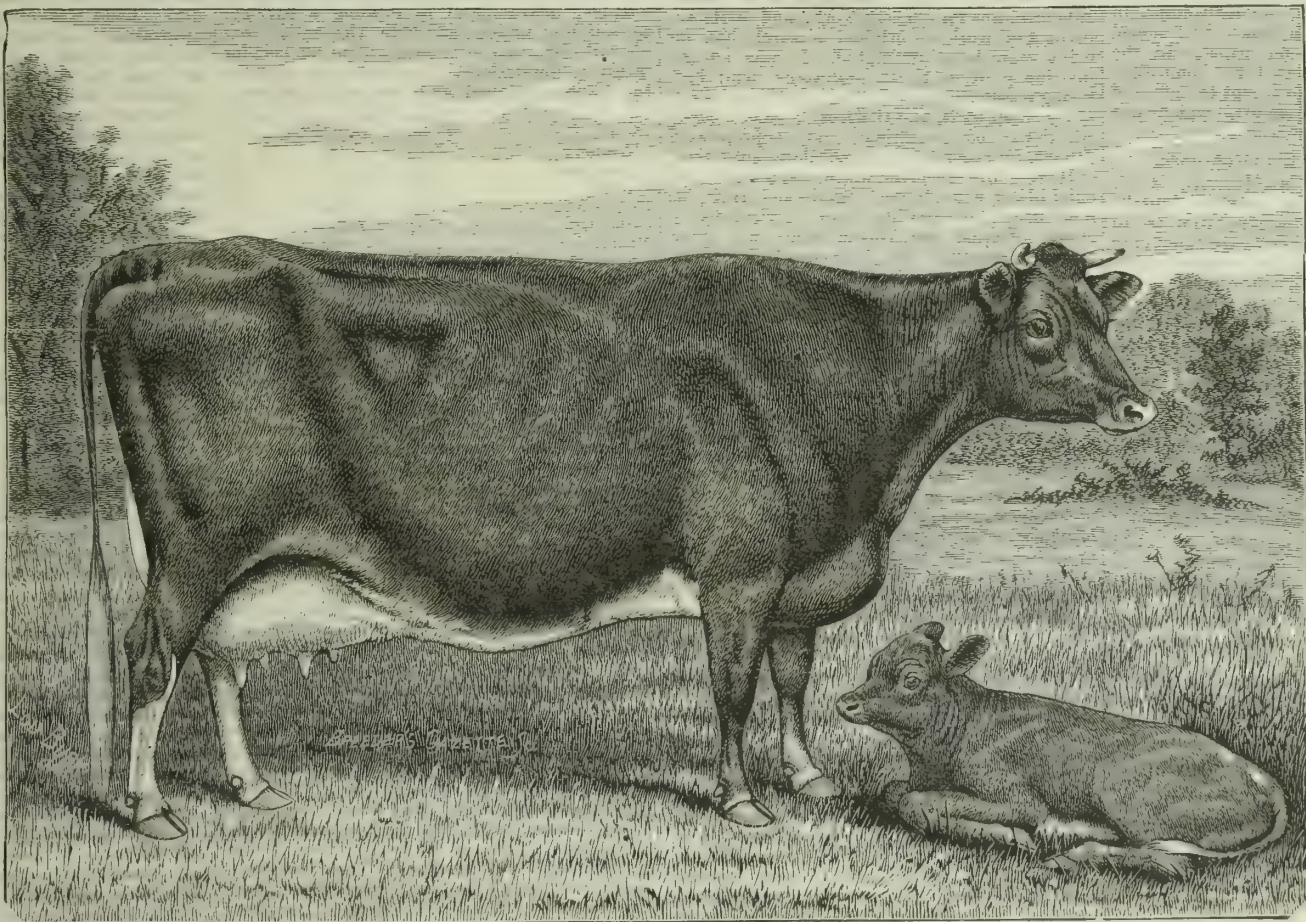
On July 18th the second special fruit train left Sacramento. The shippers are Gregory, Barnes & Co., W. R. Strong & Co., and Porter Brothers. The train consists of ten cars and goes through on passenger time. Crawford peaches, Bartlett pears, plums and grapes comprise the shipment. Upon another page we

Prof. C. V. Riley, U. S. Entomologist.

We are glad to present to our readers upon the first page of this issue of the *RURAL* a striking likeness of Prof. C. V. Riley, U. S. Entomologist. It is not pleasant to make comparisons between things which are all good and between men who are rendering eminent public service, but it can be strongly argued that applied science has attained no higher industrial importance than in the field of economic entomology, and if this be conceded, the position of Prof. Riley, who is the acknowledged leader of the world in this field, becomes apparent without argument. This position is an award of merit. Fitness for it has been secured by a quarter of a century of unremitting labor—labor guided by genius and vitalized by the glow of enthusiasm. Industry, genius, enthusiasm—these three have conquered worlds, in war and in philanthropy, in philosophy and in science, and in industrial arts. We like an opportunity to present their achievements as a rebuke to listless, aimless living and as an incentive to the youth to choose life courses which gain the reward of an approving conscience and make the world the better for their tenancy of it. Therefore we give a sketch of

the life and public services of Prof. Riley, intending to convey thereby some slight token of our appreciation of his worth and in the hope of spreading abroad among our youth a desire to emulate his eminence and usefulness. In the sketch which follows we make no claim to originality. We draw the facts, and in some cases the expression, from a number of published sketches to which we have access.

Nativity and Youth.
Charles V. Riley was born in London, England, September 18, 1843. His boyhood was spent in Walton, a charming village on the banks of the Thames, between Hampton Court and Windsor. He subsequently attended private schools at Chelsea and Bayswater till the age of 11, when he entered the College of St. Paul at Dieppe, France. Here he remained



IMPORTED GUERNSEY COW ROSEBUD 1037, AND HER CALF.

citrus fruits will be produced in Central and Northern California; but such cultivation there also will be confined to comparatively small areas, if none but first-class fruit is accepted.

It should be the endeavor of fruit growers everywhere, and of all varieties, to produce nothing but the best, and to meet the question of supply by driving all that is inferior out of the market. Fruit-growing will ultimately come to that point. No producer of superior fruit need have any fear from overproduction.

SHORTHORNS FOR NEVADA.—Mr. H. F. Brown of Minneapolis writes that he shipped on July 7th the famous Shorthorns bought by W. J. Marsh & Son of Fort Churchill, Nev., of which mention was made a few weeks ago in the *RURAL PRESS*. The animals are Duke of Waterloo, Wild Eyes of Browndale 6th, Wild Eyes Duchess 12th, Wild Eyes Duke 11th. This is a very choice lot of Bates bred Shorthorns, which must prove of great benefit to the stock interests of the coast.

PRIZED BEYOND THE MISSISSIPPI.—A reader of the *RURAL PRESS* in Illinois writes for two back numbers, to complete Vol. XXXIII, and adds: "I have your paper bound each year, from nearly the first. It offers more and better information pertaining to California than anything else extant—I refer to current events and such things as are of interest to those who love California for herself alone."

give the latest announcement of the railway authorities concerning rates.

A NEW APRICOT.—A. D. Pryal of N. Temecal, Alameda county, brings us specimens of a new apricot he has originated by crossing the Royal and Blenheim. The cross thus obtained was grafted into a Moorpark tree and fruited for the first time this year. It is of good size, rather oblong, nearly equally molded on each side, its most obvious external characteristic being its exceptionally high color. Its ruddy hue is strongly deep for the coast climate, and bids fair to make the new variety famous. The flesh is firm and rich colored and the fruit seems to ripen evenly. Mr. Pryal has given much attention to crossing fruit varieties, and he believes this apricot his most notable success.

AMERICAN MACHINERY IN ITALY.—The United States consul at Milan, Italy, reports to the State Department that American machinery has a high reputation with the Italians, especially hydraulic wheels, turbines and windmills. If such is the case, it might be a profitable movement on the part of our machinists to look into the matter, and if it has a substantial existence try and make some arrangement for a representation at the International Exhibition of machinery to be held in Milan next May and June. If the time is too short for an exhibit of this kind, any Italian partiality for American machinery should not be lost sight of.

three years, and then spent nearly three years more in a private school at Bonn, Prussia. These six years of study on the continent of Europe are the secret of his familiarity with the French and German languages, and of his power of speaking them with exceptional accuracy. Two passions characterized his boyhood, one for collecting insects, the other for drawing and painting. The first brought him, as a mere boy, in contact with the late H. W. Hewitson, a celebrated naturalist, who had an unrivaled collection of butterflies and birds at Oatlands, Weybridge, near Walton, and later with many eminent naturalists at Bonn and the neighboring village of Poppelsdorf. The artistic talent is recorded in many a framed sketch yet cherished at Walton, and enabled him easily to carry off the best prizes in drawing at Dieppe and Bonn.

The early loss of his father, and the care at school of a younger brother, developed in young Riley a self-reliance and sense of responsibility which gave a practical turn to his views and convinced him that the classical education he was getting lacked many elements of utility, and was not the best preparation for active life-work. So at the age of 17, with that love of adventure, of free institutions and of rural life which often accompanies the artistic temperament, he sailed for New York, where, after a seven weeks' voyage, he arrived with little means and "a stranger in a strange land." He went West and settled upon a farm in Illinois;

here, during four years, he acquired that experience of Western agriculture that can be gained only by actual farmwork. Fond of animals, of flowers and fruit, of bee-keeping and of all life as manifested on the farm, young Riley devoted himself enthusiastically to the calling he had chosen. Of an inquiring and experimental turn of mind, he aimed to improve on the methods in vogue, and soon won the esteem of all who knew him; and though so young, was sought for in counsel and honored at public gatherings, at which he became intimate with prominent farmers of Illinois.

Early Public Work.

Just about the time of his majority Mr. Riley entered journalistic work in Chicago and finally became connected with the *Prairie Farmer*, the leading agricultural journal of the West. Besides a close application to the duties of his position as reporter, delineator and editor of the entomological department of this paper, he devoted his time and energies to the study of botany and entomology. His industry and versatility soon made him not only popular with his associates upon the paper, but gave him a wide-spread and favored reputation as a writer upon natural history, especially on his specialty of economic entomology, the importance of which he soon made apparent.

During his travels in connection with the *Prairie Farmer*, he became personally acquainted with the leading naturalists and agriculturalists of the West. His connection with the *Prairie Farmer* was interrupted in May, 1864, by his enlistment in the 134th Illinois volunteers, with which he served until its disbanding in November of the same year, when he resumed his connection with the same paper. In the spring of 1868 he terminated his connection with the *Prairie Farmer* to accept the office of "State Entomologist of Missouri," which was tendered to him upon its creation.

The Foundation of his Greatness.

In his new position in Missouri, Prof. Riley found full scope for his peculiar abilities, and soon earned a world-wide reputation as an original investigator and a keen writer, not only on his favorite specialty, but on various practical subjects connected with education and agriculture. Putting heart and soul into his work, he labored for nine years to the credit of his adopted State. With no assistance save what he engaged from his own means; paying all his own expenses, even to the illustration of his reports; contending with much ignorant opposition and ridicule from the Legislature, he yet knew no failure. It was his enthusiasm, born of conviction, and his power of communicating it to others, that enabled him to fight successfully for the cause of economic entomology in a State which had never been noted for advanced ideas.

Of Prof. Riley's published works, those which first gave him prominence are his nine annual reports on the insects of Missouri. In these reports the noxious, beneficial and innocuous insects are treated of in separate divisions. They owe their value in no small degree to the fact that they are replete with the results of original research, and of newly discovered facts in the life histories of most of our common insects, together with practical information for controlling them. Accuracy and popularity are combined in these works, which have come to be looked upon as authoritative text-books, and which are all the more remarkable from the fact that the author had none of the accumulated experience and library facilities to be found in Eastern scientific centers, and had to contend with very inferior State printing and binding.

Of these Missouri reports, the late Charles Darwin wrote that they contained a vast number of facts and generalizations valuable to him, and that he was struck with admiration at the author's powers of observation; while that high authority, the *Entomologist's Monthly Magazine* of London, in noticing the ninth or last report issued, says: "The author, in giving full scope to his keen powers of observation, minuteness of detail, and the skill with which he uses his pencil, and, at the same time, in showing a regard for that scientific accuracy, unfortunately too often neglected in works on economic natural history, maintains his right to be termed the foremost economic entomologist of the day."

Beginning of National Effort.

We all remember the sad experience which our Western States and Territories passed through from 1873 to 1877, from locust or grasshopper ravages, which resulted in destitution and precipitated a financial crisis. These ravages seriously affected the western portion of his own State, and Prof. Riley took hold of the problem with that originality and vigor which have characterized all his work. His last three reports to the State contain the first positive and accurate knowledge on the subject that had been published. But he early saw that the subject was one of national importance, and could not be fully dealt with by work in any one State. To feel a necessity was sufficient for him to act, and consequently we find him, in public lectures, in leading articles, through resolutions offered at society meetings, memorials to Congress, and in every other way, urging the creation of a national entomological commission. After various bills had been introduced and discussed, Congress finally created the Entomological Commission, with a special view to investigate the Rocky mountain locust, or so-called grasshopper; and Prof. Riley was tendered the position of chief of the com-

mission, a distinction which his investigations into this insect had justly earned, for he had already not only made most important discoveries as to its habits and the best means of subduing it, but had ascertained sundry laws that govern it, so as to be able to predict the time of its coming and going and the limits of its spread. Consulted by Secretary Schurz as to the other appointments, it is no wonder that the members chosen were Dr. A. S. Packard, Jr., a naturalist of eminence, one of the first entomologists of the world, and a prominent author and editor, and Prof. Cyrus Thomas, who had likewise labored for the creation of the commission and who was the authority on the family of insects to which the locust belongs. Both of the gentlemen, like Prof. Riley, had been chosen by their respective States as official entomologists, and had a large personal experience in the West. Accepting charge of the commission thus constituted, in March, 1877, we find Riley traveling that year over most of the Western country, from the Gulf to the South Saskatchewan, in British America, now in company with the Governor of a State, again with other special officials, but everywhere exhorting the farmers to action, making careful observations and experiments, and inspiring confidence.

In the spring of 1878, while superintending the publication of the first report of this commission, Prof. Riley was tendered the position of entomologist to the Department of Agriculture by the then Commissioner LeDuc. There was at that time an entomologist provided for at \$1900 per annum, with no assistants or means for efficient work, and little experimental work or original research had for many years been attempted. It was not an inviting position to an ambitious man; but, seeing possibilities for future good work, Prof. Riley accepted it, and Congress gave him \$1000 additional compensation and appropriated \$10,000 for special entomological investigations.

Having already given much attention to the chief insect predators on grain and fruits, he now turned his attention more particularly to those affecting the cotton crop and other Southern staples. But there was lack of harmony in the Department and Prof. Riley resigned his position. Upon his withdrawal, Congress complimented him by transferring the cotton-worm investigation to the Entomological Commission, which acted under the Interior Department. During the next two years—1879 and 1880—he pursued his investigations in the Southern States, during the hottest parts of the year, visiting one State after another and directing and co-operating with his assistants. During this period the commission had its headquarters at his residence, and the bulk of the correspondence fell to his lot. Its success and the increasing support given to it by Congress was due as much to the dignity, tact and courage, as to the efficiency which characterized Riley's management. When LeDuc's administration of the Department of Agriculture came to a close, Riley was again tendered the position of entomologist by Dr. Loring, who knew and appreciated his abilities. Few appointments have, in fact, been more generally demanded or indorsed by the most prominent agriculturists and scientists, whether in their individual capacities or through organizations.

During the early years of his incumbency, Prof. Riley carried forward the work of the Department and of the U. S. Entomological Commission together. The publications of the Commission on the Rocky mountain locust, the cotton worm, etc., are already entomological classics. They present evidences of tireless application, of profound insight into natural phenomena, and of most practical appreciation of the economic aspects of the topics presented. We cannot find space even to properly outline or characterize them.

The Government Work Concentrated.

Prof. Riley foresaw clearly that with a properly organized and supported Entomological Division in the Department of Agriculture, under an appreciative commissioner, there would be no reason for the continuance of the special commission, which was, in fact, transferred to the Department on July 1, 1881, and closed its active labors a year afterward. The organization of the Entomological Division was an original conception of Prof. Riley, and the plan was arranged by him to the smallest details. It is the foremost organization of its kind in the world, and is a credit to the American name. Incidentally Prof. Riley's work has advanced the whole Department of Agriculture, for it is generally conceded that the Entomological Division has led in most matters where efficiency, system and discipline were needed. Commissioner Loring recognized this fact, and showed unreserved appreciation of it. In one of his reports he cited the *regime* of the Entomological Division as one to be imitated, while Prof. I. O. Westwood, the highest living English authority in general and economic entomology, and titular life president of the London Entomological Society, in expressing his admiration of Riley's work in 1883, said: "I am sure it must have had a great share in inducing the activity in entomological work in America, which is quite putting to the blush the entomologists of Europe."

It would take columns of the *RURAL* merely to catalogue the important published works of Prof. Riley since the organization of the Division. He has a large corps of local assistants all doing original work under his direction, and their reports, with his deductions and applica-

tions, supplementing his own most important original studies, which he never for a moment loses sight of, place the entomological literature of America in a position of world-wide eminence. We are obliged to restrict ourselves to this general statement.

During the last four years, as our readers know, Prof. Riley has had much to do with what has been done in promoting silk culture, starting investigations in economic ornithology and in apiculture. It will be difficult to say which are the more important of the original discoveries made; but those made in the last two years with regard to the buffalo gnats of the South, the habits of which were entirely a mystery before, and those with regard to the hop louse (of which we shall soon give a full account), are probably of the most scientific value.

Prof. Riley's Gift to the Country.

Considering the value of Prof. Riley's work in general, it is hard to specify which are the most important contributions to the country. There is one, however, which is not all included in the list of his official duties and must be accepted as signaling his thorough devotion and generous sacrifice of self to the public good. We refer to the gift of his private collection of American insects to the National Museum. It represents the fruits of his own labors in collecting and study for over 25 years, and contains over 20,000 species, represented by over 115,000 pinned specimens, and much additional material unpinned and in alcohol. This generous gift to the Government has long been contemplated by Dr. Riley, whose ambition it is to be, as far as possible, instrumental in forming a national collection of insects, and with the belief that his collection will form an excellent nucleus for future accumulations. This collection contains the following pinned and mounted specimens:

	Boxes.	Specimens.	Species.
Hymenoptera.....	66	24,796	2,650
Coleoptera.....	127	43,513	6,558
Lepidoptera.....	338	17,098	2,308
Diptera.....	21	5,646	699
Hemiptera.....	59	8,862	1,184
Orthoptera.....	64	6,993	560
Neuroptera.....	14	868	169
Arachnida and Myriopoda.....	4	425	110
Insect architecture.....	16	1,080	178
Miscell. (not yet arranged).....	28	1,610	178
Galls and gall insects.....	31	4,152	734
Total, pinned.....	766	115,058	15,328

Foreign Honors.

We have alluded incidentally to the esteem in which Prof. Riley's work is held abroad. If he could be clothed in the medals and tokens of honorary membership in foreign scientific societies which have been awarded him, he would have no need of further tailoring during his natural life. His studies on the grape phylloxera have everywhere been honored. The French Republic marked its appreciation of his discoveries and of his services to French grape culture by presenting him in 1873 with a grand gold medal, designed and cast for the occasion. We may mention also that in 1884 a gold medal was awarded to Prof. Riley by the Scotch authorities for a collection of forestry insects which he made at the International Exhibition in Edinburgh. As the motto on the Edinburgh medal is quaint, it is worth noting. The face has a pretty relief of the city of Edinburgh with castle, Arthur's seat, etc., and "International Forestry Exhibition, Edinburgh, 1884," underneath. The reverse has around the border: "Be aye stickin' in a tree it'll be growin' when ye're sleepin'"; then within a wreath: "Awarded to Prof. Riley, Washington, for collection of insects injurious to forest trees."

Personal.

In personal appearance, Prof. Riley is above the average in height. Of a bilious, nervous temperament, dark complexion, rather spare, he possesses an active organization and unwearying endurance. The face is striking and strong, remarkably mobile, with the ordinary expression rather pensive, serious and concentrated, but beaming with pleasure and humor whenever the Professor is off his work. Socially, he is bright, warm-hearted and sympathetic. Of late years he has shown the effects of overwork, against which his friends and family find it necessary to constantly warn him. He married, in 1878, Miss Emilie G. Conzelman, daughter of G. Conzelman, Esq., a much-respected citizen of St. Louis, who, among other public-spirited acts, was the originator and is one of the chief supporters of the manual labor school connected with Washington University, and which has proved so successful that it is emulated in other cities. Prof. Riley's home, in the northwest part of the city of Washington, is noted for its many pleasant belongings, and particularly for the taste displayed in the garden.

Prof. Riley is yet in the prime of life. No one could fill his place, and thousands of people throughout the land will wish with us that he may yet be spared many years of health and usefulness. With so much accomplished, with so honorable a past, it is difficult to predict his future, or the good he may yet accomplish, for, as he is not yet 44 years of age, it is pleasant to think that his life is but just entering upon its best estate.

We hear so much about the "cattle kings" of Nevada, but why is it nothing is said of the "horse kings"? A man who owns a bunch of horses is as much a king as is the man who claims to be the owner of a herd of cattle. Let us have horse kings.—*Elko Independent*.

Southern California.

[NO. 7.—CONTINUED.]

San Diego County and City.

[Editorial Correspondence.]

Twenty years ago all Southern California was looked upon as a barren desert, fit only for stock ranges and of but little value for even that. Its wonderful capacity for fruit-growing and general agricultural value was hardly suspected. The chief reason of this lack of knowledge as to its true value was the restricted means of communication with other portions of the State. The supposed lack of water and slight rainfall was also considered an effectual bar against any extensive improvements. The only exceptions were a few isolated spots where natural water was available.

These few cases, however, gradually attracted the attention of tourists and others, who found the climate of surpassing excellence and so reported it to the world. This circumstance soon began to attract visitors, mostly invalids, who fully confirmed these reports. In time many of these visitors became permanent residents, and such as were possessed of means and energy began to seek out new fields of enterprise, by introducing artificial irrigation into previously desert localities. Success attended such efforts and a new order of things was gradually developed. Land was abundant and cheap; horticultural and agricultural experiments were a universal success, and the cultivation of the soil soon took the place of the less profitable and less progressive business of cattle and sheep raising.

The well known and observing visitor, Chas. Nordhoff, was the first person of wide reputation who fully realized and confidently predicted the future of Southern California and gave it a world-wide reputation. His writings were published in 1872-73; but it was not until the extension of the Southern Pacific railroad into and through Los Angeles and San Bernardino counties that the really active growth of those counties commenced. The building of this road was soon followed by that of the California Southern from Colton to San Diego, by means of which the "boom" was soon extended to the latter place. The next thing after the advent of the railroad was a united effort to secure an abundant

Water Supply for San Diego

And vicinity. This effort has been most successful and the city now has several water companies which work in harmony. The first is known as the San Diego Water Company, whose chief object is to supply the city. Another has been more recently organized with the special purpose of supplying the Coronado Beach tract, across the harbor, where a new city is growing up, to which we shall refer more fully hereafter. Both of these companies pump water from the San Diego river, some four or five miles above the city. As these two companies will furnish but a limited supply and that chiefly for domestic purposes, another and larger company has been organized which is known as the San Diego Flume Company, who are taking the water from the San Diego river at a point in the mountains some 30 miles above the city, where the supply is abundant all the year round. It will be brought down in a wooden flume six feet wide by four feet deep. At the point where the dam is being built the supply varies from 1500 to 2000 inches in July and August. This flow will be supplemented by several feeders below. This water is designed especially for irrigating purposes, and will furnish water whenever needed from the Cajon valley to the city. As the demand for water increases, extensive reservoirs will be made in the mountains, after the manner of the well-known Bear river reservoir above San Bernardino. The cost of this work is estimated at from \$400,000 to \$500,000. Another very extensive and important water enterprise is in a very forward stage of completion, and intended for supplying water for irrigation and domestic use along the Sweet Water valley and throughout National City and the region of back country adjoining that locality. Of this we shall speak more fully next week. Other enterprises of a similar character will, no doubt, be undertaken in the more northern portions of the county as soon as a sufficient number of new-comers shall locate there to make such investments profitable.

Until the isolation of San Diego was broken up by the advent of the Southern California, which has now become the San Diego terminus of the Atchison & Topeka, but little was known abroad of the county beyond San Diego City and the mines in the distant interior. The coast line gave but little indication of what was beyond it, and to the few who ventured inland, the country, with the exception of two or three little mountain valleys, seemed almost worthless except for grazing and bee pasturage. The numerous streams which found their way from the high mountain ranges, which always kept up their flow from the winter rains and accumulated snow, sank from sight as they approached the lowlands, and their waters found their way to the sea in underground channels of loose granite sand. This fact led to the erroneous conclusion that the county had no means of irrigation—a conviction which was much strengthened by the further fact that much of the arable land of the county was broken into hills and valleys and rolling table-lands. But

the engineering and experience of other parts of the State during the last few years has shown that all such difficulties can be readily overcome. Moreover, experience has shown that the peculiarities of the climate and soil of San Diego county do not require anything like as much water to produce a given crop as does the soil of Los Angeles and San Bernardino counties. Fruit-growers there claim, and consumers acknowledge, that fruit raised with a very small supply of water is much better than that produced on the same land by the use of as much water as is required 100 miles to the north. Good fruit lands in San Diego can be had at a much lower price than similar lands in the two adjoining counties to the north—a fact which will attract many in that direction.

Increase in Population and Wealth.

Notwithstanding the disadvantages, in many points of view, under which San Diego has been placed, it has nevertheless more than kept even pace in increase of population and wealth with the six neighboring counties to the north of it. The census reports of 1880 and 1885 show that San Diego has made a larger proportionate gain in both population and wealth than either Los Angeles, San Bernardino, San Luis Obispo, Santa Barbara or Ventura, during the half-decade between those dates; and that, too, while the more northern counties began with a larger capital in population, and were the earliest to lay aside the business of stock raising for cultivation of the soil and the building up of business centers.

Topography of the County.

The total area of the county is about 9,500,000 acres, of which but little over 750,000 is included in Mexican and Spanish grants, leaving all the balance as public lands. It is an interesting fact to know that nearly all the large grants have been or are being rapidly divided into small holdings, which are being promptly taken up by new-comers. It is estimated that there are about 3,000,000 acres of good arable land in the county, the chief part of which is still unsettled, although the most desirable localities are already occupied.

Two mountain ranges run through the county from northwest to southeast, dividing it into three elongated districts, each possessing marked peculiarities of soil and climate. The section between the mountains and sea is about 80 or 90 miles in length, ranging from 25 to 40 in breadth. It consists chiefly of rolling hills and mesa land, is exceedingly fertile, and nearly all of it will eventually come under a high state of cultivation through artificial irrigation. This region is covered by six principal rivers, and several smaller streams either pass through it or flow from it. Of course the most of these streams are either quite or nearly dry in the summer-time; but, as already said, their waters may be taken up at points just above the foothills, and whatever escapes or finds its way into those streams below these points may be largely utilized by being pumped up from wells near the river-banks, at any place along their course from the foothills to the sea. All this region is capable of the highest degree of cultivation and now comprises fully three-fourths of all the population of the county.

The Middle Division of the County.

Lying between the two ranges of mountains alluded to, comprises numerous broad and fertile valleys, which furnish an abundance of good pasturage all the year round. These valleys are now being rapidly taken up and improved as arable lands, and in some of them thriving towns are growing up, with every indication of a large future increase and permanence. The rapidity with which the series of valleys along which the California Southern railroad finds its way is being filled up is quite a marvel. When that road was constructed, some four or five years ago, the most of these valleys had every appearance of a barren desert, forever given over to cattle and sheep. But with the advent of the road has also come the settler with his plow and cultivator. When the writer first passed through these valleys, just after the road was completed, scarce a house was to be seen, or a cultivated field or garden. While passing over the same road a few weeks since, towns and villages were passed every few miles. Fine hotels have been built for the accommodation of travelers and residents, vineyards and orchards are seen all along the route through the valleys, until the locomotive enters the canyon through which it winds its mountain way to the coast. Everything betokens the enterprise and thrift born of the railway and capital and energy of the new, industrious comers. The natural resources of this portion of the county are scarcely inferior to that which skirts the seaboard, and it is capable of supporting a very large population. The cereals and all the fruits of temperate regions grow here to perfection. But little has as yet been done with citrus fruits here, but experiments are in progress which will most undoubtedly prove that this region has large capabilities in that direction also. The apple, cherry and plum are especially at home in this section of the county.

The Third Division

Of the county, or, as it has sometimes been termed, "the desert division," lies east of the second or San Jacinto range of mountains. The Southern Pacific railroad passes through this section, within which is the famous desert valley, about 75 miles long by 20 to 30 broad, where the locomotive pushes its way along the central line of the valley, at one point reach-

ing, it is said, a depression of 500 feet below the level of the sea! At the head of this remarkable depression the peak of San Jacinto rises, precipitously, to an elevation of 9000 feet above the sea—overlooking, with its snow-crowned summit, all the great valleys above alluded to, as well as those of San Jacinto, San Bernardino, and the upper portion of the San Gabriel valley.

San Diego Bay and Harbor

Has been known to the world for centuries, and San Diego City for the last hundred years. It is the only harbor worth the name in California south of San Francisco, and is third in the possibilities of its extent and commerce in the Union. For safety and ease of entry it may be classed as the first. It is now connected with the great system of continental railroads, and many mighty hopes have been ventured in regard to its future destiny and that of the great city which is rapidly growing up all along the 12 miles of its eastern front. It requires no prophetic eye to predict that the time will soon come when that city and harbor will become a place of great commercial importance. Whether it will seriously affect the growth of San Francisco in regard to its Asiatic and overland commerce, time alone must determine. That it will secure a portion of such traffic is already a foregone conclusion. Negotiations are, at this very hour of writing, in progress to make San Diego the terminus of a line of steamers across the Pacific. If such an enterprise is not accomplished at this date, there can be no doubt but that time will insure it at an early day. San Diego has been for many years under the influence of an apparent nap; but all that time there have been a few hopeful, active and energetic citizens, led on and encouraged by the indefatigable brothers Kimball of National City, who have never given up hope, have never ceased for a moment in their determined purpose to build up a great city on this magnificent harbor. The fruition of their hopes has now been realized, and the work of building is now going on with constantly accelerated energy. Local roads are being built and projected in every direction to develop the immediate surroundings of the growing city. Wharves are being built to accommodate the rapidly increasing shipping. Little centers of business are being constantly started all along the water-front, all of which are destined at an early day to be merged into one grand emporium of commercial business, which will take its place among the great cities of the world and pass into history to continue and increase as long as railroads traverse the earth or sail and steam find their trackless paths across seas and oceans. W. B. E.

Frightful Waste.

Consumption carries off its thousands of victims every year. Yes, thousands of human lives are being wasted that might be saved, for the fact is now established that consumption, in its early stages, is curable. Dr. Pierce's "Golden Medical Discovery" will, if used in time, effect a permanent cure. It has no equal as a remedy for bronchitis, coughs and colds. Its efficacy has been proved in thousands of cases. All druggists.

"Be wise to day; 'tis madness to defer." Don't neglect your cough. If you do your fate may be that of the countless thousands who have done likewise, and who to day fill consumptives' graves. Night-sweats, spitting of blood, weak lungs, and consumption itself, if taken in time, can be cured by the use of Dr. Pierce's "Golden Medical Discovery." This wonderful preparation has no equal as a remedy for lung and throat diseases. All druggists.

The huge, drastic, griping, sickening pills are fast being superseded by Dr. Pierce's "Purgative Pellets."

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and, as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription rate, \$3 a year. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

"DON'T SEE HOW ANY ONE CAN DO WITHOUT IT."—We see that our friend Edmund Wright has secured the agency for the PACIFIC RURAL PRESS—emphatically the farmers' and horticulturists' organ on this coast. At this time of general awakening to the importance and advantages of fruit culture, we should think Mr. Wright would find no difficulty in obtaining hosts of new subscribers to that excellent paper—for we don't see how any one engaged in that line can afford to do without it.—Red Bluff Sentinel, July 2, 1887.

Don't Fail to Write.

Should this paper be received by any subscriber who does not want it, or beyond the time he intends to pay for it, let him not fail to write us direct to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to any one who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

INVINCIBLE!

Carbolic Smoke Ball

(TRADE MARK.)

FREE TESTS!



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NEVER FAILS TO CURE

Catarrh, Asthma, Diphtheria, Croup, Neuralgia, Hay Fever, Bronchitis, Cold in the Head, Sore Throat, Etc.

SHOULD BE IN EVERY HOUSEHOLD.
A CHILD CAN USE IT.

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Genuine Home Testimonials can be seen at our office.

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CARBOLIC SMOKE BALL CO.,

Rooms 7, 8, 9, 10, No. 652 Market St., Cor. Kearny (opp. Lotta Fountain), San Francisco, Cal.
Separate Parlor for Ladies, who will be waited upon by skilled and polite lady attendants.

THOROUGHbred ESSEX SWINE.

Boars and Sows not akin, full grown, and small Pigs for sale; imported stock.

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We buy for cash and sell for cash. The old credit system has been abandoned. We will not be undersold. We guarantee all goods as represented. We will give good value for your money. Our motto is quick sales and small profits and speedy returns.

Farmers and consumers will find it to their interest to call and see us and be convinced.

T. A. LAUDER, Manager.

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The ALLEGRETTI GREEN FRUIT TREATMENT and STORAGE SYSTEM COMPANY announce that they are now ready to store and treat all kinds of Green Fruit, Vegetables, and other Perishable Articles, on Storage System, by the week, month, or for shipment East.

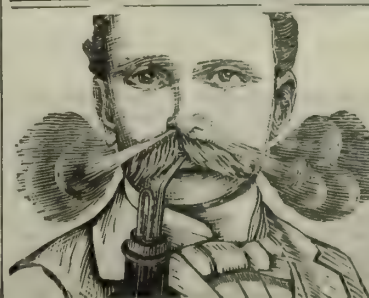
This system is well known among fruit-growers, its power of preserving fruits, etc., in a fresh state, having been fully demonstrated with most satisfactory results.

For particulars, address

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MEDICATED INHALATIONS.

The Only Successful Home Treatment and a Positive Cure for

Catarrh, Asthma, Bronchitis, Deafness,

And all diseases of the head, throat and lungs. One test, one look will convince intelligent people that this is a rational and scientific treatment. It is the only advertised remedy endorsed by the medical profession. A hundred physicians and thousands of citizens are our references. Established in 1882. Children enjoy it. A household treasure. Lasts a lifetime. Cost, with medicine and prescriptions for duplicating same, only \$2.50; can be sent by express. Consultation and test free. Send for Circular. Office, 229 Kearny Street, San Francisco.

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Capital \$1,000,000 00
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The WHITE IS KING

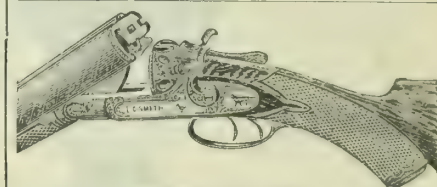
FOR FAMILY USE,

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IN ITS GREAT RANGE OF WORK IT STANDS WITHOUT AN EQUAL.

THE LIGHTEST RUNNING,
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Five gun work done by first-class smiths.

GEO. W. SHREVE,
525 Kearny Street, San Francisco, Cal.

Late Fashions.

Ladies' Oostume.

The fashionable combination of velvet and cotton dress goods is here achieved in the costume, the cotton fabrics being plain and embroidered batiste. The skirt, being shaped in the popular four-gored style, hangs gracefully and may be worn with or without a bustle and steels. On either side of the gores are two flat

the edge of the skirt and are smoothly fitted at the belt. The back drapery is made *bouffant* over the bustle by two deep, downward-turning plaits in each side edge near the belt, and falls straight below even with the edge of the skirt.

A double-pointed vest of the embroidered goods is visible between the cutaway edges of the fronts, which flare toward the bottom and do not meet at the throat. Long lapels of vel-



Fig. 2-LADIES' HAT.



Fig. 3-CHILD'S CAP.



Fig. 1-LADIES' COSTUME.

panels that are finished with wide hems down their front edges and sewed to the skirt along the back of the hems, the panels farthest back overlapping the others the width of the hems. As the hems are sewed visibly, the effect of plaits is realized. The front gore is of the embroidered goods and is revealed between the front panels, which are rendered decorative by a row of embroidered batiste edging applied to turn forward from beneath the hem of the overlapping panels. The panels fall even with

vet turn over the front edges of the fronts all the way down and are broad above the bust and taper narrowly below. Three long button-holes simulated with fine cord decorate the top of the lapels, and, extending slightly above them on the basque, are terminated under three pretty buttons. The basque is adjusted by well-curved darts and seams, and the vest is sewed underneath to the fronts along the first bust darts and flatly above. The vest is closed invisibly with hooks and loops, which are ar-

ranged to alternate on each side. The side seams terminate below the waist-line, but all the other seams are continued in their curves to the edge, and to the lower edge of the front at either side is joined an ornament of velvet that is continued across the side nearly to the side-seams, turned up on the outside and caught like the top of the lapels to the basque with three simulated button-holes of fine cord and three buttons. The ornaments are narrow at their tops and are tacked to place at their upper corners. The standing collar is of velvet, and a bar-pin is fastened at its ends. A linen collar is also worn. The coat-sleeves are trimmed at their wrists with deep, round cuffs of velvet, over which at the bottom turn shallow cuffs of the silk that flare at the back of the wrists. A button on the shallow cuffs and a simulated button-hole of cord extending from it upon the velvet cuff complete the decoration in harmony with the other parts of the basque.

Combinations of all kinds may be developed in a costume of this style, velvet being stylish with all goods, whether of cotton, silk or wool texture. Embroidered and plain chambrays, pongees, batiste, etc., also checked, plaided and striped fabrics combined with plain materials, make up well in this way.

The rough straw hat is trimmed with soft silk and ribbon.

Ladies' Hat.

This hat—a shape familiar and fashionable, because it is comfortable and suited to the street—is of light-brown straw. Around the crown [at its base is draped a Roman scarf, showing many faint colors in contrast. In front, and extending far over at each side, are yellow coreopsis with brown hearts, sprays of foliage and grass coming out from their midst. The effect is very artistic, and it is commended to the amateur milliner, because of the ease with which the trimming may be arranged. Mignonette, roses, violets or pansies may be substituted for the coreopsis, but certainly nothing will be more effective.

Child's Cap.

The puffed portion of this dainty little cap is made of fine, plain muslin, and its oval crown is of embroidered muslin. They are both arranged on a lining of thin muslin, which is cut enough smaller to produce the desired effect and comfortable fit. The edge is defined and the small face framed by three tiny ruffles of Valenciennes lace arranged one above the other. The broad ribbon ties are of pale blue and are looped under the chin; in the back is a prim-looking little bow which gives the little one a very picturesque appearance.

DRESS REFORM.



Equipoise Waste.

A Corset and a Cover Combined.

Union Underflannel. Ready Made and Made to Order. The Perfect Corder Corset, all colors, for ladies and children; button or steel front. Skirt and hose supporters for ladies and misses. All styles of bustles. Corsets ready-made and made to order. Send for Illustrated Catalogue and price list.

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HALL'S SARSAPARILLA

Cures all Diseases originating from a disordered state of the BLOOD or LIVER. Rheumatism, Neuralgia, Boils, Blotches, Pimples, Scrofula, Tumors, Salt Rheum and Mercurial Pains readily yield to its purifying properties. It leaves the Blood pure the Liver and Kidneys healthy and the Complexion bright and clear.

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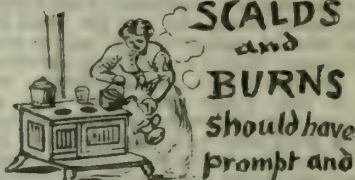
Of Every Description, such as BOOKS, PAMPHLETS, CARDS, BILLHEADS, CIRCULARS, &c., OR

BLANK BOOKS,

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Estimates Furnished when Desired.



SCALDS and BURNS

Should have prompt and proper care or they may prove very dangerous and perhaps FATAL.

ACCIDENTS

are constantly happening. A kick of a horse or cow may cause

a bad bruise; the slip of an axe or knife may result in a Serious Cut.

Any of these things may happen to one of YOUR family at any moment.

Have you a bottle of PERRY DAVIS' PAIN KILLER ready for use in such cases? It has no equal for the cure of Scalds, burns, cuts, swellings, bruises, sprains, sores, insect bites &c.—All Druggists sell it. PERRY DAVIS & SON, PROVIDENCE, R.I.

OSTRICHES.

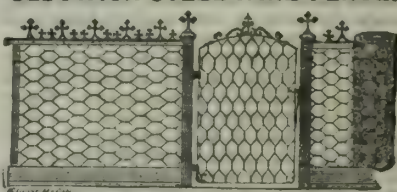
Having a few more of these valuable birds than I have room for on my farm, I will sell, at a very moderate price, three or four pairs. They were all chosen by me in Africa with great care, and are of the best stock.

These birds require little care and will do well in almost any part of California; two acres of ordinary grazing land will keep one pair through the year. The feathers—a seven-monthly crop—yield a large return on the outlay, and the number of chicks obtained from a pair averages from five to twenty a year.

For further particulars, address

E. CAWSTON, Washington Garden Ostrich Farm, Los Angeles, Cal.

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The best Farm, Garden, Poultry Yard, Lawn, School Lot, Park and Cemetery Fences and Gates. Perfect Automatic Gate. Cheapest and Neatest Iron Fences. Iron and wire Summer Houses, Lawn Furniture, and other wire work. Best Wire Stretcher and Trier. Ask dealers in hardware, or address, SEDGWICK BROS., RICHMOND, IND.

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Large and small tracts of land for sale on easy terms. Correspondence solicited.

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DIVIDEND NOTICE.

The German Savings and Loan Society.

For the half year ending June 30, 1887, the Board of Directors of the German Savings and Loan Society has declared a dividend at the rate of four and thirty-two one-hundredths (4 32-100) per cent per annum on term deposits and three and sixty one-hundredths (3 60-100) per cent per annum on ordinary deposits, payable on and after the 1st day of July, 1887. By order.

GEO. LETTE, Secretary.

Fruit Rates for the East.

The Southern Pacific issued July 14th a circular giving full information relative to the special fast-train service, as well as the rates, etc., that obtain for cars sent forward by passenger trains. The following table shows the rates in full, those to New York and Boston not having before been made public:

From points on the Pacific system of the Southern Pacific.	B Freight Pass.	Train.
Omaha, Council Bluffs, Kansas City, Houston and San Antonio, Chicago, St. Louis, New Orleans, St. Paul and Minneapolis.....	\$1 10	\$2 10
New York (Jersey City delivery) and Buffalo.....	1 25	2 50
Boston, Mass.....	3 12½	3 22½

Conditions.

The rates quoted are, as usual, per 100 pounds, and to intermediate points, or points common with those named above, rates by freight train will be the same. The passenger rates will apply only to the points named, or to points intermediate on the line, by which the fruit is carried. The ten-car train rates are as follows: To Omaha, Council Bluffs or Kansas City, \$1275 per train; to Chicago, St. Louis or points common therewith, St. Paul and Minneapolis, \$1500 per train. These charges are for trains of ten cars; if more than ten are offered, each additional car is charged extra as follows: To Omaha and common points \$85; Chicago and common points, \$100. A few other points mentioned in the circular are also of considerable interest to shippers—one of these is that when special trains to Missouri river contain five cars or less destined to Chicago or other through point, each car so destined will be charged regular freight-train rates if run east of the Missouri river by freight train, or 18½ cents per 100 pounds additional if by passenger train. Another rate is that made on trains of ten cars for New York, on which a rate of \$2 per 100 pounds is given, with the additional liberty of dropping five carsloads at Chicago.

Where Rates Do Not Apply.

The rates named, however, it will disappoint the Capay valley farmers to learn, do not apply from points on the Vaca Valley & Clear Lake railroad, the Sacramento & Placerville railroad and the northern division of the Southern Pacific. The carriers will not run in special fast-train cars loaded in excess of 22,000 pounds. The special-train service is open to any corporation, person, firm or firms acting in concert, who, on a given day at Sacramento or other shipping point, engage the requisite number of cars. The expedited service, however, will be treated as a unit, and no cars will be taken into a train without consent of the party or parties acting together who have engaged and made up said train. Fruit, by passenger train, can only be taken when carriers furnish cars properly equipped.

The Board of Forestry.

An informal session of the State Board of Forestry was held Tuesday, Commissioners Bettner and Kinney being present. The following resolution was adopted:

WHEREAS, The annual cutting, waste and destruction by fires of the forests of the United States is enormous, and the renewal of tree growths practically nothing; and whereas, the Government land laws are totally inapplicable to forest lands, giving neither protection to the public domain nor to the legitimate lumber industry, these laws are naturally evaded, and entries under them have been fraught with fraud and perjury. To carry on the lumber industry at all, fraud is nearly a necessity. Besides these defects the land system in relation to forests makes no provision for a continuous supply of timber, nor does it give any attention to the necessity of preserving a due proportion of forest, for the maintenance of springs and streams and climatic conditions favorable to agricultural labor.

Whereas, The State Governments are even more remiss in their treatment of the State school lands (Secs. 16 and 36) in every township, the result of which neglect is that fires devastate these lands, and timber thieves cut and carry off the lumber and wood without let or hindrance, to the loss of the State school funds; therefore, be it

Resolved, That the State Board of Forestry, through its representative at the next National Forestry Congress, will impress upon that body the importance of urging upon the National and State Governments the great necessity for withdrawing Government timber lands and State school timber lands from sale and sale, and the establishment of a system for entry of timber alone under provisions insuring the protection of young growth and the renewal of the forests as fast as cut.

It was also decided to receive proposals for the use of tracts of land of the south, central and north sections of the State for experimental tree planting. These tracts are to be placed under the absolute control of the board for a certain term of years, and proposals will be received for the laying out of these tracts as parks to be used for the recreation of the public.

ROGUE RIVER "COURIER."—The last issue of this paper has the salutatory of A. A. Allworth, the new editor and publisher. We have known Mr. Allworth for a number of years as a good writer and full of skill and energy in journalistic work. He has gone to a very important field, and we have no doubt his labors will be very effective for the development of the country and acceptable to the community.

DENVER is to have a wool-scouring mill.

Fairs to Come.

Bay Dist. Assoc., S. F., Aug. 6 to 13.
Santa Clara Valley Agric. Soc., San Jose, Aug. 15 to 20.
Sonoma Co. Agric. Park Assoc., Santa Rosa, Aug. 22 to 27.
Fourth Dist.—Sonoma and Marin—Petaluma, Aug. 29 to Sept. 3.
Eighth Dist.—El Dorado—Placerville, Aug. 30 to Sept. 2.
Thirteenth Dist.—Sacramento, Yolo, Yuba and Sutter—Marysville, Aug. 30 to Sept. 2.
Mechanics' Institute, San Francisco, Sept. 1 to Oct. 8.
First Dist.—Alameda, Contra Costa and S. F., Sept. 5 to 10.
Third Dist.—Butte, Colusa and Tehama—Chico, Sept. 6 to 10.
Seventeenth Dist.—Nevada and Placer—Grass Valley, Sept. 6 to 10.
California State, Sacramento, Sept. 12 to 24.
Oregon State, Salem, Sept. 12 to 17.
Los Angeles Co. Pomological—Los Angeles, Sept. 12 to 17.
Shasta Co.—Redding, Sept. 14 to 16.
Ninth Dist.—Humboldt and Del Norte—Rohnerville, Sept. 20 to 25.
Nevada State, Reno, Sept. 21 to Oct. 1.
Second Dist.—San Joaquin, Stanislaus, Merced and Tuolumne—Stockton, Sept. 26 to Oct. 1.
Nineteenth Dist., S. Barbara, Sept. 27 to 30.
Tenth Dist.—Siskiyou, Trinity and Shasta—Yreka, Sept. 28 to Oct. 1.
Santa Clara and San Mateo—San Jose, Oct. 3 to 10.
Sixth Dist.—Los Angeles, S. Bernardino and Ventura—Los Angeles, Oct. 3 to 8.
Eleventh Dist.—Plumas, Lassen, Modoc and Sierra—Susanville, Oct. 3 to 8.
Seventh Dist.—Monterey and S. Benito—Salinas, Oct. 4 to 8.
Portland Mechanics' Fair, Oct. 6 to 22.
North Pacific Domestic and Fat-Stock Assoc., Portland, Or., Oct. 9 to 17.
Fifteenth Dist.—Tulare and Kern—Visalia, Oct. 10 to 15.
Twelfth Dist.—Lake and Mendocino—Ukiah, Oct. 11 to 15.

Cold Storage for Fruits.

Our readers have heard much of the Allegretti process for fruit storage. The application of it is making progress. At San Jose, as has been stated, a small establishment has been built for Mr. Leib. Results of trials of it with different fruits, according to the reports in the *Santa Clara Valley*, have been quite satisfactory, and the building of a large establishment is being agitated. In another column may be found a notice from the Allegretti Storage Company showing that the West Berkeley establishment is now ready to receive fruit on storage. We hope fruit-growers generally will avail themselves of the opportunity to test the process practically and thus get data for larger operations in the future if the results warrant them.

A DEBRIS SUIT.—Mr. George W. Hancock, the well-known agriculturist of Sacramento, has brought suit against H. S. Byam, a hydraulic miner, for injury done to his fine farm on the Cosumnes river by wash and deposit of debris, the result of the mining operations of the defendant. Mr. Hancock claims that before hydraulic mining began the river ran between well-defined banks, the water was good for domestic use, but now his meadow lands have been plowed by torrents, his alfalfa ruined, young orchards defaced and trees killed, he has been put to the expense of leveeing, and the water is rendered offensive. Mr. Hancock's complaint seems to fall within the principles laid down as prevailing, and which would render the defendant liable for the injury.

THE "RURAL" ABROAD.—The RURAL PRESS goes to the uttermost parts of the earth, for interest in Californian agricultural practices and progress extends even to such limits, and the RURAL is sought for its great amount of practical information in this line. One of our subscribers on the other side of the globe, sending money for renewing subscription, writes: "We are pleased to state that the papers reach us with the greatest regularity." It will be for the benefit of the RURAL and of the State to have our circulation extended as far as possible abroad, and we shall be obliged to any friend who will commend our journal to foreign correspondents who may be seeking information about California agriculture.

ONE of our readers and correspondents writes: "I hope your contributor on astronomy will continue his good work. A popular treatment of astronomy, unburdened with the misleading and unnatural figures of lions, bears, centaurs, and virgins, is certainly needed, and must interest not only the young, but some old ones like myself."

A LARGE number of sheep died out of the flock of 3000 that has been feeding on Mount Davidson, from the effects of some herb, probably wild parsnip. The carcasses attracted half a dozen buzzards, who may be seen daily hovering over the mountain. Many have mistaken them for eagles.—*Report.*

C. P. BAILEY, the California Angora goat raiser, has sheared 23,000 pounds of mohair this year. A large band of his goats range in the hills south of Lewis, Lander county, Nevada.—*Elko Free Press.*

IMPORTATIONS from Mexico in the Paso del Norte district, during the last fiscal year, show a great falling off, especially in wool and cattle.

PACIFIC COAST WEATHER FOR THE WEEK.

(Published for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.)

DATE.	Portland.				Red Bluff.				Sacramento.				S.Francisco.				Los Angeles.				San Diego.			
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.
July 14-20.																								
Thursday.....	.00	60	NW	Cy.	.00	82	N	Cl.	.00	74	NW	Cl.	.00	61	W	Cl.	.00	76	SW	Cl.	.00	76	SW	Cy.
Friday.....	.00	64	NW	Cl.	.00	86	N	Cl.	.00	75	W	Cl.	.00	61	W	Cl.	.00	70	SW	Cy.	.00	72	SW	Cy.
Saturday.....	.00	74	NW	Cl.	.00	86	SE	Cl.	.00	74	SW	Cl.	.00	58	W	Cl.	.00	76	SW	Fr.	.00	68	W	Cy.
Sunday.....	.00	72	NW	Cl.	.00	88	S	Cl.	.00	74	SW	Cl.	.00	57	W	Cy.	.00	76	SW	Cl.	.00	66	W	Cy.
Monday.....	.00	78	NW	Cl.	.00	82	S	Fr.	.00	72	S	Cl.	.00	60	SW	Cl.	.00	80	W	Cl.	.00	68	NW	Cl.
Tuesday.....	.00	72	S	Sy.	.00	84	S	Cl.	.00	72	SW	Cl.	.00	58	W	Cy.	.00	80	SW	Cl.	.00	66	NW	Cl.
Wednesday.....	-	-	-	-	-	-	-	-	.00	78	SW	Cl.	.00	59	W	Cl.	.00	84	W	Cl.	.00	68	NW	Cl.
Total.....	.00				.00				.00				.00				.00				.00			

EXPLANATION.—Cl. for clear; Cy., cloudy; Fr., fair; Fy., foggy; — indicates too small to measure. Temperature Wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

List of U. S. Patents for Pacific Coast Inventors.

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From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 210 Market St., S. F.

FOR WEEK ENDING JULY 12, 1887.

366,291.—CORN AND CANE CUTTER—Jos. Al-
bertson, S. F.
366,444.—PILE COVERING—H. Anderson, S. F.
366,311.—FOLDING BED—B. F. Farrar, S. F.
366,312.—MATTRESS—B. F. Farrar, S. F.
366,320.—MINERS' CANDLESTICK—D. B. James,
S. F.
366,411.—WASHING MACHINE—H. Lawrence,
Salem, Oregon.
366,328.—METALLIC LATHING—D. P. N. Little,
S. F.
366,641.—PILLOW-SHAM HOLDER—R. X. Mc-
Arthur, Tacoma, W. T.
366,237.—FAUCET AND GAS VALVE—C. C. Mor-
ris, S. F.
366,343.—CARGO-DISCHARGING APPARATUS—
Sam'l Murray, S. F.
366,242.—TRAVELING THRASHER—J. Parnell,
Grayson, Cal.
366,253.—REGISTERING TAG—M. Raphael, Port-
land, Oregon.
366,434.—BUNG—O. Sowers, Santa Rosa, Cal.
366,355.—DRUM ATTACHMENT—W. H. Travis,
San Jose, Cal.
17,440.—BADGE DESIGN—Chas. Hadenfeldt,
S. F.
14,591.—TRADEMARK—Webster & Sargent,
Minturn, Cal.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

At Anderson Springs,

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Among the late arrivals were: Mr. Vincent O'Brien, Oakland; Mr. Thos. F. Connolly, Mr. D. E. Josephi, Mr. R. E. Houghton, San Francisco; Mr. J. P. Garlich, Oakland; Mr. C. M. Young, Guenoc; Mr. and Mrs. Cot-trell and family, Mr. Coburn, Lake county; Mr. and Mrs. Willis Whitmore, Mr. Garvin, Oakland; Mr. McKenzie, San Francisco; Mr. M. G. Meagher, Vallejo; Mrs. P. McCann and son, Portland; Mr. and Mrs. Henry Connolly and daughter, Vallejo; Mr. H. H. Garrett, Calistoga; James Quigley, New York; Miss Fannie Quigley, Mrs. F. Bollum, Mrs. Ghermins, San Francisco; Mr. George McCormick, Mr. and Mrs. Giddings, Tulare; Mrs. F. Bellum and daughter, San Francisco.

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SAN DIEGO COUNTY.—We are indebted to F. R. Wetmore & Co., real estate agents of San Diego, for an interesting budget of local papers and a pamphlet on the "Resources of the County," by Mr. Douglas Gunn of the Union.

We learn that Mr. G. G. Baker of this city and former secretary of Haines Bros., publishers of Chicago, has connected himself with the Japanese Tree Importing Co., and will continue to reside in this city.

THE STATE BOARD OF HORTICULTURE will remove, the 1st of August, to new quarters in the Hayward building, No. 220 Sutter street, S. F., where greater facilities will be afforded for the information of the public. The library is to receive large additions. On a bulletin-board will be displayed horticultural dispatches from all parts of the State, detailing the condition of crops, amount of shipments, etc., and arrangements have been made for daily telegrams from the California Fruit Union at Sacramento, and the Orange-growers' Protective Union of Southern California.

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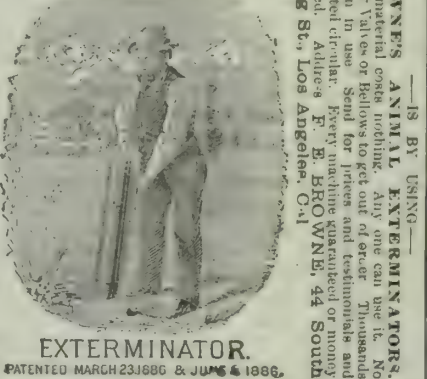
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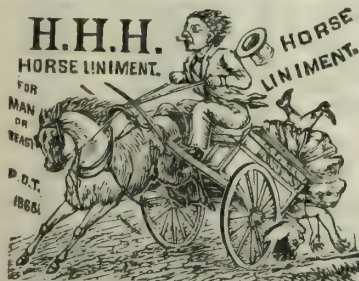
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\$2000 in Cash for County Exhibits.

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STATE FAIR

Of the varied products of their counties. The supervisors of each county are invited to make a liberal appropriation, sufficient to pay the expenses of getting together an Exhibition of County Products. Premiums received can be returned to the treasury of each county making the appropriation, so that their respective counties would be written up and advertised at a small expense by an exhibition of this character. The Railroad Company transports the same free of charge.

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APPLY FOR SPACE AT ONCE, as the Society is willing to devote the entire exposition building, if necessary, to displays of CALIFORNIA PRODUCTS. A NEW FEATURE has been added to the Premium List this year, in the shape of awards for a Sheep Display of Cereals. Forty Sheaves, not less than 10 inches in diameter, of 10 varieties of grain are called for. Not necessary to be grown by exhibitor. Notice is now given that samples may be gathered during harvest, and laid away for exhibition. Address the Secretary for Premium Lists and other information.

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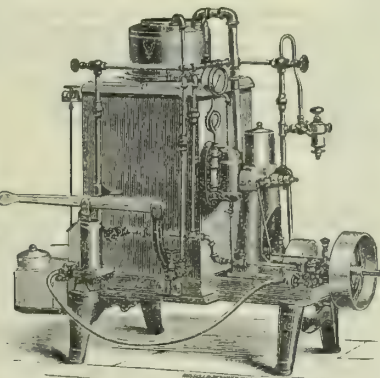
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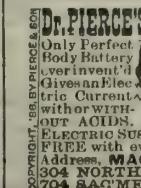
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Apples, bx com.	30 @	50	Figs, loose.....	3 @	4
do choice.....	50 @	1 25	Nectarines.....	8 @	10
Apricots, bx.....	25 @	55	do evaporated.	16 @	18
do Royal.....	35 @	50	Peaches.....	— @	—
Bananas, bunch.	2 00 @	3 25	do pared.....	— @	—
Blackberries, ch.	2 50 @	3 50	do evaporated.	— @	—
Cantaloupes, cr.	4 00 @	5 00	Pears, aliced.....	5 @	5
Cherries whit bx	— @	—	do qrted.....	8 @	10
do black bx.....	— @	—	do evaporated	8 @	10
do Royal Ann....	— @	—	Plums, pitted....	9 @	10
Cherry plums....	30 @	50	do unpitted.....	3 @	—
Crabapples.....	50 @	—	Prunes.....	6 @	10
Cranberries.....	10 00 @	12 50	do French.....	8 @	12 1/2
Currants ch.....	6 00 @	7 50	Zante Currants..	8 @	—
Gooseberries lb..	2 1/2 @	7 1/2	RAISINS.		
Figs, black bx....	50 @	75	Dehesa Club, fcy	2 40 @	2 50
do white bx....	40 @	60	Imperial Cabin-	— @	—
Grapes.....	25 @	1 00	et, fancy.....	1 75 @	—
do Rose Peru....	— @	—	Crown London	— @	—
do Muscat.....	— @	—	Layers, fcy....	1 50 @	—
do Tokays.....	— @	—	do Loose Mus-	— @	—
Isabel.....	— @	—	catels, fancy	1 40 @	—
Wine, Zinfandel	— @	—	do Loose Mus-	— @	—
do Mission.....	— @	—	catels.....	1 35 @	—
Limes, Mex.....	11 00 @	—	Cal. Valencias..	1 25 @	—
do Cal. box....	— @	—	do Layers.....	1 25 @	—
Lemons, Cal., bx	2 00 @	3 50	do Sultanas....	1 25 @	—
do Sicily, box..	6 00 @	—	do Fractions come	25, 50 and 75	—
do Australian.	— @	—	cents higher for halves, quar-	—	—
Nectarines box..	50 @	75	ters and eighths.	—	—
Oranges, Com bx	— @	—	VEGETABLES.		
do Choice.....	2 00 @	2 50	Artichokes, doz.	— @	—
do Navel.....	— @	—	Asparagus @ bx.	— @	—
do Panama.....	— @	—	do ext'a choice	— @	—
Peaches, bx.....	30 @	45	Okra, dry, lb..	15 @	20
do back.....	— @	—	do green lb....	5 @	10
Oranford, bx....	50 @	75	Parasips, chl... 1 50 @	—	—
do back.....	— @	—	Peppers, dry lb.	10 @	—
do choice.....	— @	—	do green, box	25 @	50
Pears bx.....	30 @	75	Pumpkins prton	— @	—
do choice.....	— @	—	Squash, Marrow	— @	—
do Bartlett, bx	70 @	1 60	fat, ton.....	— @	—
Persimmons.....	— @	—	do Summer bx	40 @	65
Jap, bx.....	— @	—	String beans lb.	23 @	4
Pineapples, doz.	4 00 @	5 00	Tomatoes box..	50 @	75
Plums box.....	— @	—	do choice.....	75 @	1 00
Pomegranates, b	— @	—	Turnips chl....	25 @	60
Prunes bx.....	— @	—	Beets, sk.....	75 @	—
Quinces bx.....	— @	—	Cabbage, 100 lbs.	50 @	—
Raspberries ch..	4 00 @	7 00	Jarrots, sk....	35 @	—
Strawberries ch.	3 00 @	7 00	Eggplant, @ bx.	35 @	60
Watermelons 100	— @	—	Garls, lb.....	15 @	3
DRIED FRUIT					
Apples, aliced, lb	— @	—	Green Corn, cr.	50 @	75
do evaporated..	12 1/2 @	13 1/2	do sweet cr....	1 00 @	1 50
do quartered...	13 @	14	do large box..	— @	—
Apricots.....	6 @	8 1/2	Green Peas, lb..	1 @	2
do evaporated..	11 1/2 @	14	Sweet Peas lb..	2 @	3 1/2
Blackberries....	13 @	13 1/2	Lettuce, doz....	10 @	—
Citron.....	25 @	30	Lima Beans lb..	— @	—
Dates.....	8 @	16	W. Beans lb....	8 @	20
Figs, pressed..	5 @	6	Rhubarb bx....	— @	—

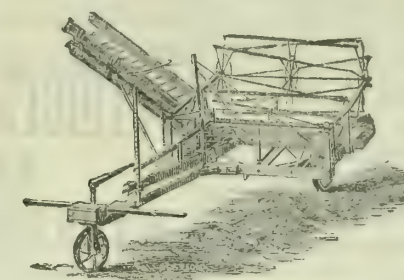


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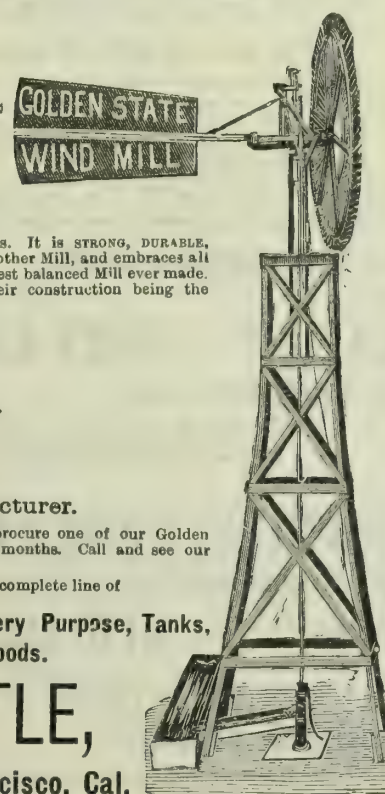
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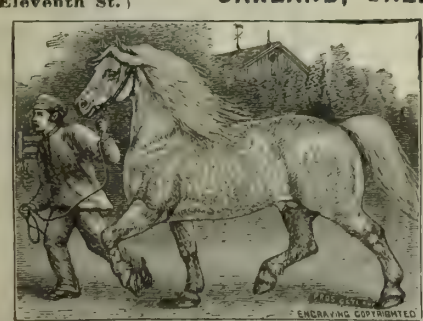
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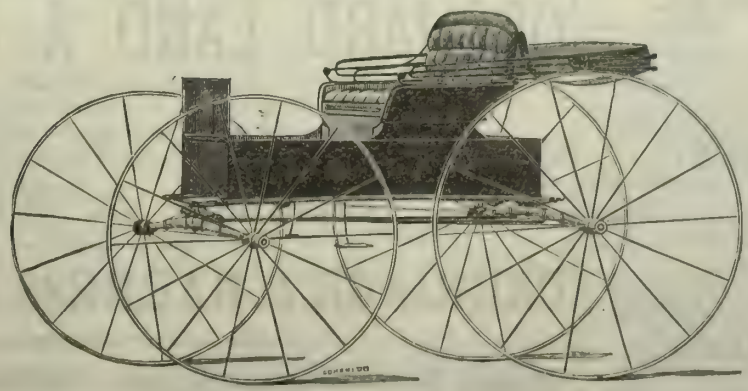
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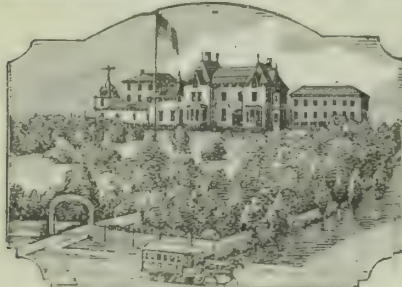
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Farmers and Viticulturists, Attention!

FERTILIZE! FERTILIZE!

NITROGENOUS SUPERPHOSPHATE.

UNIVERSITY OF CALIFORNIA, Nov. 3, 1886.

Dr. J. Kobbie—Dear Sir: I have analyzed your sample of "Nitrogenous Superphosphate," with the following result:

Soluble Phosphoric Acid	12.90 per cent
Inverted Phosphoric Acid	.35 "
Insoluble Phosphoric Acid	2.83 "
Potash	2.23 "
Ammonia	1.87 "
Nitric Acid	2.95 "

The above amount of Nitric Acid is equal to 0.85 per cent Ammonia, therefore, total of Nitrogen calculated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vineyards, orchards, gardens, farms, and I recommend its use by the cultivators of the soil generally, in California. Yours truly,

DR. E. A. SCHNEIDER.

University of California, College of Agriculture.

BERKELEY, Nov. 20, 1886.

Dr. J. Kobbie, San Francisco—Dear Sir: I take pleasure in adding my testimony to that of Dr. Schneider as to the high quality of the "Nitrogenous Superphosphate" Fertilizer, analyzed by him at your request. It is a high-grade article, and as such returns the user a better money value than a low-grade

fertilizer. It is especially well adapted to use in California, on account of the predominance in it of Phosphoric Acid, which is generally in small supply in our soils. Yet it is desirable that "complete" fertilizers be used in our orchards and vineyards, and yours is of that character in furnishing Potash and Nitrogen as well. Very respectfully,

E. W. HILGARD.

The value of this Fertilizer consists in the large percentage it contains of Phosphoric Acid—the chief element of all plant food—in combination with the necessary quantities of Potash and Ammonia, and the ease and cheapness with which it can be applied.

In ordinary soils the following quantities will be found sufficient: For Wheat, Barley, Corn and Oats, 300 to 350 pounds per acre. For Grass, Sugar Beets and Vegetables, 250 to 300 pounds per acre. For Vines, Fruit Trees, from 1 pound to 1 pound each. For Flower Gardens, Lawns, House Plants, etc., a light top dressing, applied at any time, will be found very beneficial.

FOR SALE IN LOTS TO SUIT,

On board cars at Sobranto, Station of the O. P. R. R., 20 miles north of San Francisco, at \$30 per ton, by the MEXICAN PHOSPHATE & SULPHUR CO., H. DUTARD, President, room 7, Safe Deposit Building, or

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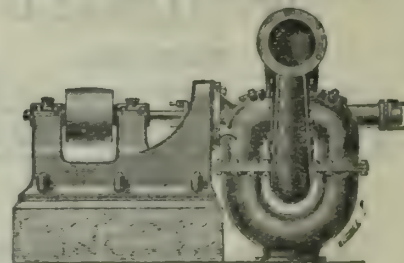
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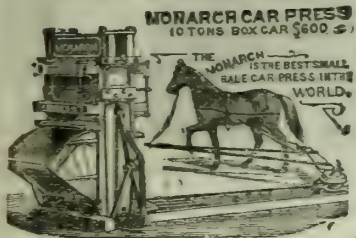
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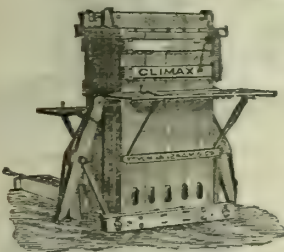
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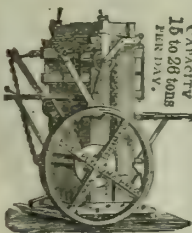
Any young man can earn more on an investment of \$500 in this press than can be earned in expending \$3000 for any other machine. We have a Monarch Press, which we sell for \$600, but have been used a very little and is just as good as new, which we will sell for \$450.

THE CLIMAX HAY PRESS, \$300.



Weight, 2200 lbs. A crew of three men—four can be used to advantage.

Five ropes are used on the bales. Capacity, 10 to 15 tons per day. The best press for the money in the world.



The Celebrated Petaluma Baling Press.

Weight, 2600 lbs. Price, \$350, delivered at the factory. Size of bale, 22x48 inches. Capacity, 20 tons per day. Weight of bale from 225 to 400 lbs. This remarkable machine still stands at the head of all vertical baling presses, and probably bales three-quarters of all the hay west of the Rocky Mountains.

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16x18 Mounted, weight, 3600 lbs. \$400 00
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All make bales of variable size.

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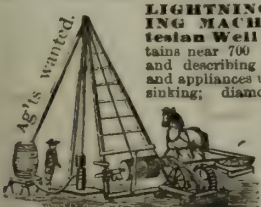
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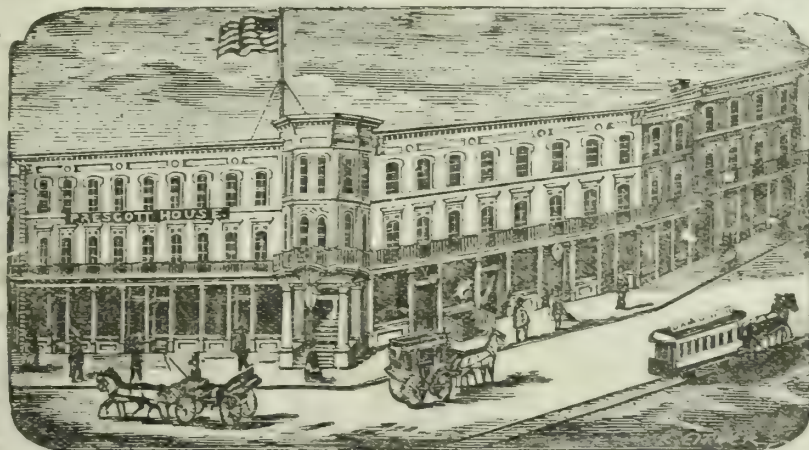
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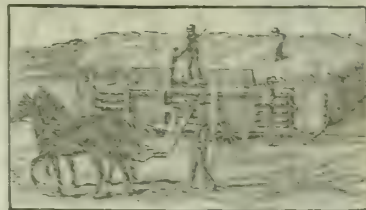
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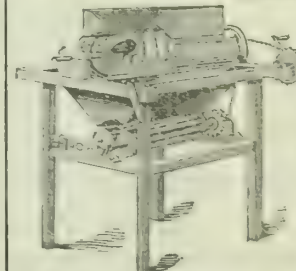
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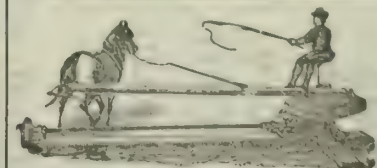
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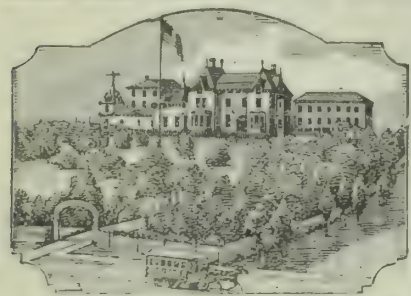
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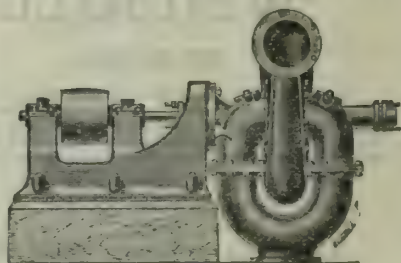
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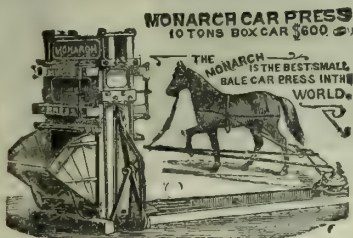
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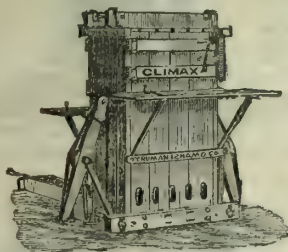
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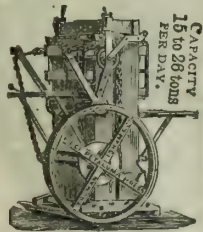
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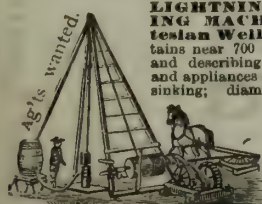
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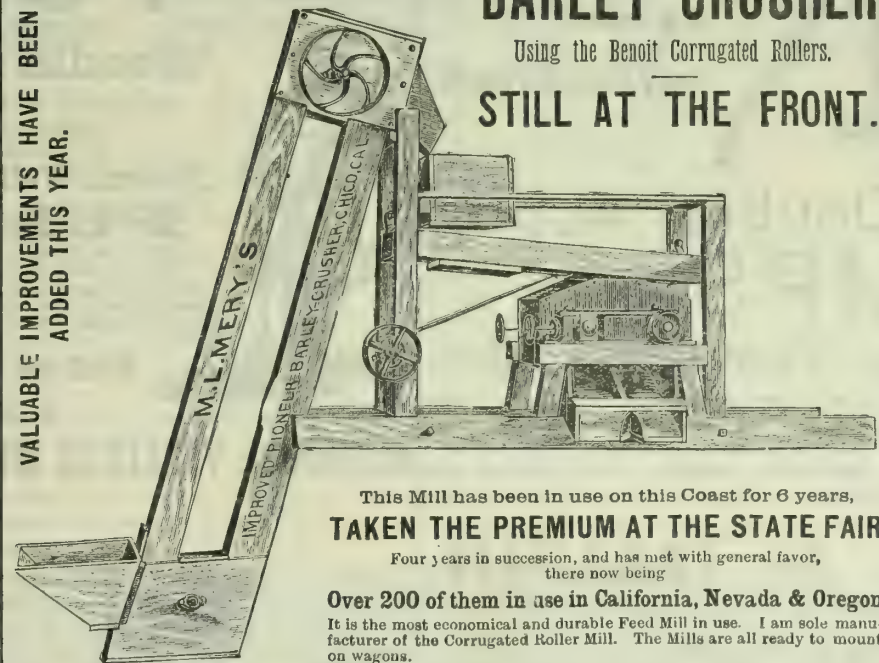
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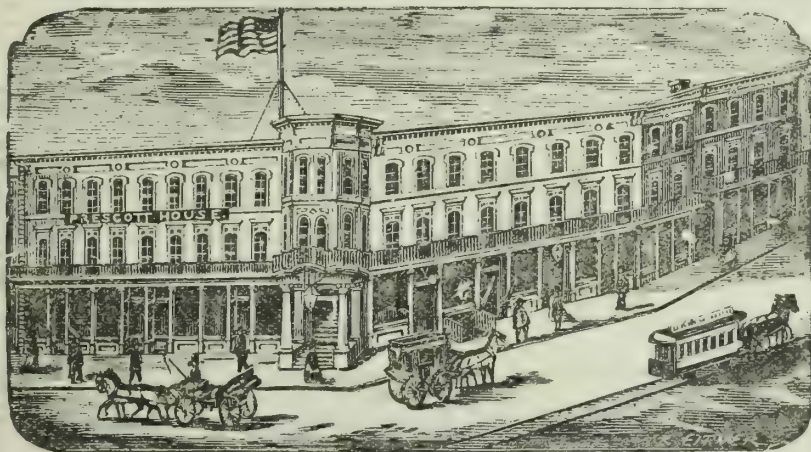
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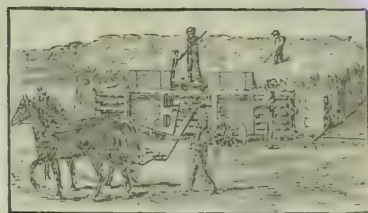
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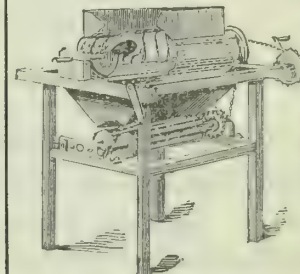
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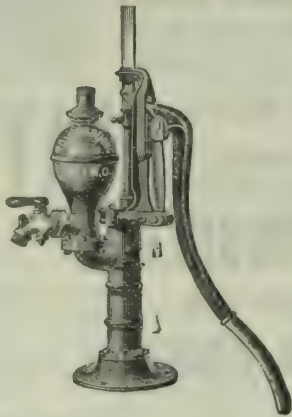
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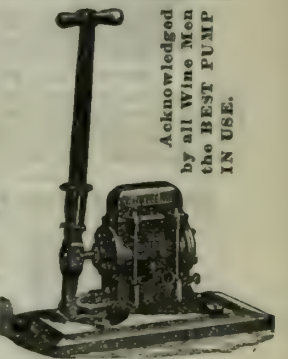
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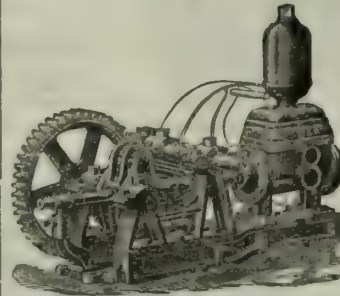
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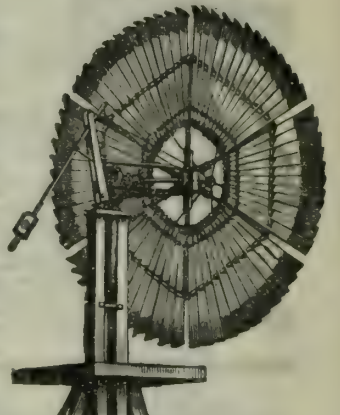
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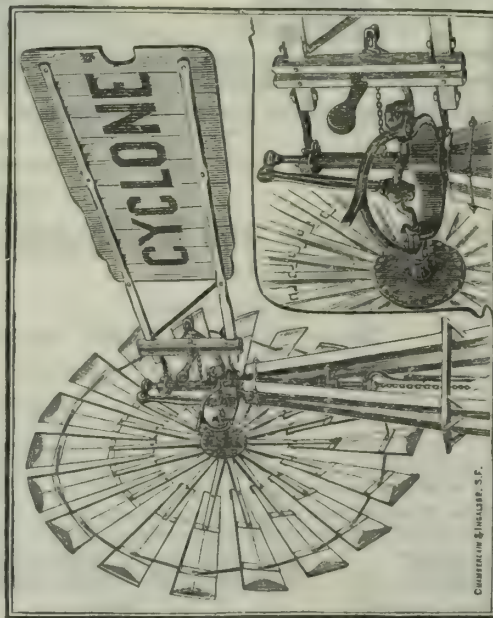


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Vol. XXXIV.—No. 5.

SAN FRANCISCO, SATURDAY, JULY 30, 1887.

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A Landmark at Monterey.

California, though young, has a history full of moment and interest. As one of the pioneers recalls from memory the incidents of the last 40 years, or as a younger citizen reads in the many books which have been written the occurrences of the same period, it is almost incredible that so much could be accomplished in so short a time. This fact increases the interest in what may be called our historic materials. It is fortunately so, for the result will be the cherishing of the vestiges of early civilization and progress which in a more careless state of the public mind might become forgotten and obliterated.

We give on this page an engraving of a building which figured largely in the events attending the birth of California as an American State—the old Custom-house at Monterey. All remember, of course, that it was at Monterey that California was formally taken possession of by the U. S. forces under Commodore Sloat, in July, 1846. The flag was raised on that occasion over the building shown in the engraving, and upon the same flagstaff, which is there seen. Last year was the fortieth anniversary of the event, and was appropriately celebrated by the

Veterans of the Mexican war, Major E. A. Sherman of Oakland being the originator of the movement and a leader in the celebration, which was very successfully carried out. Major Sherman continued his disinterested public service by writing an account of the celebration, which is published in neat form by the Fraternal Publishing Company of this city. The book has several good illustrations, and one of them is reproduced upon this page. It shows the old Custom-house as seen from the street; behind it lies the waters of Monterey bay.

From these waters at 9 o'clock on the morning of July 7, 1846, the expedition from Commodore Sloat's flagship, the Savannah, composed of boats of the Savannah, Levant and Cyane, landed without opposition at the mole. The forces were then marched up a short distance to the Custom-house. Here the marines and men were halted and the proclamation read to the multitude by Rodman M. Price, Esq., purser of the Cyane, in a loud and distinct manner, followed by three hearty cheers by those present. The flag of the United States was then hoisted by Acting-Lieutenant Edward Higgins, immediately after which a salute of 21 guns

was fired by the Savannah and Cyane. The Custom-house was then turned into barracks for the United States forces and everything settled down quietly.

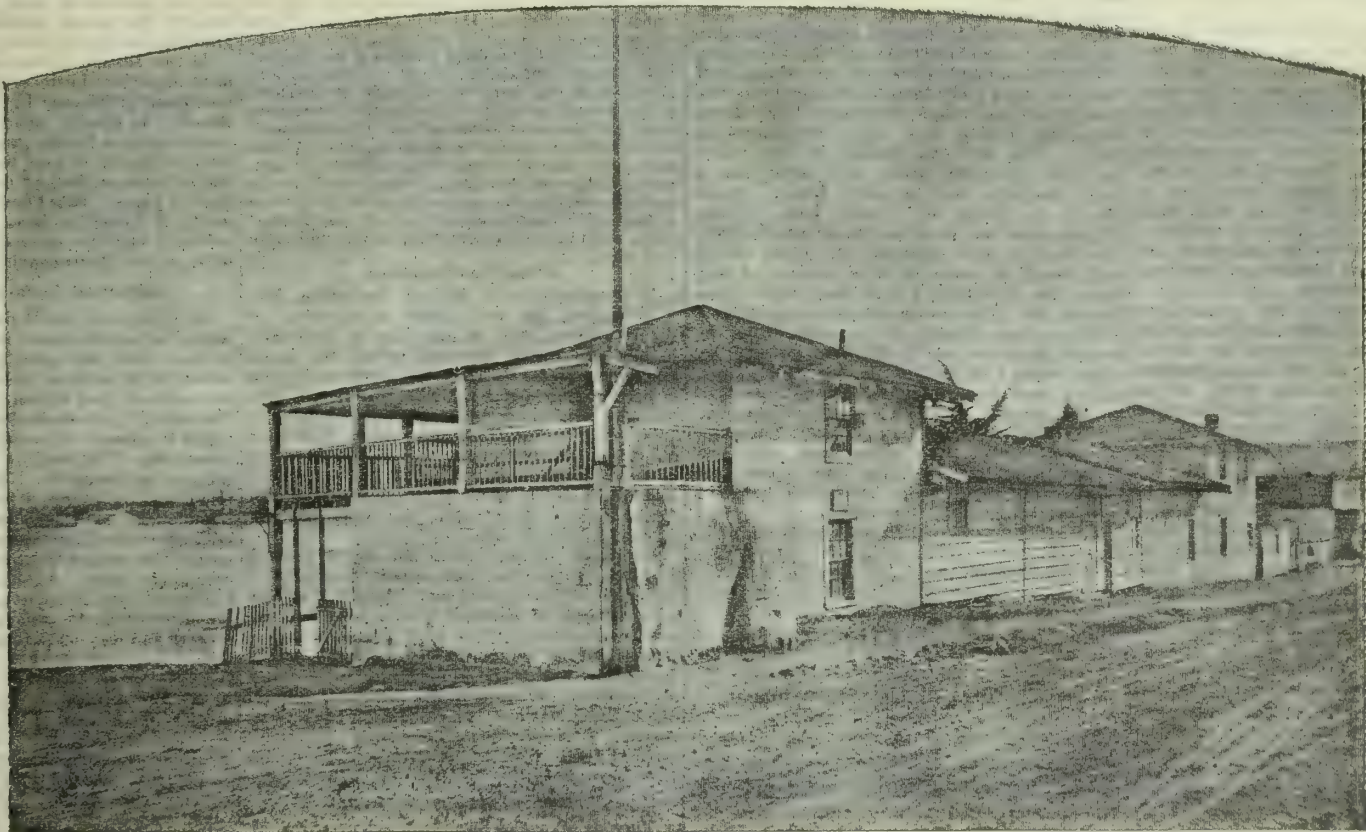
As the engraving shows, the building is really in three parts. It is what might be called a piece of National crazy-quilt work, as two portions of it were erected under the Spanish and Mexican flags and afterward patched together by the Americans. This historic building has been in charge of Captain Thomas G. Lambert and wife for 20 years, and they deserve great credit for the handsome manner in which they

BEET SUGAR.—There are still signs of growth in the beet sugar business. Specimens of beets grown in Fresno county have been received from time to time by Professor Hilgard at the University, and analyses have been made upon which he will no doubt prepare a statement for the public. It is announced that an enterprise of considerable dimensions is in contemplation for the Pajaro valley. It has been rumored for some time that capital which has long had for its objective point the production of cane sugar in the Sandwich islands, would be ere long turned toward the extension of the

The Live-Stock Interest in Japan.

There has been a considerable movement of breeding stock from this State to Japan of late. The grade of stock selected by the Japanese agents has not been of the best, it is true. The common stock of this country is so vastly superior to their dwarfed cattle that it may seem quite good enough, but the Japanese will, no doubt, get their ideas advanced to the plane of improvement beyond the standards which they now seem to hold. The reason why the Japanese seem disposed to increase their live-stock

interest seems to rest upon a great advance in the carnivorous taste of the people. It is announced that the demand for beef has so greatly increased of late that it is feared that if the demand continues to increase the stock of cattle will be exhausted. Mr. Kamiza Shin-kichi of Shigagori, in Nagano Prefecture, who has devoted himself to cattle-breeding for some years past, intends to rear cattle on a large scale. He has recently arrived in the Japanese capital and bought scores of animals of foreign origin or half-bred. As the price of cattle is very high in Japan, he intends to send orders to the United States for a further supply of cattle. It is quite likely that



A HISTORIC LANDMARK—THE OLD CUSTOM-HOUSE AT MONTEREY.

cleaned and adorned it for the celebration last year. Upon that occasion the building was wrapped in bunting, and in front of the balcony were designs worked in flowers, flags and war emblems; the coats-of-arms of the United States, Spain, and Mexico, and the dates 1776, 1846, and 1886.

We trust the attention which has been called to this historic building will result in its preservation from ruin or decay. The interest with which it will be regarded at the end of its first century may be imagined, and the thanks of future generations will be to all who now minister to its preservation.

DEATH OF A PROMINENT BEE-KEEPER.—We regret exceedingly to hear of the death of J. D. Enas of Napa, well known as a bee-keeper and as a writer on this and kindred subjects in our columns. He was accounted an active and enterprising citizen of Napa county, and his removal will be sincerely mourned. His death followed a long and painful illness. He was a native of Massachusetts, and but 53 years of age at his death. His bereaved wife and children will have the sympathy of all our readers.

beet sugar interest in this State. This will be very fortunate. The business needs capital, and if it will come in and pay a fair price for the vast amount of beets which can be grown in this State, the capital will be entitled to its reward. We trust that such rumors will soon take visible form.

GARDEN PROFITS IN CAROLINA.—Half an acre of average soil planted to onions in Anderson county, S. C., yielded a clear profit of \$69 over the cost of seed and fertilizers, which is at the rate of about \$140 per acre. The same half-acre will be planted in cabbages, so as to yield two crops the same year. The Charleston News, which makes the above statement, deems this better than cotton-growing, and believes that with high cultivation greater profits could be realized.

DEATH OF A WELL KNOWN BREEDER.—F. J. Barretto, a native of New York, and a well-known stock-raiser, and formerly president of the Los Angeles County Agricultural Association, died last week. Mr. Barretto was one of the leading Jersey breeders of Southern California. We hear with deep regret of his demise.

the awakening of the live-stock interest across the Pacific may ere long be a great advantage to our Pacific Coast breeders.

THE LABOR PROBLEM.—It is exceedingly gratifying to know that there has really been great progress made during the last two years in the employment of white labor in our fruit industry. We never had a bit of sympathy with those who cried aloud for reform but offered no acceptable substitute for the objectionable labor the fruit-grower was obliged to employ, but we really rejoice that gradually there are more people being found willing to take earnest hold of the pleasant labor which the handling of our fruit crop affords. There is now a large army of women and girls being employed in our canneries and drying establishments, both in city and country, and many growers are finding this help better than the Chinese. They have tried many unsatisfactory experiments toward that end. Of late the movement seems to be succeeding better, and as the work is destined to increase almost immeasurably, it will be well for the State to have the satisfactory character of women's help demonstrated.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Two Orchards in Tuolumne.

EDITORS PRESS:—Where the rock-crowned Table mountain of southern Tuolumne breaks into ragged spurs, jutting out from the one main armored giant, a serene little valley lies encircled by the wall-like hills that shut out the chilling winds and the blighting frosts; and in this little valley, this one choice, sunny spot, is planted the

Mountain Pass Orchard.

One of the famous old peach gardens of Tuolumne. Mr. Goodwin, the proprietor, whose experience and constant care have won for himself rich rewards in magnificent specimens of almost perfect fruit, has been a resident for many years, having planted some of the fruit trees as early as 1856. Thus he has seen grow up around him tender saplings that absorbed the rich fair sunshine of the many vanished springtimes, which now have changed to trees tall and gaugled and ancient, bearing a plentiful harvest—boxes and baskets of ripe, fair-cheeked peaches—in place of the few he so triumphantly gathered as his first crop long ago.

Among his famous old trees set out in 1856 are three which have the reputation of being the largest fig trees in the State. They are planted near together, so that their branches, interweaving, form a roof that droops to the ground, shutting out the blue skies and the fair outside world with a marvelous tent made of broad and dusky green leaves, while three white pillars rise from the ground to the high dome and send out numberless supports like an umbrella slantwise, reaching the top and sides with their slender white branches. The largest tree measures over 11 feet in circumference, and from them Mr. Goodwin receives an incredible harvest of figs.

This orchard in these later years has spread far out in the little valley, and contains hundreds of trees, all flourishing, and valuable fruit-producers; among them oranges that bear sweet golden harvests, astonishingly abundant for this high mountainous country, and 25 walnut trees that have attained to a good size and produce fine crops. The fruit is disposed of by peddling in the county from place to place. Some of it is dried, and still some shipped to San Francisco. There is always a ready market and no waste, so anxious are all purchasers for fruit from this orchard, which is a warranty for its superiority.

A vineyard not so large as the orchard receives a great deal of attention, and is worthy of notice. The grapes produced are choice varieties for table use, and the more common sorts utilized mostly for making wine. About 3000 gallons are made every year and the wine receives high praise. Mr. Goodwin having orders for it even from Sonoma, the celebrated grape county.

A comfortable, home-like residence stands in the midst of this beautiful orchard, and under the cool, swaying shadows of its aged trees. Roses bloom brilliantly and luxuriantly all about it, and border the drive that leads from the road to the house, while climbing honey-suckles weave their white and yellow blossoms into fragrant, dew-wet masses over trees and bushes and arbors alike.

And so in this glorious, fruitful garden, one of the oldest and finest of which our State can boast, the owner has passed many long, quiet years of a busy, useful life, and has seen the light of its prosperity rise like the sun each morning from the rock hills in the east, and shine from the zenith full and bright into the very heart of this charming little valley far up among the hills.

The Oak Springs Orchard.

About four miles from Chinese Camp, under the sheltering wall of Table mountain and spreading out over the low sunlit slopes of a quiet little valley, grows the Oak Springs orchard, one well known even in past years, but still flourishing and growing larger and larger with the addition of younger bright-leaved trees. Even the famed old-time orchards known so well to early day Tuolumneites in these latter progressive years have overspread by many acres their ancient limits, so that now there seems to be more of the new young trees than of the gaugled sturdy grove of bygone times.

Mr. Quinn, the proprietor, has been here for about 11 years patiently planting and cultivating for still greater perfection in his fruit, until now he has obtained results of which he may well feel proud, so enthusiastic are all in the praises of his fruit. Indeed, favored by the high altitude, mountain air and protecting hills, he has great encouragement to cultivate highly his thriving trees, for certainly in the end his reward could not be greater.

Peaches and apricots are most abundant, indeed this particular locality seems peculiarly adapted to the support of these varieties, and they thrive wonderfully, attaining a large size and bearing most delicious fruit in the course of only a few years. There is always a ready market for this fruit, and the portion not easily disposed of in the county commands the highest price in San Francisco.

An experiment with persimmon trees resulting favorably, Mr. Quinn has set out several additional ones. Oranges also do well, being

protected from severe frosts by the kindly sheltering hills that also shut out rough and blighting winds.

Grapes are cultivated, and on the sunshine-kissed hillsides, with water abundant and rich soil, they bear clusters almost perfect in fullness and fine flavor. All of the choice varieties are of course made into raisins or shipped, and besides these the Mission grapes and other more common kinds are used for wine. About 1000 gallons each year is the product.

So as time glides on, uprooting and trampling upon the proud landmarks of other days, showing how fleeting is all terrestrial strength and greatness by the wrecks that are found crumbling on every hand, it only serves to brighten the waxy leaves in the fair old orchards, green and glistening from a thousand dew visits and sun kisses, showing the barren hills now blossoming in springtime's tender light with the bright blooms of peach and apple and snow-covered clusters of almonds; and as each year advances, adding strength and beauty and a higher flavor to the plenitude of their yellow harvests, and blessing man with one of the choicest of nature's blessings—the bending gold-crowned tree of ripened fruit.

MAY BLOSSOM DAVIS.

Sierra Valley Artesian Wells.

EDITORS PRESS:—Haying is going rapidly forward. The crop promises to be fair. The prospect for a grain crop is not so favorable, owing to the cold weather in the spring. We are having cold nights, as is frequently the case in haying in this high mountain valley. A few mornings ago ice was to be seen as thick as window-glass.

The business of boring artesian wells is being pushed rapidly forward. The vexed question with the Sierra valley ranchman has been how to procure a proper water supply, for even on the ranches which have had fine streams of water in their meadows, there has been much pasture land, where there seemed no possible means of supplying water. Therefore we look upon these artesian wells as a great blessing to us. The first well-borer, bought by a company of 16 persons, began work here something over two years ago; since then there have been five other machines brought into the valley. There have this season been four well borers at work. The first one brought to the valley has done the most work; next after this a large machine with six-inch borer, owned by E. E. Haley of Honey Lake Valley. This machine was purchased at a cost of \$2800. Mr. Haley is well equipped for work, taking with him from ranch to ranch a crew of four men; also 10 horses, a large four-horse water-wagon, etc. The machine is warranted to bore 1000 feet deep, though it has gone deeper on several occasions, one of the finest wells in the valley being 1040 feet deep. Mr. Haley's machine is now boring for R. Martin, merchant at the summit, between Sierra and Long valleys. This machine has just left the ranch of Wm. Arms, five miles east of Beckworth, where three wells were bored, the largest yielding probably 140 or 150 gallons a minute, being only 325 feet deep.

The machine is supplied with tools for drilling rock. STAR.

Sierra Valley.

FORESTRY.

Transactions of the State Board.

The State Board of Forestry was in session during last week. Conferences were held with different parties interested in forest preservation, and ways and means to effect it were discussed.

Public and Official Aid Solicited.

Thursday morning was occupied in preparing the following circulars, copies of which will be posted to persons concerned throughout the State:

To State Boards of Trade: The State Board of Forestry invite your co-operation in their efforts to preserve the timber on forest lands of this State from the waste now prevailing. The depredations of timber thieves, the ravages of fire, started sometimes inadvertently by campers and sheep-herders and often designedly by the latter for the purpose of creating new pasture-lands or for other reasons, the browsing of the sheep upon the tender shoots of the young trees, are among the principal evils which are causing a wasteful depletion of the timber resources of the State and operating to prevent their renewal by the efforts of nature.

It will be the effort of this Board to put a stop to all unlawful actions operating to the detriment of the State in regard to its timber-lands. The many evils that will surely flow from the denudation of our mountains have been repeatedly pointed out. The results upon our irrigating, farming and navigating interests can easily be predicted from past experience in other countries; they can but be deplorable.

This Board is advised that much public timberland is being taken up by entry or otherwise by dummies in the interests of speculators who propose to strip the land ruthlessly and then abandon it.

We ask your assistance to aid us in putting a stop to this practice and to use your influence in every way to check the waste we have alluded to from other causes.

This Board proposes to establish experimental stations in different parts of the State where, under their supervision, forest trees from other countries will be planted and tested as to their usefulness and adaptability to our soil and climate. It is thought by this Board that such stations may be made at-

tractive and instructive, and that their establishment in any locality will be a benefit to it. We have invited proposals for donations of land to the Board to be used for the purposes indicated, and invite your consideration of and support to the project in your locality.

Aid Solicited.

To the Lumbermen: The importance of the lumber industry is fully recognized by the State Board of Forestry. To those engaged in this industry the importance of maintaining a continuous supply of lumber by means of renewed growth must be equally evident. Under the present land laws the honest and legitimate lumber dealer is in continuous competition with the robber and perjurer, who are now so extensively despoiling the Government and State school lands. The land laws are such that strict compliance with them by lumbermen is almost impossible. Owing to the total absence of official supervision, destructive fires spread from one district to another, to the great injury of the lumber interest both present and prospective. We should be glad to have your views on this subject, and especially as to our plan.

This is, that all the forest lands in the State should now be withdrawn from sale or entry and the lumber industry provided for by the European system of sale of the timber alone, leaving the land title in the Government, with the responsibility of establishing a new growth as fast as timber is cut. Thus the mountain-sides, springs and streams will be protected, a perennial supply of timber and fuel be maintained and the necessity of violation of land in the lumber industry be done away with. Please give us your views.

To County Sheriffs.

To the Sheriff of — county: The loss of property in this State caused by fires is very great. In the forests destructive fires are now allowed to go unchecked, except occasionally, when private interests demand protection. From this cause, as well as owing to the present extensive illegal cutting of timber from Government and State school land, denudation and waste in our forests is great. Thus the property of the people and of the school-children is dissipated, the sources of the springs and streams are injured, floods alternate with droughts, and the whole irrigation and agricultural interests of the State suffer.

The State Board of Forestry desires to remedy these conditions. Among its measures is one to form a forestry police. The duties of these officers will be to report fires set in the forests with all possible evidence, so that we may proceed in law against such violators, and also to report all trespass and robbery upon the State school lands—Sections 16 and 36 in each township—and upon the Government lands, with names of witnesses, etc. Our funds will not permit us to pay for the whole time of competent men, but we should be glad to pay liberally for actual work done as indicated. Please send us the name of a reliable man who could act for us in these matters. We thought some deputy in your office at times, when his duties permitted, might undertake such work.

A Station Proposed.

In accordance with the last resolution, Mr. A. T. Hatch, the well-known fruit-grower of Solano county, who is also largely interested in Alameda county, appeared before the board and expressed his belief in the proposed system of parks or forestry stations. He suggests the dividing of a certain beautiful tract of 1400 or 1600 acres in the Livermore valley into four quarters, and converting the central 20 acres of it into a public park of ornamental hardwood and forest trees, under the supervision of the Commission. Four roads may approach the groves, from each side.

Chairman Kinney, after the others present had coincided in the view, spoke generally of the plan. "These stations," he said, "will be in the nature of national parks, with the exception that they will be kept free from underbrush, and it will, therefore, be immediately perceived that their presence in any locality will enhance the value of the surrounding land. Once these stations are established, the Commission does not doubt its ability to secure enough funds from the Legislature to insure their perpetuity."

Laws to Save the Trees.

Thomas Magee of San Francisco prepared an interesting paper at the suggestion of the board upon the general subject of Forest Culture and the fearful inroads which are being made upon the fine natural growths of the State. To arrest this he proposes the enactment of proper laws. He said: "The first change needed is the passage of a law that shall utterly prohibit the pasturing of sheep on Government land. Neither Uncle Sam nor any county government of the State has ever been paid one dollar in rent, license or tax of any kind for the use of these mountain pastures by sheep-herders. They come in summer when the mountains are accessible, and leave in winter, when snow shuts them in. An attempt by one mountain county to levy a tax on these sheep-herding, grass-sod, and tree-destroying bandits was last month defeated by the Supreme Court. The remedy is in the hands of the General Government. If there were no other remedy, it would pay the Government and this State, either singly or unitedly, to pay the sheep-herders any profit they can pretend to say they make from their herds in summer, to keep them out of the mountains. Then, as to timber for domestic use, I think the taking up of timberlands in 160-acre tracts under pre-emption, should at once be prohibited. In eight cases in ten such pre-emption is done by a dummy, and by perjury, with no other object than to sell out to a timber speculator or a sawmill man. Timberlands should be sold in tracts of say 5000 acres to the highest bidder, after due advertising, one-half of the purchase money to be refunded to the buyer within ten years, on his reconveying to the Government the land sold with groves of at least two-year-old trees planted on it, the number

per acre to be specified. This law would allow the buyer to cut the old timber. The land would then be useless to him. To replant it would cost little, and when the new planting was accomplished and had attained a certain height, he could reed it to the Government and receive back half of the original purchase-price. Of course, I only suggest this plan, not knowing whether it is or not the best that might be devised for reconciling use with continued growth. Timber must be had for domestic and commercial uses, in house-building, the manufacture of furniture, for lumber export, and in many places for fuel. That fact cannot be, and is not, here overlooked. Lumber manufacturers excuse their present use of pre-emption dummies, and of bribery, perjury and of wholesale grabbing by scrip and warrants, by saying that 160 acres of timber is of no use to any one, and that to justify the erection of a sawmill and expensive machinery, at least 5000 acres must be acquired in one body. They say that they would vastly rather buy the land from the Government at a full price and thus have no cloud upon their title. They claim that timberland should not be open to pre-emption under the Homestead law, and say that even where dummies are not employed, small speculators appear when any desirable timber tract is approached by a railroad or settlement, who take up the land in 160-acre tracts for speculation merely and to sell out to men like themselves, who will build a mill and use the timber. If the Government were to sell the timberland in large tracts to the highest bidder, it would receive the full value of the land, while its repurchase, replanted within ten years, would keep the supply intact.

Engineer and Attorney Appointed.

A formal agreement was made between Mr. Davison and the members of the board that he shall be official civil engineer of the board from and after August 1st, at a salary of \$150 per month and traveling expenses. Mr. Davison received his instructions from the Commission, and will proceed at once to prepare accurate maps of the timber sections of the State, beginning with the northern counties.

At the session of the board on Saturday the most important business transacted was the appointment of Edward L. Collins, an attorney of the city, as special agent of the board to arrange evidence for the prosecution of the parties who are known to have been removing valuable timber from sections of school lands during the past 10 years. It is known that over \$90,000 worth of timber has been stolen, and from the evidence already secured it is believed that with proper efforts convictions may be secured.

Redwood Park in San Mateo.

R. S. Smith of the Redwood City Gazette appeared before the board in regard to a project of his to have set apart as a public preserve about 20,000 acres of redwood-timber lands in the southern part of San Mateo county, below Pescadero. It is desired that the Legislature be urged to consent to the setting apart and condemnation of the land by the Government for use as a public park. Here on the Coast Range ridges and canyons is a forest primeval of the sequoia. If the Government will set the district apart the Commissioners will make an experimental station there and assume charge and care of the trees. At the next meeting of the Commissioners, in about a month, the tract will be inspected. It belongs to several private owners and may be purchased for about \$300,000.

R. F. Fernow, Chief of the Forestry Division of the Agricultural Department, has written a strong indorsement of the project for reserving a portion of the coast for a redwood forest, between Pescadero and Santa Cruz. But, strange to say, for quite different reasons than those advanced by the author of the plan. Mr. Fernow says the reserve would pay the Government dollars and cents. The plan is to be placed before the Pacific Coast delegation to secure national aid.

Senator Hearst's Views.

United States Senator Hearst appeared by invitation before the board, and gave his views regarding the evils attending forest depredations. He believed it to be of more importance to protect the forests already standing than to guard the young growth. He believed the greatest damage done to young timber was that caused by sheep and goats, which by far exceeded that done by campers and malicious people who had fired the forests. He had little faith in Government supervision of timberland, and would favor a survey of all Government timberland above the 2800-foot level and the deeding of the same to the State. He said he had been over nearly every foot of the Sierra, and had moaned over the ruthless waste of timber for the past 25 years, and the evil still continued. He thought the survey proposed by him should be made on each side of the mountain range, and the State take charge of the timber. It was of little value to the Government at present, and a bill looking to that result might have a show of passage. He believed that if the forests were protected against fire and other destructive causes they would reproduce themselves. In the neighborhood of Grass Valley and Nevada City, where proper protective measures had been taken, he had seen new forests grow up from the seed in the last 20 years whose trees are now 60 to 80 feet high. The sawing of timber was one great cause for the frequency of forest fires. The trees were felled, and as they lay prone on the ground the great limbs were lopped off and

left to litter the ground. They died in time, and it needed but a spark to set a fire among this inflammable mass. He thought that a system should be instituted looking to clearing out of the underbrush and refuse on all timber tracts. He would advocate the selling off of a proportion of the trees on public land, proper care of trees left standing, and the protection and encouragement of the younger growth. It was a matter of time to grow timber, but he had seen in his day trees grow up from mere shoots that were now fit for house timbers. He would favor stations where officers should be located detailed to watch the forests and guard them against fire and spoliation.

Other Matters

Brought out by the session of the board we reserve for future allusion.

POULTRY YARD.

Practical Poultry Points.

EDITORS PRESS:—Although there are many improvements and simplifications of poultry management which are desirable, I cannot wholly agree with the writer of your article published July 2d, from the *Culitologist*, on "Automatic Poultry Feeding," for two reasons.

First, poultry need close watching every day, and when you feed you are apt to discover anything needing attention.

Second, poultry or any other animal (including man) flourish better to eat their food up clean and then wait for awhile "between meals."

But a great many advantages are gained in raising poultry by arranging to

Water and Feed Them

Without entering the yard, especially when muddy or the care devolves on a female member of the family.

This is best accomplished by making the pickets at the most convenient side of the yard small and smooth and about two and a half inches apart, so poultry can easily reach through.

For watering, set against the pickets on the outside a water-dish made of an oil-can cut in two lengthwise about three inches deep.

For food, milk, etc., make a V-shaped trough of two pieces board, one six and one eight inches wide, and long enough to accommodate the number of poultry; set the narrower side of trough against the outside of the fence.

To keep out rain and dust and prevent outside interference, get a board about 12 inches wide and long enough to cover the water and feed troughs and attach it to the fence above the trough with leather or other hinges so it will hang slanting over and cover them. Set a self-acting wooden or other latch on to hold the cover up while feeding, etc.

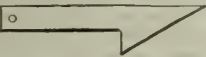
This simple arrangement saves going into the yard in muddy weather, keeps the stronger poultry from driving the weaker away, and prevents waste of food. Of course whole grain if fed in the trough should have straw scattered over it to prevent too fast eating.

Rats.

If rats bother you, make a board cover for night to fit the feed trough rat-tight, although poultry should never be fed more than they will eat clean, thereby leaving a bait for the rats.

Latches.

Speaking of a latch to hold up the trough cover reminds us that we have seen a person stop five times per day for 40 years (how many is that?) to put a stick or stone against a door or gate to keep it open, when 15 minutes' work would make a wooden self-acting latch to do it for him; viz., take a short piece of board, bore a hole in one end and saw and notch the other so it will catch on to the top of gate, shaped as shown in the engraving.



Attach this to the fence or side of building with a screw or even nail and the latch is complete.

While you are about it, make a number and put one on for every door and gate on the farm. These latches are equally as good if attached to a gate or door to hold it shut. CHICO.

The Old Breeds.

E. C. Clapp of Pasadena, an occasional contributor to the *RURAL*, has the following in the *Cackler* on the old favorites:

I admire the pluck of some of the old breeders and the poultry journals of this country in what they are doing in the way of perfecting new breeds of fowls. Were it not for some of this kind of work—yes, much of it—we would still be at work with the old dung-hill fowl, and would know little of the Leghorn egg basket, the Brahma potful of meat, or the great and happy medium, Plymouth rocks—the birds that flavor of both meat and eggs.

Now, I don't wish to dampen any one's ambition in the least, or put even a small straw in the way of any person, but I would like to ask just here, Why not let the older breeders do the work of bringing out the new breeds to perfection, even if they do gain the glory? How many, as they first go into the poultry busi-

ness, full of fire and bound to win, make fame and fortune, etc., are able to judge of the make-up of any one of the older breeds, how to mate for best results, how to feed and manage them, the care and detail peculiar to the breed? If, perchance, they do understand one breed fairly well, how about two or more of them?

But to the point: I find that it wants and requires some experience and good fowls, even with the older breeds, to be reasonably sure of producing 90-point birds, or better. Knowing this, I would say to those just entering the business, stay by the old standard breeds; don't throw away time, patience and money by starting with the latest arrivals for honors in the poultry yard. There is enough glory for young or old fanciers in staying with the old reliables and breeding them at their very best; there is still a big call for them, and long will be.

Lest some one may think I have soured on some of the new kinds, I will say, frankly, I have not, nor do I want to; some of them are yet to stand well to the front among the breeds for general good qualities—for instance, White Plymouth Rocks, White Wyandottes, also the Wyandottes—but they have some points to improve yet before they will do well for general use by young fanciers. So, I would say, learn the business with that which has been tried for a long time, and liked.

THE FIELD.

California Productions.

At the annual meeting of the Produce Exchange in this city on Wednesday of last week, Wm. Dresbach, president, delivered an address from which we take the following:

During the past year the Exchange has issued two reports on the wheat and barley crops, one on the 1st of April and one on the 1st of June. These reports have been collated from the answers of over 150 correspondents, covering every section of the State where the cereals named are grown. On behalf of the Exchange I wish to thank the various correspondents for their courtesy in giving the information asked for, which, it must be understood, is entirely voluntary. The reports purport to give the actual condition of the crops on the date named. They do not say what the actual yield will be, as that is something that cannot be determined until after the harvest is completed, and even then correct estimates are difficult to make.

The value of these crop reports cannot be overestimated, especially considering the incomplete reports published concerning the crops in this State by the United States Agricultural Bureau. The United States Agent gives information no more valuable. The position this State and this coast hold as grain-producers certainly entitles them to more consideration than they now receive at the hands of the Bureau at Washington. I am of the opinion that a decided improvement could be made in these crop reports if the gathering of the information were confined to this Exchange, and its secretary should be appointed United States State Agent.

From statistics of the crop of 1886, which are now complete, it would seem that the State raised 1,070,000 tons of wheat. At harvest-time a much larger yield was confidently expected, but as time wore on former estimates had to be reduced, until it became a certainty that the yield of 1886 was below rather than above an average. This is the more remarkable considering the generous rainfall, amounting to some 32 inches. With regard to the present harvest, from the reports collated by this Exchange, it would appear that the output will be less than it was last year.

While it has always been the policy of your Exchange and of your Board of Directors to refrain from recommending any legislation, occasions have arisen when the interests of the grain trade and of the producers have forced them to deviate from this rule. Last winter, with the co-operation of the Chamber of Commerce, with a view of bringing about a more economical administration of our seawall and water-front—one more calculated to benefit the grain trade of this city—bills were prepared and presented to the Legislature, then in session in Sacramento, without, I regret to say, receiving the approval of either body.

The protection of the farming interests receives from foreign Governments their closest attention, as witness the heavy import duties levied on breadstuffs by France, Germany and Spain and some of the other European countries. The principal exception is the United Kingdom, and even there, such taxation is being industriously agitated.

The following table, taken from the *New York Exchange Weekly*, gives the custom duties imposed by the principal importing European nations upon American cereals:

Countries.	Flour per bbl.	Wheat per bu.	Corn per bu.	Barley per bu.
France	\$1 37	\$26	free	\$6
Germany	\$1 58	19	06	08
Spain	\$1 50	30	16	13
Portugal	\$1 53	30	25	19
Italy	94	16	16	free
United Kingdom	free	free	free	free
Belgium	free	free	free	free
Holland	free	free	free	free

All this is directly to the disadvantage of the American farmer; and to California, exporting

more wheat than any one State, it is a matter of vital importance. The question is, What can be done to counteract the burden that is thus indirectly imposed upon our farmers? Germany built up her sugar trade, now grown to great proportions, by an export bonus, and it may become necessary for the United States to adopt some similar measure, and by some means afford our farmers the protection that is their due.

Gentlemen, a great deal has been said and written about the capabilities of this State and its resources, but I doubt if any of us but dimly appreciate as yet the glorious future that awaits this, the Golden State of our Republic. Time was when naught was thought of but the precious metal, gold. This era passed, and there succeeded another golden era—that of wheat, when the tillers of the soil thought of no other crop and when wheat became king. Wheat is king to-day and will remain so for many a day to come, but no longer is it the sole thought and reliance of the husbandman, although as a natural grain-growing State California is unsurpassed. There are lands producing to-day as good and as large crops as they did 30 years ago, although they have been sown and crops gathered off them every year during that period. But now we are beginning to hear in no uncertain terms of the other products that our soil and climate enable us to raise so profusely, and, mind you, so economically as well.

When your Exchange was founded, the only articles dealt in were flour, wheat and barley. Now look at the tables during any of your morning sessions and see the articles without number that none of you ever expected would appear on the floor of this Exchange. Among others I will but mention hops and beans, and your secretary has prepared tables to show the receipts and exports in these articles during the past 12 months. California to-day raises more beans than any other State in the Union, and, as its capabilities for producing this crop are unrivaled, the production can be vastly increased. San Luis Obispo, Ventura and Santa Barbara counties alone can raise sufficient beans to supply the population of the United States, and at no distant day will you see the markets of this whole country looking to us for their supply of this necessary article of food.

And here let me remind you how other products of the soil, not so intimately connected with your Exchange, are forcing themselves into prominence. Whereas, formerly, on rare occasions, they might have been heard of, to-day, California fruits, wines, raisins and nuts are dealt in throughout the length and breadth of the United States. California is but awakening from a long period of inertia. You all know how the southern counties are experiencing a rapid growth that is being pushed forward with vigor and enterprise. The northern part of the State extends to the southern its warmest congratulations, knowing full well that, at no distant date, the resources of its fertile valleys and hills will be appreciated, and that then it will have its share of the tide of progress and immigration that is now doing so much for our southern neighbors. North or south it is but one State, and such it will remain. The Golden State—California—always has been and such it will ever be. It is the Empire State of the Pacific Slope, and this city, San Francisco, is its Queen City.

THE DAIRY.

Counterfeit Butter.

We are indebted, says the *Indiana Farmer*, to Dr. Wiley, chemist of the Department of Agriculture, for a copy of Bulletin No 13, devoted to the investigation of imitations of butter.

The subject is quite exhaustively discussed in its several bearings, historical, chemical and sanitary. The invention of artificial butter dates back no farther than 1870. Mege-Mouriés, a French chemist who was employed on the Imperial farm at Vincennes, published in 1870 the result of a series of experiments, in which he sought to imitate the physiological process of converting animal fat into butter, and two years later the siege of Paris gave him an opportunity of bringing his artificial butter into general use. From that time "oleomargarine" became a popular substitute for butter among the French peasantry.

The Bulletin gives the full text of the Act of Congress regulating the manufacture and sale of oleomargarine and other imitations of butter. This is followed by a list of 50 patents that have been issued from the U. S. Patent Office, embracing the materials and chemical methods, and the mechanical contrivances employed in the manufacture of oleomargarine, butterine, suine, etc. The original patent of Hyppolyte Mege is given at full length, with nine specifications. The American patents modify and simplify the French process in many respects.

The method of manufacture used by the firm of Armour & Co., Chicago, is as follows: The kidney tallow is taken from beef cattle in the process of slaughtering, and after thorough washing, it is placed in a bath of clean, cold water, surrounded by ice till the animal heat is removed. It is then cut very fine by machinery, and subjected to a temperature of 150° F., till the liquid fat has separated from the fibrine. When cold, this is subjected to a pressure which separates it from the more solid

stearine. This product is known commercially as "oleo," which, when churned with new milk, or cream, with usually a small portion of creamery butter—the whole being properly salted—gives the new food product, oleomargarine. In the manufacture of butterine, fresh leaf-lard is subjected to the same process as the kidney tallow in oleomargarine, and the product, when subjected to the action of strong brine for 48 hours, is known as "neutral." This is mixed in any desired proportion, with oleo and fine butter, and churned with milk or cream; it is then salted, packed, and ready for the market.

This can hardly be called an adulteration of butter. It is rather a substitute for that indispensable article of dairy food. The Act of Congress on the subject bids fair to increase, rather than diminish, the consumption of oleomargarine, as it makes its manufacture a legal business, and the product, when properly branded and stamped, a legitimate article of commerce.

In the investigation before the committee of Congress, a number of leading men of science—chemists, physiologists and sanitary experts—testified to the healthfulness of the product when made according to the submitted formula. Of this there will probably be no dispute; but will it always be so made? It is claimed that it would be nearly impossible to use old or rancid fats in the manufacture of oleomargarine on account of the difficulty, if not impossibility, of deodorizing them, and at the present time fresh kidney tallow is almost a waste product, kerosene having displaced candles.

Under the Act of Congress there are 37 factories engaged in the manufacture of artificial butter, distributed as follows: Colorado, 1; Illinois, 1; Indiana, 1; Kansas, 2; Massachusetts, 1; New York, 6; Ohio, 4; Pennsylvania, 5; Rhode Island, 2. In the months of November, December and January last, these factories made and delivered for sale to 259 wholesale dealers an aggregate of 10,029,961 pounds of oleomargarine. Of this amount, 114,697 pounds were exported, leaving 9,915,265 pounds for home consumption.

Feeding Value of Skim Milk.

Since the use of the Centrifugal cream separator is so extended in this State, the feeding value of skim milk is a matter of much interest. We find the following in the *Farm, Field and Fireside* of London, England:

At the recent Dairy Conference in Ireland, the above was one of the subjects treated of, the remarks made being as follows: In estimating its value as a food for animals it will be well to compare it with hay, which is much better appreciated than almost any other kind of cattle food. A fair analysis of the constituents of hay is—

	Per cent.
Albuminoids (flesh formers).....	9.0
Fat.....	2.5
Carbo-hydrates (heat formers).....	40.0

Total.....51.5

Upon this basis, 1 ton of hay and 1 ton of skim milk respectively contain:

	Hay, lb.	Skim Milk, lb.
Albuminoids.....	202	94
Fat.....	56	11
Carbo-hydrates.....	896	90

Totals.....1,154 195

The feeding constituents of hay, however, are not all digestible. Therefore, deducting the indigestible portion, we have 693 pounds remaining as applied to the albuminoids, fat, and carbo-hydrates, and divided respectively into quantities of 113 pounds, 26 pounds, and 554 pounds. Now, basing our calculations upon the value of the albuminoids and fat at 2d., the carbo-hydrates at 1d. per digestible unit, we get the following result:

	Hay, £. s. d.	Skim Milk, £. s. d.
Albuminoids.....	0 18 10	0 15 8
Fat.....	0 4 4	0 1 10
Carbo-hydrates.....	2 6 2	0 7 6

Totals.....£3 9 4 £1 5 0

Hay is worth this amount per ton when it is composed of good grasses which have been well saved, whereas no one can dispute the value of the milk, which is arrived at by the same process of reasoning, with this exception, that the whole of the solid constituents of the milk are estimated as digestible, whereas the fiber of the hay and the manurial value of both foods is omitted. Upon this basis skim milk is worth 1.36d. per gallon.

Lastly, skim milk can scarcely be overestimated as a food for pigs, although it does not return so large a profit in this direction. To utilize it to the best advantage it should be mixed with meals rich in carbon, such as barley-meal and maize, and in conjunction with these foods it produces the richest pork in the world. Experiments both at Rothamsted and in America have shown that a bushel of 60 pounds of maize is capable of conversion into 12 pounds of pork. It is also equal to 70 gallons of skimmed milk. Consequently, as maize can be purchased at 20s. per quart, skimmed milk, as compared with it, is worth less than 1d. per gallon; but as, by the same rule, 6 gallons of milk are equal to the manufacture of one pound of pork worth 6d., there would be no extravagance in assigning it a value as a pig food of 1d. per gallon.

PATRONS OF HUSBANDRY

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

The Worthy Master Away from Home.

[NUMBER 3.]

[Written for the RURAL PRESS by MRS. W. JOHNSTON.]

The next day carriages were provided by the Honolulu Masonic Fraternity to carry us all to the beach, where surf-bathing could be indulged in. Captain Houdlett, commander of the good ship Australia which brought us safely over, accompanied the party, taking with him the band that had furnished such sweet music at each meal on shipboard; so we felt quite at home in the elegantly fitted up hall of Spreckels & Co. There we again heard the soft, sweet notes of the harp and other instruments that had grown so familiar to us on our voyage.

In the evening at our hotel, a grand banquet was given to the Masons, the King honoring them with his presence. At the same time the ladies were entertained on the veranda by the King's band, as they had been for two nights before.

The next day the gentlemen of the party were invited out to the King's grounds to see his dancers. Of this I cannot speak—perhaps it was something like Herod's customs. The ladies spent the day in calling, shopping and taking in the sights near at hand.

Saturday afternoon was the time of all times for us. I feel embarrassed at attempting to describe this wonderful royal entertainment. It was a native "Luau"—we would call it a picnic. It was given on the beach of one of the King's grounds, adjoining those we visited before. His Royal Highness' rancho—as he learned to call it from the Worthy Master—is simply a large grove of coconuts, with low shade-giving trees intermingled, nestling in which is a charming little cottage for the King's entertainments, and further on upon the beach is another. The ground is thickly matted over with native or Bermuda grass. The feast or "Luau" was expressly for the Masonic excursion party, no natives being present but the King and the royal family and servants.

One of the pleasant features of the day was the presence of the King's band, who were there evidently to be heard as well as seen. Sandwiched between their many charming pieces of native music were medleys of American National airs such as "Star-Spangled Banner," "Red, White and Blue," "Marching Through Georgia," etc., which carried the guests—soul and spirit, not bodily—back to their native land for a few minutes.

But our spiritual visit, let me tell you, was of short duration, for, as we wandered through the grounds or sat in our comfortable seats, we were completely lost in wonder and admiration at all that was going on around us. A short distance from where our chairs were placed the royal family sat carelessly in a circle, while on the opposite side was the band. The King's dancers were with the family, and perhaps part of it. None were presented save Grand W. M. Atkinson and family. They were honored with an introduction to the Princess, the Queen's sister, the highest in honor in this circle, as the Queen was absent. The introduction was performed by the King himself, who seated them in this circle and decorated Mrs. Atkinson—our queen for the time being—with a native sash of green vines, making her look charming. The natives all wear something of this kind, either a sash, wreath or necklace; the first are made of green, while the last two are of feathers or flowers.

The King wore a long double necklace of bright yellow feathers and a small Derby hat with a broad black ribbon, on top of which was a wreath of little white flowers. His coat was a short blouse, while his pants were of a heavy white material, something like eider-down. His shoes and gloves were of white kid. The native ladies, without an exception, wore "Mother Hubbards," some made of white wash goods and some of elegant silk. One I saw was of black alpaca with a train.

After spending an hour or two here, the King invited us to the beach to witness the performance of the surf-bathers, who were skilled in their part of the entertainment. The band accompanied us here also. The bathers were provided with planks about 10 feet long, 12 inches wide, and 4 inches thick in the middle, but smoothed, and dressed down to about 1 inch at the edge. These boards they float before them as they wade or swim far out to sea beyond the breakers. When a certain point is reached, the race for the shore begins, and it is very amusing. They lie flat upon the plank with one arm spinning round, half the time in the water and half the time out, like the crank of a windlass.

Part of the company were entertained in the cottage by the King's dancers, but I preferred to remain quietly in the shade of walking in the hot sun to see them. Soon all the party returned to the grove, where the band had preceded us and were doing their best to render the day perfect, while we waited for the tables to be prepared.

(To be Continued.)

SACRAMENTO COUNTY POMONA GRANGE meets at Sacramento, in Granger hall, Saturday, July 30th.

Grange Work and Progress.

[Prepared Weekly by M. WHITEHEAD, National Lecturer.]

Legalized robberies, amounting to millions of dollars, that must be paid by the masses of the people, are becoming more frequent with every passing year. The great wheat and coffee "corners" were of this class. The price of coffee was doubled to the millions of consumers in this country for several weeks; and who has estimated the millions of dollars, "stand and deliver," thus taken from them? How few people who are thus robbed are taking any action to have it stopped. The National Grange, at its late session in Philadelphia, had this subject under consideration, and with the view of bringing it before the Subordinate Granges and the people, passed the following resolutions:

Resolved, That the National Grange, Patrons of Husbandry, do hereby denounce and condemn the practice of the monopolists and speculators in the purchase of what is known in commercial circles as "futures," whether of cotton, corn, wheat, pork, or any other product of the farm; that we, the said Grange, believe it to be a species of iniquitous gambling; that it establishes the price of the produce of the farmer without regard to the necessity of the just and equitable law of supply and demand.

Resolved, That we recommend to the Subordinate Granges, and farmers generally, to petition their respective Legislatures to enact such laws as will make the said dealing in "futures" a misdemeanor, and punished as other crimes.

When public sentiment in regard to this subject is aroused as it should be, laws will be enacted prohibiting the dealing in "futures," and the natural law of supply and demand will govern the market in the necessary commodities of life.

ON this same subject the following is an extract from a decision by Judge Blandford of the Supreme Court of Georgia: "It is manifest that the consideration of the note sued on is for and on account of dealings commonly called 'futures.' Is such a transaction in the nature of gaming? The transaction termed 'futures' is this: One person says that I will sell you cotton at a certain time in the future for a certain price; you agree to pay that price, knowing that the person you deal with has no cotton to deliver at that time, but with the understanding that when the time arrives for delivery you are to pay him the difference between the market value of that cotton and the price you agreed to pay, if cotton declines, and if cotton advances he is to pay you the difference between what you promised to give and the advanced market price. If this is not a speculation on chances, a wagering and betting between the parties, then we are unable to understand the transaction. A betting on the game of faro, brag or poker cannot be more hazardous, dangerous or uncertain. Indeed, it may be said that these animals are tame, gentle and submissive compared to this monster. The law has caged them and driven them to their dens; they have been outlawed, while this ferocious beast has been allowed to stalk about in open midday, with gilded signs and flaming advertisements to lure the unhappy victim to its embrace of death and destruction. What are some of the consequences of these speculations on 'futures'? The faithful chroniclers of the day have informed us, as growing directly out of these nefarious practices, that there have been bankruptcies, defalcations of public officers, embezzlements, forgeries, larcenies and death."

PATENT LAWS.—W. A. Armstrong, Master of the N. Y. State Grange, in his last annual address, says: "The iniquities of our patent system are so great as to suggest imperative necessity for correction, whereby the wrongs it engenders shall be eliminated. The system encourages and promotes monopoly of the harsher character. This is illustrated in the combination which makes users of telephones pay for each instrument an annual rental ranging from 10 to 40 times the cost of the instrument itself. It is true that liberal allowance should be made for a service that requires skilled operators, and capital in establishing lines and keeping them in working order. Besides this, generous consideration should be had for the inventor, who is entitled to large reward for service rendered to the public. But with all these charges arranged on a scale that provides for magnificent returns, the public is required to pay four or five times as much as should be required in equity, most generously defined, to make suitable compensation for talent, capital and service. It will be seen, then, that the patent system establishes, or, at least, provides means for establishing monopolies that bear with great severity upon the public. * * * But this is not all. Opportunity is given for collusive suits at law, in which the courts are made the instruments of extortion by supporting fictitious claims. Illustrations of this evil are so numerous that they need hardly be cited. But if instances be required they may be found in the numerous demands made upon farmers for royalties on articles of common use—articles bought in good faith, in the very spirit of innocence, and with proffered guarantees by sellers and manufacturers against the very evil to which purchase and use open the way. It is estimated by competent authorities that exactions put upon farmers in this way amount annually to sums great enough to defray the entire expenses of the patent office, which is so conducted as to support iniquities that take the form of extortion. As matters stand, there is no security for the farmer who buys an implement that has improved adaptation to the use for which it is designed; for when he pays an extra sum for the improvement covered by a patent, he may be visited, later, by the owner of a prior patent, who has all the authority of law to demand payment of royalty, proportioned mainly by his greed. In this case Government has conferred its license and protection upon two persons with diverse claims, and each is empowered to collect of the purchaser or user of the patent device a sum at variance with the plainest principles of equity, and the only way of resistance is through courts, where interminable litigation tends to bills of cost far beyond the means of contestants. The system is so manifestly unjust, and so harsh in its operation, that correction should be sought at once through the earnest demand of those who suffer."

RESULTS OF THE GRANGE.—Elizabeth Boynton Harbert, in a late issue of the Chicago *Inter-Ocean*,

makes the following truthful remarks, and those living in rural districts where there are bright, living Granges have observed similar effects: "We hear from many sources great surprise expressed at the rapid growth of public sentiment in favor of an equality of rights, and particularly in regard to the fact that progress seems more rapid in our agricultural districts than in our larger towns and cities, and we are requested to suggest a reason. We think the answer may be embodied in two words: 'The Grange.' Silently and unobtrusively there is developing in our country an organization destined in the near future to effect results, startling in their character, to the careless observer. The fact that during the past 19 years the thoughtful men and women from our farm-homes have convened together on an exact equality to consult upon questions pertaining to the better methods of government in school and State, may not have attracted general attention, but influences may have been set in motion, incalculable in their results, and, as we believe, incalculable for good."

THE success of the Grange organization, now that the ritualistic work and the rules for the government of the Order are comparatively complete, depends upon the individual members of the Grange. The same unselfish devotion to principle, and love to God and man, which is necessary in building up the church, school and home, is equally essential in building up and perpetuating the Order of the Patrons of Husbandry. It is to the Grange, as a fitting adjunct to the church, that we must look for an organization that will help us in developing a higher and better manhood and womanhood among ourselves.—W. M. King, Secretary Potomac Grange.

IN these long days, while farmers are thinking of their harvests and bending their energies to preliminary tasks, politicians are weaving the webs that will ensnare the votes of the dear farmers, who forget that while they perform their daily labor well there are schemers whose successful plots lessen its rewards.—Husbandman.

EVERY toiler, every farmer, every member of the Grange, should take the oath of Hannibal before his father and his father's God, and "swear eternal enmity to all upholders of unjust and burdensome laws, which plunder you and your children of the little property slowly obtained by a lifetime of ceaseless toil through summer's heat and winter's cold."

PROGRESS.—Two more new Granges: one in Alabama and one in Pennsylvania.

"HAVE reorganized 17 Granges within a few weeks."—A. E. Page, Missouri.

THE Windham County, Vermont, Pomona Grange received 35 new members at its last meeting.

"Be patient, oh, be patient! the germs of mighty thought

Must have their silent undergrowth, must under ground be wrought;

But as sure as there's a Power that makes the years appear,

Our land shall be green with liberty, the blade time shall be here."

The Grange Gains Strength.

EDITORS PRESS:—After 12 months more have passed, it has been a great pleasure to meet again our very worthy secretary of the National Grange, Dr. John Trimble, at headquarters in Washington. Another year of work and anxiety, and of rather busier occupation, has brought no more wrinkles to Bro. Trimble's brow, and his good face bears that vigorous, cheerful cast which a successful year and health are wont to bring to all devoted workers in any cause.

I am sure many of your readers who are most interested in all that truly concerns the well-being of American farmers and American agriculture will be glad to know that an official and unvarnished report of the condition of the Order of the Patrons of Husbandry throughout the United States shows that the general condition of State and subordinate Granges is decidedly better than a year ago. It is a pleasure to inform you of the following official facts and figures, which our worthy secretary of the National Grange is willing to give me for your readers.

In the seven months since the last annual session of the National Grange, which was held in Philadelphia,

One Hundred and Thirty New Granges

Have been organized in the various States of the Union, as compared with only 91 during the same seven months of the last fiscal year. Indeed, I am very glad to learn from Bro. Trimble that this 130 is a larger number than were organized during the entire fiscal year ending last November. Bro. Trimble also informs me that more than three times that number of dormant Granges have been revived. This will make, you see, over 500 more subordinate Granges alive and working in the various States now than there were a year ago. This is certainly full of encouragement for the good cause. More than this, one more State Grange—that of Nebraska—has been reinstated by payment of back dues since the National Grange adjourned last December. There are now in all 34 State Granges in good standing, whose delegates will be entitled to attend the meeting of the National Grange at Lansing, Michigan, next November. This shows much greater strength and solidity than even the friends of the Grange have believed to exist.

The Finances

Of the National Grange, that backbone of every institution, are still in a very healthy condition, and its well-managed funds are ample to meet its current expenses, including the traveling and per diem of all State delegates to its annual sessions, which have always, under its organic law, been paid out of the treasury of the National Grange.

Such facts make it evident to both friends and

foes of the Order that our National Grange is likely to be what its motto hopes for—*Eato Perpetua*—"Let it be perpetual."

I am glad to see that dormant Granges, in the old field of my fraternal labors, California, are being reorganized, as is shown by the familiar pages of the RURAL PRESS, whose weekly visits are still most welcome in my home circle, in Alabama. Of my good friend, the RURAL, let me say with all sincerity, as of the work of the National, State, and subordinate Granges, *Eato Perpetua*.

J. W. A. WRIGHT.

Washington, D. C., July, 1887.

Bidden to the Feast.

EDITORS PRESS:—Alhambra Grange has a Harvest Feast Aug. 6th, and all Patrons are cordially invited to be present.

MRS. M. B. LANDER, Sec'y.

Martinez, July 26, 1887.

EASTERN PICNICKERS.—The fourth annual three-days' picnic of the Patrons of Delaware took place at Rehoboth beach, July 19th, 20th, and 21st, and was more largely attended than ever before. Illinois Patrons will hold their regular annual State picnic at Senachwine lake, in August, and it is to be followed by carefully planned "filled work" all over the State for several weeks.

THE Fire Relief Association (Grange), of Wayne county, N. Y., shows by its last annual report that it has \$1,760,000 of risks in force, a gain of \$340,000 over the previous year. The losses sustained within the year amounted to \$3371.75. The cost for the year was two mills on the dollar. The cost for nine years on \$1000 was \$5.23.

VALLEY GRANGE held its monthly social at Odd Fellows' Hall, Pacheco, Friday before last. The *Gazette* says that the attendance was large, a number having gone from Martinez to participate; dancing was kept up until a late—or early—hour, and all enjoyed themselves highly.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

HUGE CUCUMBERS.—Oakland *Enquirer*: In J. Hutchison's window are exhibited two cucumbers that remind one of Hercules' club. They were raised from seed imported from England by W. Hutchison, a brother of the florist, on the grounds of J. G. Eastland, in the foothills back of Temescal. They are of the variety known as the Telegraph, presumably because they aspire to attain the length of a telegraph pole. They are 21 inches long, and weigh respectively three pounds six ounces and three pounds two ounces. The seed was started in a frame, and when the plants were of sufficient size they were shifted to the open ground. Although these cucumbers are of giant size, the flesh is as fine-grained and as nicely flavored as the best of the ordinary ones procurable in the Oakland markets.

LIME VS. JUNEBUGS.—Livermore *Herald*, July 21: Julius Bohrer, who owns a fine vineyard and orchard a mile west of town, saved the apricot crop on his young trees from the Junebugs by the use of air-slacked lime. His trees were swarming with the insects, which had begun to destroy the fruit as fast as it ripened. He applied the lime by dusting it through the trees, with the result of driving away every bug and saving the remainder of the crop, unblemished.

THRIFTY VINES.—We examined Wallace Everson's vineyard yesterday. The first block is Charbono. These suffered a trifle from frost, but are well fruited and luxuriant. A portion of the vines of this variety were grafted out last season to Cabernet Sauvignon, Cabernet Franc and Petite Syrah. The growth of these grafts has been something prodigious. The main canes are from a half to an inch in diameter, while looking over the field there is very little difference between the size of the grafts and the old vines. Some have a dozen shoots each from four to eight feet long. Such a growth from a single bud in three months is almost beyond belief, and must be seen to be fully appreciated. . . . On the Crelin vineyard is a field of grafts on Charbono roots, put in last May. The growth of two months is almost beyond belief. It is the rank vegetation of a swamp rather than that of a gravelly loam. Each plant has from a dozen to 20 shoots, ranging from 6 to 20 feet in length. They are still growing with great vigor. Already cultivation is out of the question. This field is worth going a hundred miles to see.

Butte.

EARLIER YET.—Oroville *Register*, July 21: Last week we mentioned the first mowing machine in Butte. Mr. John J. Smith tells us that he ran a Hussey mower in Yuba, on the Quintay ranch four miles north of Marysville, as early as May, 1853.

YOUNG WOMEN HOMESTEADING.—Misses Fannie and Alice Orton of Berry Creek are doing what many a young man might be proud to do in the way of securing themselves homes. They each secured 160 acres of Government land and are now fulfilling the law requiring them to live upon the land and make the necessary improve-

ments. Each has a residence upon her quarter section, fences have been built and trees planted to test the land. It is found that plums, apples and prunes do splendidly, while all the small fruits reach perfection. There are many fine springs on the land.

Calaveras.

FARMS AND ORCHARDS.—Valley Springs Cor. San Andreas Prospect: Mr. Messenger is beginning anew on a portion of his old farm, having sold the improved portion to N. N. Craig, lately from Wyoming. He has planted about 300 fruit trees and a few vines, and expects to increase the size of his orchard the coming year. Mr. Craig is turning his attention to raising horses, having a number of very promising young ones now on the farm. The Morgan brothers and C. N. Stevens have planted eight acres in grapevines, which are doing finely. Mr. Nixere, lately of Tulare, has planted about 350 trees and some vines, and is also trying the bee business. Frank Costa purchased a fine tract of bottom land near town about two years ago, and planted in 1886 about 700 fruit trees, which have made such a fine growth that the eye loves to linger upon their luxuriant foliage. His success is because he diligently cultivated them. J. M. Lemon, formerly of Oakland, has a good claim and is wrestling with the chaparral problem. He is now growing about 10 acres of vines and fruit trees, which, though not irrigated, are doing as well as could be expected. His orange trees look thrifty, but are too young to be in bearing yet. He expects to plant a tract in olive trees next spring.

Contra Costa.

PRESSING HAY.—Concord Sun: Friday, July 15, Chas. Louis' hay-press pressed 29 tons 18 pounds. We doubt if any such amount of work in one day has been done outside of Contra Costa county.

THE CONTRA COSTA AGRICULTURAL SOCIETY met here Saturday. Certificates of stock of the new association are being taken rapidly. It was decided to canvass the county for a larger membership, so as to bring all points together and make a fair that will be ever remembered. No farmer, business man or mechanic can well refuse to take a share, if he has at heart the benefit of the county. The next meeting will be held at the fair grounds Saturday, July 30th.

Del Norte.

"PLENTY AS BLACKBERRIES."—Crescent City Record, July 23: Every day, men, women and children crowd the trains on their way to the blackberry fields in the logging woods. It is many years since blackberries have been as plentiful as they are this season. It takes but a short time for the vines to spring up in the woods that have been chopped over, and in a year the vines are ready to bring forth luscious fruit. Very pleasant parties are made up with the double purpose of a picnic and at the same time spending the day profitably.

Humboldt.

FROM BEAR RIVER.—Cor. Ferndale Enterprise: We are all busy from early morn to dewy eve, dairying, hay-making, etc.; also trying to entertain our many visitors from different sections of the county. We have had a very favorable year for dairying, as well as farming. I think we have the heaviest hay crops that we ever had, and a heavy growth of grass; consequently everything in the shape of stock is in fine condition, with good prospects of a fair price for butter, beef and pork, which is very encouraging to the dairyman and stock-raiser.

THE CANADA THISTLE.—Our friend Jas. Smith of Gravelly Point brought us a seven-foot Canada thistle Friday, which he cut from the Wm. Reese place on the Port Kenyon road. He says there are two bunches of these thistles on that place, the only ones he knows of in the valley. Some 20 years ago Mr. Reese sent to England for some grass seed, and in it was mixed a little Canada thistle seed, from which these two bunches sprung. It is almost impossible to kill this thistle after it once starts, and the roots grow to an enormous length. It stands every farmer in hand to know a Canada thistle when he sees it, hence we invite all who have never seen one to call at this office and take a look at the genuine article. The Canada thistle comes to stay, as the farmers on Arcata bottom can testify.

Inyo.

AN OWEN'S VALLEY FARM.—Independent, July 23: At Camp Independence S. A. Densmore has 320 acres of land. Forty acres are planted with alfalfa; this yields heavy crops each year. Forty acres are usually planted with corn, barley and wheat; crops are always heavy. There are now 175 head of cattle upon the place and the number is increasing. Ten horses are kept. Mr. Densmore now has about 2000 trees in bearing; many of these, however, are young trees, now carrying the first crop. He has already marketed some of his early apples and several of the trees have brought a return of \$20 each. He has also sold some early peaches at a good price. Twelve thousand young trees are set out, including apple, pear, peach, plum, nectarine, and other fruits, and quite a number are carrying their first crop. No one can look at the pear trees without being astonished at the quantity and excellence of the fruit. Vegetables of all kinds grow in profusion. When Mr. Densmore first began to set out fruit trees he practiced irrigation, but soon discovered that this was not necessary, and now does not irrigate his trees at all.

AN AGRICULTURAL ASSOCIATION has been organized at Bishop Creek. The articles of incorporation were filed with the County Clerk last Wednesday and bear the names of many citizens of Mono and Inyo counties. The directors are David Olds, W. C. T. Elliot, W. W. Collins, N. C. Young, Robert Love, J. R. Eldred, Andrew Dell and T. F. A. Connelly. All but two of these are residents of Bishop Creek.

Mendocino.

HERMITAGE JOTTINGS.—Cor. Dispatch and Democrat, July 15: People are jubilant over the prices realized from the sale of their wool. Large flocks of sheep are passing daily, and buying and selling is the order of the day. There is plenty of tanbark being taken to market, and it commands good prices. Pickets are in demand, as are also men to work them. It seems impossible to get men to work in the woods. The Dry Creek sawmill is about to begin sawing lumber on an extensive scale.

Merced.

A FATAL EPIZOOTIC.—Merced Argus, July 23: A disease prevails among horses and mules in this county that universally proves fatal and is becoming general on the farms and the canal works. The disease attacks the animal similarly to the distemper or glanders, but runs its course more quickly, and has proved fatal in every instance. The demand is for treatment that will not fail to cure. Henry Dewey, a large farmer near Plainsburg, says that he has lost 12 good work mules, and his neighbor, George Hannah, has lost six. The disease has broken out among the mules of the M. C. & I. Co., and farmers generally are becoming alarmed.

Monterey.

THRASHERS.—Salinas Index, July 21: Twenty steam thrashing machines are now in full blast in the Salinas valley, thrashing at least 1200 tons per day. The grain is yielding over 25 per cent better than was expected.

GRAIN AND HAY.—J. E. Heath, who farms in San Miguel canyon, raised this year 375 sacks of barley on 17 acres—over 22 sacks per acre. He also cut upward of 30 tons of excellent hay from 25 acres. Mr. Heath is a good farmer. He will plow his land soon and turn it over again before planting when the rain comes.

HORSES AT AUCTION.—T. G. Harris sold under the hammer here last Saturday, for the benefit of the Salinas bank, 24 head of horses, mostly young Norman stock. In order to give our readers some idea of what horses are worth in this section of the country, we append prices: A 3-year-old black filly brought \$175; 3-year-old gray horse, \$137.50; 3-year-old gray filly, \$142.50; 3-year-old bay filly (one eye), \$115; 3-year-old sorrel filly, \$118; 2-year-old bay filly, \$160; 2-year-old bay filly, \$140; 2-year-old bay filly, \$120; 2-year-old black horse, \$125; 3-year-old bay horse, \$102; total for the 10 head, \$1335. The other 14 head, mostly 2-year-olds, brought \$931.50, or an average of \$66.53½ each. The 24 head realized \$2266.50.

Napa.

VOLUNTEER BARLEY.—Register, July 22: Ike Orndorff harvested this year, off 35 acres west of town, 628 sacks of barley, each averaging 115 pounds to the sack. This crop was all volunteer, too.

POPE VALLEY GRAIN.—A. J. Dollarhide bought 1800 sacks for his crop, and was compelled to get 700 more. Robt. Harden, and other farmers in the valley, have also been agreeably surprised at the immense yield of their grain-fields.

Placer.

WHEAT HARVEST.—V. W. Still left at the Herald office, last Saturday week, a sample of wheat grown on the ranch of W. H. Murray, who lives on Dry Creek, in this county. The grain is large and plump, and bears no evidence of having been shrunk by the north wind. The wheat was reaped and thrashed by the combined reaper and thrasher, made by W. H. Murray and George Williams. The machine will reap 20 acres a day. Sixteen horses can run it, and only three men are required to manage it and sack the grain.

San Benito.

BARLEY IN ABUNDANCE.—Hollister Advance: Barley crops are turning out wonderfully. As the thrashing goes on it is found that the yield averages 30 bags to the acre. On nine acres near San Juan, H. Dowdy obtained 264 sacks, averaging 120 pounds each.

SOME HONEY.—John Sherman, the boss honey-raiser of Erie, will have about 15 tons of honey this season, which will bring from 14 to 15 cents per lb. in the market. John says it is an off-year for honey, too. If this be a fact, he must have kept his bees "wastlin." The honey is pure, and of a beautiful color.

FRUIT-DRIERS.—Free Lance, July 22: There are now four fruit-driers in full blast in Hollister and vicinity, with a capacity of seven tons of dried fruit daily. People now see the mistake that was made in not building a cannery this year.

THE CODLIN MOTH seems to have given San Benito county the go-by this year. The apple trees look very thrifty and are loaded with fruit, which has to be thinned extensively to keep the trees from breaking down.

San Joaquin.

CASTOR BEANS.—Stockton Independent, July 24: J. A. Sollinger of Woodbridge exhibits two spikes of castor beans grown by him. The longest is exactly two feet, and the beans are

as close and full on the stalks as it seems possible to grow. Several farmers in the vicinity of Lodi and Woodbridge, finding the experiment of 1885 successful, have cultivated from 1 to 60 acres of the beans this year. One of the pioneer cultivators says that at the price realized for the beans last year farmers can make \$35 an acre raising them.

San Diego.

LITTLE HONEY.—Viejas Cor. Record: Mr. Harbison, the famous apiarian, has a large number of stands of bees on his ranch here, but they are not making much honey. Mr. Cox, who has about 400 stands in the valley, reports but a poor yield of honey this year.

Siskiyou.

OFF SCOTT'S VALLEY.—Salmon Mountain Cor. People's Cause, July 17: This little nook is well watered, and the lands very prolific. This is mostly a stock-raising region. The farmers are busy cutting hay. Wheat harvest will not commence for two weeks yet. This is a great dairy country. Several of the ranchers milk 40 to 60 cows, and the butter and cheese made is excellent.

Solano.

THE TRACTION ENGINE A SUCCESS.—Dixon Tribune: Week before last the furnace of the traction engine was altered so as to burn oil instead of wood, and on Friday it was taken to McCune & Garnett's farm to test its capacity and practicability as a road wagon. Four "prairie schooners," loaded with 1½ tons of wheat, were coupled together and the engine moved off with them with perfect ease. The gauge showed a pressure of from 80 to 90 pounds of steam, and the train experienced no difficulty in moving up or down grade. One mile of the distance was made in 15 minutes, but such speed cannot be made with safety to such large and heavily loaded wagons. Three miles an hour can be made with perfect safety to both wagons and engine.

Sonoma.

OAT HAY.—Santa Rosa Republican, July 21: The largest crop of hay reported to have been raised anywhere this year was on the place of N. Zambellich, Sonoma avenue. From seven acres of land he obtained 28½ tons of oat hay.

HEAVY GRAIN.—Thrashing on the farm of H. M. Wilson, near Healdsburg, has just been completed, and the result was enormous. On 25 acres the average yield of wheat was 60 bushels to the acre. The average yield of barley was 90 bushels to the acre.

CHESTNUTS.—Petaluma Courier: Why don't our farmers plant more chestnuts? They grow and bear abundantly in this vicinity, and are a nut that is always salable. H. Meacham has a number of trees on his ranch on the Stony Point road that have been bearing for the last two or three years.

HOP OUTLOOK.—Democrat, July 23: As the hop-vine approaches maturity the prospect brightens. At first it was feared there would be less than an average crop, but the apprehension is likely to prove groundless, and the harvest bids fair to prove eminently satisfactory. A meeting of the Hop-Growers' Association will be held on the 30th, when the price to be paid for picking will be determined.

HORSES AT PETALUMA.—Courier: Horse-dealers and raisers, both farmers and liverymen, tell us that within the year ending July 1st, over \$75,000 have been paid for horses within the limits of Petaluma. Our farmers are all taking an interest in this industry, and Eastern men tell us that they have seen no county in the United States where stock, especially horse stock, presents a more advanced appearance in good blood than can be found in Sonoma county; and Petaluma is the principal market for them north of the bay. There are more horses selling here for from \$400 to \$500 a span than any other class.

Stanislaus.

LEMONS.—Modesto News, July 22: Mr. T. E. B. Rice brought in from La Grange three lemons, that surpass anything of the kind we have ever seen. Two of them measure 9x11 inches each, and the third 10x13 inches. The color is rich and the flavor fine. They were grown by Mr. J. A. Hammond, and of course, owe their size and beauty to irrigation. The trees have been given proper attention and all the water they required.

WHEAT AT TURLOCK.—Most of the farmers in this vicinity have got through with their harvesting. Wheat is coming in quite lively and it looks like days of yore. There has been more raised this year than many thought there would be.

Sutter.

A FINE YOUNG HOLSTEIN.—Sutter Farmer: R. C. Kells of this county sold Gen. Bidwell a 13-months-old Holstein bull calf. The animal was one of the handsomest we ever beheld. It had received no special care nor feed, but was in excellent condition. It was weighed on the Farmers' Union hay scales, and raised the beam at 905 pounds, surprising every one. Gen. Bidwell, we are informed, has always given preference to the Durhams and has been an extensive breeder of them. That he now comes to Sutter and pays \$150 for a yearling Holstein is significant.

CANNED 'COTS.—Marysville Appeal, July 22: The run on apricots at the Sutter cannery, just ended, resulted in the putting up of some 400 tons. About 5000 cases are of superior quality and intended for shipment to the East, where it not only brings a good price, but is a great advertisement.

TO REBUILD LEVEES.—The Sutter County Land Co. has resolved to rebuild and add the levees erected to protect its lands from overflow, which gave way two years ago during a high freshet. The work will be commenced early in the fall, and will involve the outlay of considerable money.

Yuba.

IRRIGATION ABOUT SMARTSVILLE.—Cor. Record-Union, July 19: When the mines were in operation many large ditches were required to bring the necessary water from the streams of the mountains, and now they are being turned to account as irrigating ditches by the Excelsior Water Co., which now has in operation 135 miles of ditches, carrying 6000 inches of water and capable of irrigating from 40,000 to 50,000 acres of land. About 15 miles of ditches were built last spring, and the work will be continued until there will not be much excuse left for the man who owns property around Smartsville and does not irrigate.

NEVADA.

EDITORS PRESS.—In Mason Valley, Nevada, the farmers are all cutting good crops of alfalfa. They had light showers July 17th and 18th, which interfered with haying. Some of them complain of being short of white labor. A great many of the natives (Pute Indians) are employed on the ranches in Carson, Smith and Mason Valleys. They are said to be good workers, but expect their pay every Saturday night or quit. W. B. Sanders, Mason Valley, has 150 acres in alfalfa from which he cuts two crops, and the rest goes for pasture. He has several acres in apple trees and some good-looking corn and currants. At Mr. Barrett's place I was shown some very fine potatoes. Mr. B. received a premium for his potatoes at the last Reno Fair.—F., Bodie, July 25th.

LIVE-STOCK TO BE SHOWN.—E. C. Hardy, of the Oasis Ranch Co., informs the Stockman that he will exhibit at the State Fair six Norman-Percheron stallions, and possibly Gallo-way bulls and thoroughbred merino sheep. It is such men as Mr. Hardy that develop an industry, and it would be well for the stock interests of Nevada if other breeders follow his example.

OREGON.

CROP PROSPECTS.—Willamette Farmer, July 22: The protracted dry weather has affected fields and gardens to some extent, but not seriously. Winter wheat is not as good a crop as was hoped, though it generally will turn off a fair yield. Spring-grown wheat is light, but oats have generally done well. It has been an unusually good season for oats, and meadows have done fairly, though an impression prevails that hay will bear a good price before another hay harvest comes. It cannot be claimed that crops in Western Oregon are first-class, though they generally are fair....Portland Rural Spirit, July 22: Several gentlemen who have had opportunity to form an opinion say that the fall grain in Willamette valley is not going to come up to expectations; wild oats are very abundant, and the spring grain will certainly be below an average.

MERINOS.—The 20 Spanish Merino rams, purchased by the Baldwin Sheep & Land Co., were taken to The Dalles by boat and sheared before starting them out to their future home. An eye-witness to the shearing and a judge of sheep informs us that he never saw the equal of these animals, as to carcass and length of wool. The breeders of Eastern Oregon are to be congratulated.

WASHINGTON.

FROM THE WHEAT FIELDS.—Willamette Farmer, July 22: Aaron Parker arrived in Walla Walla to-day and reports grain in the country back of Lewiston the heaviest crop ever harvested. He says he never saw in any country a stand of wheat so heavy for the amount of straw. The yield is estimated at 20,000 tons between Lewiston and the reservation line. The steamer Almonta is the only boat now running on Snake river. The Gates and the Spokane are now at Riparia, ready to commence removing the crop, but the efforts of the three boats will make no impression on the amount of wheat waiting shipment....It is understood here that crops in Asotin county, W. T., are burning up with intense heat. Possibly there will be a half crop. Fall-sown grain will not exceed 20 bushels, while the spring crop will fall below that figure.

MUSTERING FORCES FOR THE FAIRS.—It is announced that the supervisors of Nevada county have appropriated \$1000 from the General Fund with which to have a county exhibit of fruits, farming products and minerals at the State Fair and Mechanics' Fair. Great efforts will be made to render these displays the best and most comprehensive on exhibition. Placer and Sonoma, also, are getting ready to sustain the reputations won by their exhibits at the Mechanics' Fair in former years, while notes of lively preparations for handsome showings come from Humboldt, Santa Clara, San Luis Obispo and other counties.

We desire to acknowledge the courtesy of the directors of the Sonoma County Agricultural Park Association in sending us a complimentary ticket to their Ninth Annual Fair, which is to come off at Santa Rosa August 22d to 27th.



Booming.

From Coronado's famous beach
Where sun-lit waves are spuming,
To Monterey by coastward reach
The booming land is booming.

Like hives aswarm our hotels hum,
Where hustling guests are rooming,
And still the cry is, "still they come,"
And property is booming.

The man who sells "way up" to-day,
To-morrow finds him fuming:
"Zounds! what a chance I cast away
Just in the bud of booming!"

In dreams before our startled eyes
What prospects grand are looming!
Each day we rise to realize
The boomous boom more booming.

Our whilom grass-grown avenues
Grand city airs assuming!
There lightning's news and light diffuse,
Illuming still the booming.

With dash and vim and enterprise
See eager faces blooming!—
O Argus! lend us your keen eyes
To see whereto we're booming!

O Speculation! set your groom
Your swift steeds to grooming.
For only steed of cyclone speed
Can trot abreast this booming.

Lo, every day the priest of time
Some hobby old entombing!
I'll bet two bits against a dime,
That in the zenith of your prime,
When hope rang wildly as this rhyme
The coming pesos' pleasant chime
Above Despair's entombing,
Of all your dreams the most sublime
Weren't zero to this booming.

The poor man prays, the rich man prays:
"O Fate, forbear our dooming!"
O from our eyes wipe all dull haze!
Do thou, we beg, in mercy blaze
The path that leads where bargain lays;
O pardon all our shuffling ways
To ride this boom and make a raise!
And finally, while traffic pays,
In mercy lengthen out our days
To swell our fortunes. And the praise
Be thine forever"—booming.

—Santa Barbara Independent.

What Polly Frost Has Learned About Partnership.

[Written for the RURAL PRESS by M. P. A.]

If there is any one thing which recompenses me for my wrinkles and gray hairs, it is the wisdom I have attained with years. When Tom and I were married we were both of us laboring under a great mistake in regard to the partnership into which we were entering. Tom thought that with all his goods he did endow me, and that an undivided half of all his belongings being mine, and our partnership being for life, our interests were so united that he might venture to treat me with the same respect he would have shown to any business partner whose interests were less closely allied to his own.

Tom is not so blessed with that valuable commodity, self-esteem, but that he thinks "two heads are better than one," and so he has liked to consult me about his business affairs. He might have gone on in this way of thinking (for our friends who came to visit us, and to eat at our board, took no pains to set us right, kindly thinking if we were satisfied they could afford to allow us our little peculiarities). But we soon began to hear that the men who lounged about the store, or bar-room of the one hotel of the neighboring village, and the women who were not sufficiently occupied with their own affairs not to take a lively interest in others, said: "Mrs. Frost was going too far;" "Mrs. Frost was going to rule things;" "Mrs. Frost was wanting to run the ranch;" and we began to hear considerable sympathy expressed for Tom, though some said "Tom Frost was mean-spirited to let a woman rule him."

Now, human sympathy is a rare commodity, and I am very much obliged to these good people; but I do feel mortified to think I should have caused Tom to be called mean-spirited, and I do wish he had set me right on this matter, for having considerable regard for Tom, I usually see things pretty much as he does. I think back with surprise at some of the blunders I made before I learned wisdom of these philanthropic strangers.

Now Tom has a fashion of being from home sometimes, and one of his blunders is that he has an idea that my interests being so associated with his, I will look better to his affairs than some man who has had half a dozen homes in as many months; so when he leaves home he will say: "Now, Polly, take good care of everything while I am gone."

One of these times, when Tom was away from home, I stood by the pantry window making

pies, when I saw the hired man hitch the team (one of which was a fractious colt) to the plow, and then, mounting the more quiet horse, he started for the field, the plow dragging at the horses' heels. Now I knew that colt had very strong opinions of her own, and should the plow so much as touch her heels she would give such forcible expression to her ideas as to result seriously to all concerned; so I went out and mildly suggested that the man walk, and hold the handles of the plow, and of course the next time that man went to the village store he declared that Mrs. Frost did not allow him to ride to the field, and of course people were justly indignant.

Upon another occasion Tom was mowing and I was obliged to see about selling some butter. The hired man drove the team, and when we returned he undid the breast-straps and let the buggy tongue down, the horses still being fastened to the buggy. I am sorry to say that, knowing if those young horses started the buggy would go to pieces just as the deacon's masterpiece did, "all at once, and nothing first, just as bubbles do when they burst," I so far forgot myself as to tell the young man that it would be a little safer to undo the traces first.

In our early married life Tom sold a horse about which I felt very sorry, the more so because the \$100 he was to receive for it came so slowly, sometimes \$2.50 at one

his trip and left the little month-old colt at home. He had upon other occasions allowed it to follow its mother, but doubtless "his mind on more important matters ran" than so small an equine specimen. Now in the light of the wisdom of years I understand that the proper thing for me to have done would have been to have gone to the pasture, a mile away, and driven up a fresh cow and milked her, and proceeded immediately to bring that colt up by hand, as was Dickens' little Pip. But what I did do was to call loudly for the man to return for the colt, already calling excitedly for its mother.

Tom has a way of employing a good many men. One of these—a good, faithful soul—had a peculiarity of not being able to distinguish one cow from another, and being anxious to attend well to his work, this little peculiarity, trifling as it may seem, caused him to frequently milk the same cow over four and five times. He would seat himself, adjust his bucket and begin to milk; but after the first milking, not finding the milk, he thought the bossy failed to give it down, so he would pat her and speak encouragingly and repeat his efforts, and the long-suffering cow would remain quietly chewing her cud. Thus considerable time would be consumed at each milking, for that man's patient waiting was something marvelous. I did feel anxious to mention the fact to him upon some of these occasions, that the cow he

of the nation, like helping to put good men in authority, would be. As to this matter of the partnership between Tom and me, my mistakes really seem unnecessary, as there are many ways in which these kind people who have remarked upon my blundering would consider me an equal partner with Tom. If there is a colt or calf to be brought up by hand, any one would consider me an equal partner with Tom, and would think I should be willing to take these minor matters off his hands. Of course when the colt becomes a horse, or the calf a cow, the partnership would, to all intents and purposes, cease, for as to the selling any of the farm-stock a woman should understand that it is not considered proper for her to have a voice in the matter.

There is one subject upon which these people, who have been so shocked over my mistakes about my partnership with Tom, are very certain, and that is, that in regard to work I am equal partner with Tom; that it is my right to rise as early as he, and work as late, and when Tom's long day's work is at last finished, and he sits down to read politics, there is no one who would object to my using the extra hour of quiet to doing up the supper work and getting everything ready for breakfast, so that I might have time to milk a few more cows in the morning.

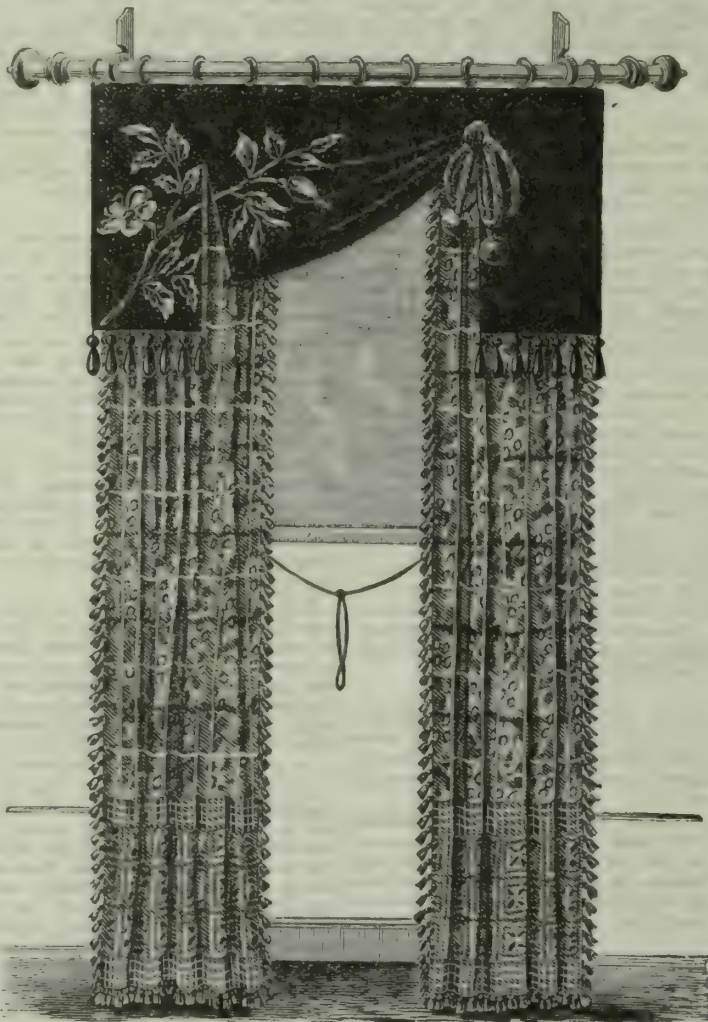
But Tom has some very old-fashioned notions, one of which is, "Woman's strength is to man's strength as sixteen is to twenty-six;" therefore he will occasionally give up his nightly reading, though he is very fond of it, and help me through with this last hour's work. Now this is very indiscreet of Tom, for if there is anything which makes people who are inclined to be a little critical decide that a man is a henpecked husband, it is seeing him engaged in the occupation of washing kettles and frying-pans, which occupation is exceedingly feminine in its character.

MORE LAUGHTER.—The man whose "Ha! ha!" reaches from one end of the street to the other may be the same fellow who scolded his wife and spanked the baby before he got his breakfast, but his laughter is only the crackling of thorns under the pot. The man who spreads his laughter through his life, before a late breakfast, when he misses the train, when his wife goes visiting and he has a cold supper, the man who can laugh when he finds a button off his shirt, when the furnace fire goes out in the night and both of the twins come down with the measles at the same time, he's the fellow that's needed. He never tells his neighbor to have faith; somehow he puts faith into him. He delivers no homilies; the sight of his beaming face, the sound of his happy voice and the sight of his blessed daily life, carry conviction that words have no power to give. The blues flee before him as the fog before the west wind; he comes into his own home like a flood of sunshine over a meadow of blooming buttercups, and his wife and children blossom in his presence like June roses. His home is redolent with sympathy and love. The neighborhood is better for his life, and somebody will learn of him that laughter is better than tears. The world needs this man; why are there so few of him? Can he be created? Can he be evolved? Why is he not in every house, turning rain into shine and winter into summer all round the year, until life is a perpetual season of joy?—*Indiana Farmer.*

NOT HONORED AT HOME.—As water seeks its level, so does the village instinctively tend to maintain a certain moral and intellectual uniformity. The man of exceptional ability is sooner or later expelled by the body politic. He is mistrusted, disliked, and finally ostracized. Nor is he himself slow to take the hint to depart. He perceives that there is nothing for him to do at home. He forges restlessly about for awhile, trying this and that, and effecting only mischief; everybody surmises an evil destiny for him; he puts on his hat and departs, in despair or anger; and presently the world recognizes and celebrates his genius. But his native village never swells the chorus of praise. They have known him from a baby; he cannot humbug them! Did he not steal apples from farmer Hoyt's orchard? Was he not the slowest hand at a spelling-match in school? Did he not jilt Mary Jane after everybody had agreed that he would marry her? Go to, then! Can such a fellow as that invent a navigable air-ship, or write a classic book, or create a successful railroad? He is only Jack Smith, after all is said and done, and, among those who know him, will always have a Jack Smith reputation.—*Julian Hawthorne, in The American Magazine.*

Window Drapery.

The engraving illustrates a rich and handsome drapery for a window. The curtains are of Madras in Persian colors, and are edged all around with tiny, fluffy tassels of floss, showing all the colors of the material. The lambrequin is of plush lined with silecia. It is mounted on a pole with rings, and is elaborated by a decoration of Karsheedt's standard satin floral applique embroidery at one side, a bunch of cord tipped with large pompons where it is plaited up, and a row of pretty pendants along the lower edges of the tab-like sides. The pattern will develop handsomely in all materials used for lambrequins. Any style of pendants may be used, and ribbon may take the place of the cord.



DRAPERY FOR WINDOW.

time, and a good share of it never came at all. Well, I so lacked wisdom that I said, in Mrs. Deacon Gay's presence, that I was sorry Tom sold the horse; but Mrs. Gay brought me to a proper sense of the impropriety of expressing opinions about Tom's affairs by saying, with severity, that she took no interest in what horses the deacon bought or sold.

I knew there were other subjects in which Mrs. Gay took no interest. She seemed to take none at all in the deacon's cooking the breakfast, so that he was often kept waiting after he had prepared the morning meal till the partner of his joys should rise, dress herself, and share with him the good things he had labored to cook and to keep warm for her. I could not help thinking (for our thoughts are sometimes unruly) that if Mrs. Deacon Gay would milk as many cows before breakfast as I had all the summer through, and then prepare the morning meal for as many persons, she might take a more lively interest in the deacon's affairs.

But returning to the subject of the mistakes I made before I learned the real state of the partnership existing between Tom and me, I used to blunder a good deal in Tom's sick spells; for Tom does have a way of being sick sometimes, and when such is the case he always seems better satisfied to have me look after things. It is a way he has, and all these philanthropic people cannot rid him of it, for it is just as sure to come with all his sick spells as the symptoms of pneumonia follow one of his colds. "Now, Polly," he will say, "look after things the best you can while I am laid up."

Upon one of these occasions Tom was in bed, and the man-of-all-work was sent from home to be gone three days. Well, the man started on

had been expending so much time upon had already been milked; but I did not know how much liberty was deemed proper for a woman to take in the green isle from whence this man had come, therefore I held my peace.

One peculiarity of a large share of the men Tom employs is, they will leave gates and bars open. Of course these men are voters, and I could hardly be expected to understand how heavily the affairs of our nation rest on these men's shoulders; therefore I must confess with mortification, I have sometimes called after a man, whose mind on some "more important matters ran" than the mere shutting of a farm gate, and asked him to close it after him, thinking more of the sad havoc the animals anxious to take advantage of the man's preoccupation would make in the growing grain or grass than of being in sympathy with the weighty matters which may have caused his preoccupation.

Now, in the light of the wisdom of years, I know that men do not take it kindly to be reminded of the minute details of life by one of the weaker sex, and I understand what my duty in such a case is, to simply adjust the meal which I may be cooking properly upon the stove (for men like their food well cooked), and to take baby under my arm, so that he will not fall into the bucket of scalding water I have had ready for the scrubbing, or meet with any other like disaster, and go quietly and put up the bars. If unluckily I am too late, the proper thing to be done in such a case is to find a place of safety for baby and go quietly and drive back the stock which has been so eager to gain the pastures new; for men above all things like quietness in women, whose weakness unfits them for bearing the heavy burdens

Woman and Her Mission.

[Written for the Press by C. J. H.]

What was she destined for by the great Creator?

I seem to hear some relic of antiquity exclaiming: "Who doesn't know what she was destined for? She was to be subject to the will of the man, take care of the house, raise children, and perform any other duty he may be pleased to assign her."

Now, that is all very well, so far as it goes; but it does not altogether satisfy a woman.

We are told that Adam was set over all that was created before him, but he had not yet a mate. So a deep sleep was made to fall on Adam and a rib was taken from his side—a bone—earth doubly refined into a form almost indestructible—and thereof the woman was fashioned. As the bone is in nowise inferior to the flesh, we infer that she was to be fully his equal, and as the bone is the prop of the body, so the woman gives form and strength to the visible as well as to the invisible body, according to her knowledge and ability.

Take a woman who is vain, selfish, given to appetite, with no self-government, vicious, and we have a very hotbed for the propagation of evil progeny. Christ said: "Do men gather grapes of brambles or figs of thistles?" Such women are human brambles and thistles, and we cannot expect much good of them.

In both the Old and the New Testament women are compared to grapevines. One of the prophets said: "Your mother is a vine within your blood, which vine hath many branches," and as a vine is a growth produced by what we term natural causes, every babe is, figuratively speaking, a branch from the parent vine. The wild grape is a very inferior and comparatively worthless fruit. It is better to let the wild vines grow together and tend them, and the same also.

Now what are we to understand from this illustration? Simply that a man of refined tastes and cultivated mind should never join himself with an uncultivated woman, nor one of evil habits and desires; for if he does he will find his own posterity degenerate, and of course he cannot be happy under such circumstances. But if perchance a man join himself to a woman of higher culture, nobler mind and greater abilities than himself, then happy is he; for his children will far surpass him and he will be justly proud and happy, at peace with himself and blessed on earth. He will find that his children have partaken of the good qualities of the parent vine and developed far beyond his expectations; that the mother-vine has exerted every energy to bring her fruitage to perfection and has perchance surpassed herself. "The builder is greater than the house, but the builder receives not the honors, but the house." It is the father's name that is handed down and glorified, not the mother's who performed the work. The mind of that parent vine goes deeper than we can see.

But Christ said it is better to let the wild vines grow together and tend them. What do we understand by that? If two persons of uncultivated minds are joined together, they do not realize their own roughness, so to speak, and so are happy with each other; and by throwing good influence around them we may bring them and their children to a higher state of culture, and so in time bring the wild vines to such utility and beauty as to be a joy to all beholders.

But where two cultivated vines are joined together, what a thing of beauty! The same hopes, joys and inspirations! "O Love divine, how pure a thing thou art!" Nothing to mar the happiness of each other, and they realize that the will of God is being done on earth as it is in heaven.

So we find that woman was not only destined to bring forth and rear the coming man, but she molds his future, either to be an honor and glory to God or the reverse, according to the light that shines in her own heart.

Then educate the woman. I do not mean in all the follies of the day, but educate her as you would educate your boys, to be a useful, thinking member of society. Fortify her mind with a knowledge of the evil as well as the good that surrounds her (she does not need to enter into all the evils as Solomon did), in order that she may not only know how to shun the wrong herself, but be a safeguard for her children and guide their tender feet in the paths of right. Her children are her treasures. We are told that had the rich man known in what watch the thief would come, he would have watched and not allowed his house to be broken into; and if the mother is forewarned just where the danger lies, she will watch with such wise diligence that the thief will have little chance to carry off her treasures captive to vice. The average man seems to think he is doing woman a kindness by keeping her in "blissful" (?) ignorance of the dangers that surround her and her little ones. He would fain believe that he is doing a deed of charity in what he terms protecting her from a knowledge of all the evils that are likely to beset her treasures at any unguarded moment; but he is mistaken. "Knowledge is power," and if the mothers be fortified with knowledge, they will so strengthen their defenses as to baffle the enemy that would carry off their treasures, even if they be not strong enough to destroy him.

YOUNG FOLKS' COLUMN.

Fan's Vanity—A True Story.

She was a beautiful black horse, with gray mane and tail. Her smooth sides shone like two mirrors, and her neck arched with that proud curve that needed no "over-check."

She was that rare thing, a perfectly sound horse, with no bad habits or tricks of temper, and with wonderful powers of speed. No touch of whip or rein was needed to urge her on, but at a soft word from her master or mistress, away she went, her shapely feet twinkling in the air.

She had known but one owner, who brought her up from a colt, and she had been petted and played with by the whole family.

From the time she was six months old she had been in the habit of coming to the house, whenever the way was open, to be fed on sugar. She also dearly loved warm doughnuts, and when they were frying her delicate scent never failed to detect it, and if she was loose in the barnyard, and the gates were open, she would come trotting up to the kitchen door and ask for one with her gentle whinny.

One beautiful summer morning her owner, on going to the field, found a handsome little bay colt lying by Fan's side, so after that she was allowed to run in the pasture lot that adjoined the barnyard. From this barnyard, a long lane, with a gate at either end, led down to the road. These gates were usually kept closed; but one day the men carelessly left them open, and, by an odd chance, the one that led into the front yard was also left open.

Fan's mistress was very busy in the kitchen, when she heard footsteps enter the front hall and pass into the parlor. She hastily wiped her hands and started to see who her visitor was; for she remembered she had left the front door wide open, so that the cool breezes might come in, and she feared a tramp had also entered, for the footfalls sounded very heavy. What do you suppose she saw when she came into the parlor?

There stood Fan and her colt before the long mirror. Fan was holding her nose close up against the glass, as though she thought her image was another horse. But her mistress said, "O, Fan, are you growing vain?"

She whinnied softly, as if to say, "Have I not reason to be?" What do you suppose she was thinking about?

Perhaps she thought, "That is a very handsome horse in there, but the colt looks very much like my own."

Tommy and the Berries.

The father sits in the garden and reads a newspaper. His hopeful, bandy-legged son toddles about hunting for blackberries. Tommy waddles up to his parent and asks:

"Papa, have blackberries got legs?"

"Of course they haven't got any legs. Go away now, and don't ask any more foolish questions when I am busy reading."

Tommy toddles around, but seems to have something on his mind. He toddles up to his father and says:

"Papa, oh, papa!"

"What do you want now, you little scamp?"

"Pa, blackberries have got legs."

"Nonsense. They haven't got legs, you foolish boy."

"Blackberries got no legs?"

"No."

"Then I has just eaten up a straddle bug."

A Busy Family.

DEAR EDITORS OF THE PRESS:—We live in Livermore valley, and my father has 320 acres of land, and we have a vineyard of 50 acres, and it will bear this year a great deal of grapes.

We have five cows. I have to milk two, and my sister has to milk one, and my brother next to me two cows.

My smallest brother has to herd pigs, and my brother has to herd horses. I am 13 years old last March. My father has taken the RURAL PRESS for 16 years, and he likes it very much.

We have vacation in our school for nearly a month. It will open again on August 1st; there will be about 40 scholars. Mrs. Gregory will teach, and I think she is a good teacher. Livermore. BELLE.

A FABLE.—Once upon a time, a bird, a mouse and a German sausage set up housekeeping together. The bird used to fly into the wood and bring back sticks to make the fire, the mouse fetched the water and spread the tablecloth, the sausage cooked the dinner. How she cooked it was in this way: when the pot boiled she dipped herself into the soup to flavor it—that was all. One day when the bird was picking sticks, he met a friend and told him about the housekeeping and how happy he was; but the friend exclaimed: "What! you do all the hard work! Make the sausage get the wood, do you fetch the water, and set the mouse to do the cooking." So next day the bird said he would not get wood any more. The sausage went out to look for

sticks, but she never came home, for a dog ate her; the bird tried to draw the water, but he overbalanced himself and fell into the well and was drowned; and the mouse, dipping herself into the boiling soup, was scalded to death. Moral: Let each person do his own work.—From the German.

BETSY FUDGE.—Betsy Fudge was a cat with a white coat. Taking her bath in the shed one day, she spied a plump sparrow, which she thought would make a nice dinner. Not noticing a tin boiler drying in the doorway, she made a rush for the bird, overturned the boiler with a crash, and away flew Betsy's dinner. Her mistress had a pair of canaries given her, whose cage hung over the piano, on which the cat had had her nap for years; but as she did not disturb the pretty birds, she was allowed to keep her old place. Winter nights the cage was put on the piano, so Betsy had to have her warm bed in the cellar. One night she hid under the sofa and did not stir when called as usual to be put to bed; but in the morning there she was rolled up like a ball against the cage, and Charley and Fanny were chirping and pecking at her in a very friendly way. After that, they spent many nights on the piano; for, though the cat caught many birds, she never molested the canaries.

GOOD HEALTH.

A MANIA FOR DOSING.—It is about time to organize a movement for preventing the intemperate use of "temperance drinks." The manner in which mineral waters, acid phosphate, "nerve food," and "lactart," are swallowed at all hours of the day, and by all sorts of men, with no real knowledge of their nature or effects, is quite astonishing, and in many cases, no doubt, almost as pernicious as the habit which it in a measure supersedes—the taking of the matutinal cocktail, the midday beer, and the postprandial wine or spirits. Much of this guzzling is due to the mania for dosing, which is almost a national characteristic. If, owing to improper eating or any other cause, a man "doesn't feel just right," the first thing he does is to take a drink of something, hit or miss, while, if he "feels bad," a dose of patent medicine, or some other nostrum, follows. Some of the preparations are, perhaps, harmless, but others are obviously of so potent a nature that they should be used sparingly, and commonly only upon the advice of a physician. To burn the stomach with acids, or purge the bowels with mineral drinks, in the hap-hazard manner often indulged in, is to trifle recklessly with the health. For a person in an approximately normal condition there is no need of either stimulants, tonics, "nerve foods," purgatives, or other disturbers of nature. Good plain food, fruit in abundance, milk, eggs, with a moderate supply of water that is cool, without being iced, or tea and coffee for those who must have "something else," constitute a summer regimen that is not improved by dosing of any kind.

HOT WATER TO RELIEVE THIRST.—It is a mistake to suppose that cold drinks are necessary to relieve thirst. Very cold drinks, as a rule, increase the feverish condition of the mouth and stomach, and so create thirst. Experience shows it to be a fact that hot drinks relieve thirst and "cool off" the body when it is in an abnormally heated condition better than do ice-cold drinks. It is far better and safer to avoid the free use of drinks below 60°—in fact, a higher temperature is to be preferred; and those who are much troubled with thirst will do well to try the advantages to be derived from hot drinks instead of the cold fluids to which they have been accustomed. Hot drinks also have the advantage of aiding digestion, instead of causing debility of the stomach and bowels.

WORMS IN EGGS.—DON'T EAT THEM RAW.—Professor Liebe adduces reliable data in answer to the question whether living worms are to be found in hens' eggs. A short time previously his sister had found a round, thread-like worm, the length of a little finger, in the white of an egg. It moved itself in a very lively manner. She at once took the white of the egg to a druggist, who put the worm in alcohol. Professor Mobius of Kiel decided that the specimen was an example of the thread-worm of fowls—*Heterakis inflexa*—often found in the small intestine of the domestic hen. Only a few instances of the existence of the same in the white of the egg have been recorded.

HOW TO TAKE TONICS.—Bitter tonics, as quinine, should be taken half an hour before meals; iron, oils and acids, after eating, that they may be digested with the food. Iodide of potassium is always given after meals; it is then said to be less liable to disorder the digestion. When a tonic is ordered to be taken, the doctor should be asked whether it is to be given before or after meals.

THE GREEN DIARRHEA OF INFANTS is, according to Dr. Hayem, caused by a microbe which secretes the coloring matter characteristic of the complaint. The disease is epidemic and contagious. The best treatment, he said in his communication to the Academy of Medicine, is to give the child after each feeding a teaspoonful of two per cent lactic acid.

DOMESTIC ECONOMY.

A "Practical" English Dinner.

Some of our readers may like to try what we see described in one of our London exchanges as a "practical" English dinner. It is as follows: Menu.

Consomme a la Royale. Salmon with fennel sauce. Epigrams of lamb and asparagus. Roast veal; salad. New potatoes. Cheese omelet. Neapolitan cake.

Consomme a la Royale.—Mix the yolks of six eggs with rather less than a gill of cold water and a pinch of salt; strain the mixture and divide it into three equal parts; color one with some cochineal, the other with spinach green, and leave the third plain. Put them into three small plain molds, previously buttered, and set these in a pan of hot water, which place on the fire to boil just long enough to set the mixture. When the water in the saucepan has become quite cold, turn out the contents of each mold on to a wet napkin, and you will have three small cakes of firm custard, respectively green, red and yellow. Cut them into small dice, and, handling them in the gentlest possible manner, spread them out on a plate to be kept till wanted. At the time of serving, put a clear and well flavored consomme (clear stock) into the soup tureen; slip in carefully the custard dice, and serve at once.

Boiled Salmon.—Take a piece of about 3-lb. or 4-lb. weight cut from the middle of the fish, lay it in the fish-kettle with enough cold water to cover it well, add plenty of salt, and as soon as the water is on the point of boiling, draw the kettle by the side of the fire and let the contents simmer gently until the fish is done (about five or six minutes). Take it up and lightly touch up the skin with a feather dipped in salad oil. To make the fennel sauce, blanch a small quantity in boiling salt water, take it out, dry in a cloth, and chop it finely; melt three ounces of fresh butter, add rather more than a tablespoonful of flour, mix well, put in pepper and salt to taste and about a pint of hot water; stir on the fire till the sauce thickens, then stir in the yolks of two eggs beaten up with the juice of a lemon and strained. Add plenty of the chopped fennel, and serve.

Epigrams of Lamb.—Braise a piece of breast of lamb in a stewpan with a little water and some onions, carrots, celery, whole pepper, salt, cloves, parsley, and sweet herbs to taste. When sufficiently cooked to allow it, pull out all the bones and put the breast between two dishes with a heavy weight on it. The piece of breast being quite cold and flat, cut it out into small cutlets; egg and breadcrumb them, then fry them a nice color in lard, and serve. Serve with asparagus in the center of the dish. Take a quantity of small asparagus (sprue), cut the edible part into pieces three-eighths of an inch long, throw them into boiling salted water and let them boil for five or ten minutes, drain and toss them in a saucepan with plenty of butter and a sprinkling of pepper.

Roast Veal.—Take from four to six pounds of the best end of the neck of veal, trim it neatly, and joint the cutlets. Put it to roast at a very moderate fire, and baste it plentifully every ten minutes, first with butter and then with its own gravy. It will take one hour and a half to two hours. During the last quarter of an hour bring the joint nearer to the fire and sprinkle it plentifully with salt. Serve with the gravy over, carefully strained and freed from fat, and with the juice of a lemon and a small piece of fresh butter added to it.

Lettuce Salad.—Wash two heads of lettuce, dry them thoroughly, and break the leaves or cut them into convenient pieces; put the yolks of two hard-boiled eggs into a basin with a teaspoonful of mustard, pepper and salt to taste, and one tablespoonful of oil; work the mixture into a smooth paste and add consecutively three tablespoonfuls of oil and two of tarragon vinegar; then add a handful of garden-cress and a little tarragon finely minced, and the whites of the eggs coarsely chopped. The mixture must be well stirred. Lastly, add the lettuce, turn it well over, and serve.

New Potatoes au Beurre.—Choose smallish potatoes and all of one size, put them in a stewpan with plenty of butter and a good sprinkling of salt; keep the saucepan covered, and shake it occasionally until they are quite done, which will be in about one hour.

Cheese Omelet.—Beat up three eggs, with pepper and salt to taste and a tablespoonful of grated Parmesan cheese. Put a piece of butter the size of an egg into the omelet-pan; as soon as it is melted, pour in the eggs, and, holding the handle of the pan with one hand, stir the omelet with the other by means of a flat spoon. The moment the omelet begins to set, cease stirring, but keep shaking the pan for a minute or so; then with the spoon double up the omelet and keep on shaking the pan until the under side is of a good color. Turn it out on a hot dish, colored side uppermost, and serve quickly. N. B.—The cheese should be of good quality and grated at the time, not the musty powder which often does duty for Parmesan.

Neapolitan Cake.—Take of powdered lump sugar the weight of 12 eggs in their shells, and take half that weight of potato flour; separate the whites from the yolks of the eggs, beat up the latter with the sugar, adding the grated rind of one lemon. Whisk the whites to a stiff froth, mix the two together, and incorporate with the mixture, quickly and effectually, the potato flour, beating it all the time with the egg whisk. Pour into a plain mold, buttered. Bake in a quick oven until done. When cold, cut the cake in horizontal slices half an inch thick. Make a strong syrup by boiling one pound of sugar with half a pint of water, add to it a little more than one-quarter of a pound of chocolate, grated. Stir the mixture on the fire until it becomes perfectly smooth. Spread half the slices of cake with apricot jam, and half with the above chocolate icing. Arrange the slices one over the other, so as to form the cake again. Trim the slices neatly, and ice the cake completely over with the chocolate icing. This must be done quickly, and the icing should be kept hot, for it soon sets. Ornament the cake with bonbons or sweetmeats, which must be put on before the icing has time to cool.



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W. B. EWER.

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The Week.

There is much action in the affairs of the week. Wheat has sped upward, and, according to reports, farmers are quite willing to be rid of it at current rates. Shipments from the country to loading points are large and frequent. Fruit is going eastward more freely. Three full trains and numerous cars by passenger train are set down for this week's work, and daily trains are anticipated. So far as we hear the fruit is bringing satisfactory prices at the East. Canned fruit is also being shipped in considerable quantities soon after tinning. There seems just now to be a rivalry between the Canadian and our own lines which is making very pleasant prices for shippers of both canned and dried fruits. On Saturday there was a difference of about \$40 per carload in rates, the Canadian line doing that much better and getting the traffic, but lower routes propose to meet the rate. That Canadian road is a fine concern.

Crop reports from California fields continue favorable in the main, and the output for the year, counting in all values, will be large. Land matters are still active, and large sales in old and new localities are the stock items in the interior press. And still they come hungry for California land, is the remark of those who are watching incoming trains.

Unwhipped of Justice.

We chanced to be domiciled in a hotel in Sacramento during last State Fair at the time that a burglar ransacked a number of rooms and robbed a number of people. He was too smart a burglar to waste his time examining an editor's pockets, but he took considerable sums of money from other people, and in some cases from people who could ill afford to lose it and were thereby obliged to change their plans for State Fair business and recreation. It was a glaring outrage; the perpetrator was speedily caught with the spoils and with the implements of the housebreaker upon him, but he is now allowed to go unpunished because the courts are unable to secure his conviction. We are not surprised that the *Record-Union* becomes indignant at such a balk of justice. It is a disgrace to the city and to the State. The instance is fitted to call wide attention to the weakness of our courts and to the carelessness or corruption of those who should be ministers to justice instead of baffling it. It seems from the examination which the *Record-Union* makes of the machinery of justice at the capital, that the whole system is in a most unfortunate and ineffective state. The following startling arraignment of public affairs is made:

That confessed criminals go free.
That the machinery of the law is so used as to favor the escape of the guilty rather than to secure their conviction.

That the judges of the courts are powerless to prevent the outrages.

That jury lists have been chosen for the courts with carelessness, if not with culpable neglect.

That there are classes known as professional jurymen and professional jury brokers.

That jurors put themselves in the way of being chosen on panels for the express purpose of serving criminals instead of the State.

That there is sufficient cumulative evidence to justify the moral conviction that jurors are bribed; that in drawing jurors frauds may be and are perpetrated; that behind all this rottenness there is to be found the chicane of political intrigue, the greed for place, and the power of bossism of various kinds.

It is announced that professional ruffians from San Francisco aid the Sacramento rascals in fixing the box from which jurors are drawn, so that only names of those friendly to the criminal class can be taken out. We quote:

In one instance the jury ballots had been so fixed that in case any there were 14 reliable jurymen for the defense on the venire, their ballots could be produced from the box at the precise time when the prosecution had expended their challenges, and were powerless to raise an objecting voice. The modus operandi pursued in such cases is to so fold the ballots or to attach others by light mucilage to the sides of the box that they can be distinguished with certainty. Other cases analyzed develop a state of affairs equally rotten as those already enumerated. Even in civil cases instances have occurred where jurors have thrown themselves in the way of parties interested, or their attorneys, and have made propositions looking to their corruption. In our lower courts even the pernicious system prevails, and instances have occurred where, for \$50 or \$100, a man could have a panel of jurors of his own selection summoned. The most prominent detectives in San Francisco and the oldest sheriffs in the State have openly stated that, as matters now stand in Sacramento county, no conviction can be had in any case where the defendant can raise \$100, and the records of our courts for the last few years give credence to that statement.

Some such abominable methods as these are said to have prevailed in the burglar case cited above, and in some recent actions where State officers have been put upon trial for stealing large sums of money. It is claimed that the reason why the rascals get the opportunity to do this evil work is because the supervisors are not careful and scrutinizing in preparing the lists of jurors, but listen to the suggestions of ward strikers to whom perhaps they are indebted for votes, and thus the names of professional "jurors," who make a living by selling out to rascals, are brought into the panel, and afterward, by subsequent trickery, brought into the jurors' seats. This nefarious business should be done away with, and if it is not we shall have precipitated upon us again instances of popular uprisings to punish criminals such as are well known in our early history. How can such results be averted?

There is only one way in which it can be done. Right-minded people must, even at some sacrifice and against their inclination, descend into the filthy pool of politics and purify it. If a supervisor is found to be dependent for election upon a gang of whisky-sellers and

low-down fellows, let every right-minded man put forth his full strength to beat him at the polls, no matter what party he belongs to. It is not always easy to tell whether a man is honest or not, but it is safe to shun even doubtful men. It is quite easy to find men enough for supervisors who are known to be not only honest, but scrupulous and wise. It will not do in these days to be simply honest; the honest man is very apt to be hoodwinked and imposed upon. Seek out men who are wise as serpents, as well as honest; men who will not be careless or shiftless in discharging public trusts. Seek after such a man as you would for a man to lend money to or to intrust with the conduct of your business. If the elector will only apply such tests as this, we shall have no longer reason to complain of corruption and the inefficiency of courts of justice as just now seems to be the misfortune of Sacramento.

We must have a general purification of our political system. We must have the whole gang of men who live by their wits, as the saying is, swept from places of importance and trust. We must have the moral, upright, and industrious classes at the head of affairs. It can be done if every citizen will do his duty, and in no other way.

The Subscriber's Duty and Privilege.

We have a note from one of our agents in a county of which little is said in the *RURAL*, to the effect that our subscribers would like to have much more in our columns about their county. The same thing would please the editors, and we would like to consult briefly with our readers in the country as to ways in which this result can be attained.

If readers will stop and think for a moment, they will call to mind the fact that most of the accounts in the *RURAL* which describe agricultural operations and progress in various parts of the State, are written by people resident therein. The articles are in the main by those who are actually doing the things described, who are interested in improving their operations, and to this end contribute freely to the *RURAL PRESS*, knowing that their efforts will draw out similar efforts from others, and thus all will be enriched by wide experience and suggestive descriptions of practice. Any reader can claim his share in this co-operative effort for more light, and as a matter of course those most interested and most appreciative send us most, and their line of production is most fully set forth in our columns. Just at present, the fruit-growers are taking best advantage of their opportunity, but the same chance lies open to the poultry-grower, the dairyman, the sheep, horse, or cattle breeder; and no one would be more pleased than the editors and publishers to have all these groups of producers as free in their communications and discussions as the fruit men are.

Then the subject of local representation in our columns is much in the same situation. People who believe in the charms and worth of their parts of the State write us of their experience and observation. Naturally any district which has citizens who appreciate the value of the *PRESS* and are willing to co-operate in securing for their district the advantages of truthful description, secures most space. It costs them nothing but the effort at writing, and where the writer has an active faith in his locality and rejoices in its development and advancement, it is not generally hard to write for publication. We welcome the most faulty composition if it contains the truth about any part of California. It is our business to prepare matter for publication. All we want is plain statements of observation and experience. Any reader who thinks his locality is slighted has only to aid us by taking upon himself the effort to remedy the deficiency. We shall be glad to do our part, but it is beyond our means to equip exploring expeditions to set forth the truth about every part of this grand State, and the work can be done better by all readers dividing up the effort among themselves. If this be done the result will be great and the individual effort small.

We have for years invited this co-operation with our subscribers. The plan has succeeded most admirably. No agricultural journal in the world has so good a corps of contributors as we have. We count them the secret of value which makes the *RURAL* so highly prized. We have a most cordial and sincere regard for

them. We enjoy the work of setting their work before the public eye for the public good. Now any one who has the idea that his or her section is not represented has merely to whittle a pencil or dip a pen and go to work. We count it really the duty as well as the privilege of the reader to accept our standing offer and see to it that our columns are rounded out in any portion which may seem to lack.

One Great Tinder-Box.

Under the midsummer sun that has been shining warm on field and wood day after day, week after week, grass, grain and stubble, fallen twig and last year's foliage have been getting drier and drier. Save in slough and swamp, the surface of rural California is now a vast bed of tinder, ready at the slightest spark to kindle into devouring flames. And, as usual at this season, forest and field fires are reported from all directions.

Last week a conflagration at Forest ranch, near Chico canyon, had burned over a tract of valuable woodland, destroying thousands of dollars' worth of timber, and was spreading toward the flame of the Sierra Lumber Co., causing no little uneasiness. Men from Forest ranch were out fighting it. The glare from the burning woods lit up the country at night for miles around. This fire was thought to have been started by careless campers.

The week before, as a train passed the ranch of John E. Taylor, about two miles from Woodland depot, the engine "emitted a little spark that sailed gracefully away and landed in one of the big straw-stacks." As soon as the fire was noticed an alarm was given, and two or three header-crews, who had been working near, ran to the rescue. Between their efforts, and those of others who soon appeared upon the scene, the fire was prevented from spreading to the house, barns, or fields; but they could not save the straw, of which many tons were consumed. The *Mail* remarks: "This is the first fire caused by a locomotive spark that has occurred in Yolo county in many years, and farmers along the railroad should keep a sharp lookout after every train passes."

J. B. Everett's separator was at work on Frank Davis' ranch near Woodland, when the machine was found to be on fire, and in spite of all the crew could do, was burnt up, with a considerable quantity of grain. This loss is supposed to have been occasioned by matches passing through the separator, as the fire was first seen in the straw-carrier, where there are no journals of any kind to cause a fire from friction. The machine had about 25 days' more work engaged, so the employees were losers as well as the owner.

A similar case is reported from Fresno. Threshing was going on, when a blaze suddenly burst from both ends of the machine, and in a few seconds the separator was enveloped in flames. The men went to work zealously and intelligently, pulled the derrick and feeder out of danger, and then proceeded to extinguish the fire and save the unthreshed portion of the stack. The machine burned was valued at over \$1500, and was partially insured. The origin of the fire is unknown; but from the fact that it was immediately preceded by an explosion it is thought some careless person may have dropped a cartridge in the grain stack, which was ignited by the teeth of the machine.

The cremation of 75 acres of grain, three-fourths of a mile of fence and several stacks of wheat, oats and barley that had just been harvested, was charged to the combustible gunwads used by some boys who were shooting on the Wright ranch west of Santa Rosa.

Early this week 400 tons of hay were consumed at Jewett's Evergreen ranch near Bakersfield. This fire is believed to have been kindled by the stump of a cigarette heedlessly let fall by a Mexican.

These are but scattered instances among the scores that the papers are detailing. The latest telegrams speak of extensive fires raging in the redwoods west of Gilroy, in the forests of Sierra county, and in the mountains near the town of Shasta, which is threatened with destruction.

This season of tinder-like dryness is likely to last for two or three months yet; and it behooves us every one to be scrupulously careful that no carelessness of ours be chargeable with starting one of these disastrous and lamentable burnings.

Selling the Climate.

A good deal in a jocular way has been said about Californians seeking to make in their dealings with the new-comers to the State a commercial commodity of our climate. We sell these strangers the climate, it is said, and throw the land in. While not exactly true, there is, nevertheless, a modicum of truth in this saying. That the climatic conditions existing in California are to the incoming immigration a greater attraction than the land, is no doubt the case. There is land in abundance open to settlement elsewhere. There are millions upon millions of acres to be had at Government prices in other sections of the country, much of it being quite as productive as the average land to be found in this State. Why do not these people who are seeking new homes go and settle on these exceedingly cheap and tolerably good lands, a large proportion of which are well wooded and watered and far more easy of access than California? Simply because the climate there is so much inferior to ours; being, everything considered, not much better than that from which they are seeking to escape.

It is an improved climate these emigrants are in search of, and, being able to find the best only here in California, they must expect to pay for it. It is the one thing these people are most in need of; for, while they cannot live on improved climate alone, the majority of them cannot live much longer without it. Between the freezing and the frying processes to which they have all their lives been subjected, they require now exemption from these sudden changes and opportunity to recuperate their energies. After having been thawed out they ought to be kept in a comfortably limp without being again reduced to an entirely fluid condition, a thing possible of attainment only in the belt of country lying between the Sierra Nevada and the sea. No longer terrorized with apprehensions of sudden death from sunstroke, lightning, and the many other fatal agencies to which they have so long been exposed, the nerves of these misfortunates will become strong and steady, and what was before a physical wreck will become a picture of health and a model of bodily perfection.

In view of the experiences had during the past few days by the inhabitants of the States east of the Rocky mountains, the greater safety of this our California climate is not a thing to be spoken of lightly. Six hundred persons prostrated by sunstroke in the space of three days, more than 200 killed outright, is not a matter for levity, but the rather for commiseration and sorrow. If there is a country in which human life enjoys immunity from these fatalities, it is certainly the duty of all to seek there a refuge who are able to do so.

More lives were lost in the city of Chicago on the 18th inst. than have been lost by casualties of that kind on the entire Pacific Slope since it was inhabited by white men. The number of deaths in that city from such cause exceeded during three days of the present week all that have ever occurred in California from lightning, sunstroke and earthquakes put together, and yet the idea widely obtains that this is an earthquake country! Truly the climate of California, though it cannot be bought and sold by the acre, is worth a good deal as an accompaniment of the land. Rich soil and fine views can be purchased elsewhere, but rarely ever the favorable meteorological conditions that here prevail.

IMMIGRATION MOVEMENTS.—The latest advices indicate most unmistakably that we must expect a very heavy emigration during the coming year from Europe. The causes for the movement are evidently the business revival in this country and the hard times and war excitements there. This latter is particularly the case with Germany. The increasing Irish discontent will also greatly swell the exodus from that country. In the meantime the movement from the East toward California is also increasing, and will increase beyond any former precedent as soon as the winter movement sets in again. There is also good reason to believe that Central and Northern California will receive a much greater proportion of the new-comers than those parts of the State have done heretofore.

RETURNED.—R. B. Blowers of Yolo, who has been East for three months in the interest of the California Fruit Union, has returned home.

Aggressive Monopoly.

The new phase which monopoly is assuming in seizing from time to time upon the products of the country, by means of wealthy syndicates, and compelling the payment of exorbitant prices for the necessities of life—oftentimes double their real value, as in the case of coffee and some other articles of more limited product, is attracting the attention of the labor organizations. Master Workman Powderly has recently been paying his respects to these gentry in the following significant and vigorous words:

The lesson taught our members by the experiences of the past six weeks is to keep their eyes open and to keep them turned toward the Produce Exchanges of New York, Chicago and other large cities; and the moment a grain or

produce gambler stacks the cards and announces that there is a scarcity in certain articles of food, and that prices will go up in consequence, every member should resolve, and resolve out loud, that until the unbalanced hand of the speculator has been removed from the control of the article in question not a pound nor an ounce more than can be avoided will be purchased. This may be regarded in the light of a "boycott" notice. This is exactly what I intended it for, and had I the power vested in me to make the order imperative I would order every member, so far as in him lies the power, to place an eternal "boycott" on every grain and stock gambler in the United States and Canada.

The late deal in wheat by these gentry has greatly intensified public opinion in the necessity for taking some steps which will effectually prevent such demoralizing and disturbing movements. It will be recollected that wheat was held for a considerable time at such a high price that the flouring-mills of the country, both here and in the Mississippi States, could not be run except at a loss. Large foreign orders for export had also to be refused for the same reason.

For a time this great industry of milling wheat was almost at a standstill.

Our laws ought to be so constructed and construed that all parties engaged in such useless and mischievous speculations should find a speedy home in some public institution where it would be impossible for them to rob the people of countless millions by such heartless transactions, and paralyze for a time industries on which thousands depend for their daily bread. This is a problem which the people of this country will soon be compelled to face.

A Barley Grass.

We have not secured much of a treasure in one of our barley grasses, it is true, for to this



BARLEY GRASS, OR MEADOW BARLEY—Hordeum nodosum.

class belongs the pestiferous "foxtail," although there are some stockmen who prize foxtail for the early feed which their stock get from it. The foxtail is *hordeum murinum* and the grass shown in the engraving is *hordeum nodosum*. It may be familiar to some of our readers, for it is common in the Western States and Territories and frequents alkaline soils and saline marshes. Although eaten by cattle when in a young state, it cannot be claimed as of anything more than temporary value. The culms are usually 1 to 1½ feet high, sometimes in moist places reaching 3 feet, and varying as to smoothness or pubescence. The leaves are usually flat, 2 to 4 inches long and about 2 lines wide. The flowers are in a close, cylindrical spike, about 2 inches long, with three spikelets at each joint of the rachis. One (the central) spikelet is sessile and perfect; the two lateral ones are short stalked and imperfect or abortive. Each of the spikelets has a pair of empty glumes, which are narrowly lanceolate and awn-pointed, or the lateral ones may be reduced to rough bristles.

ENTOMOLOGICAL.

The Gas Treatment for Scales.

Our Los Angeles friends are pursuing the good lead which they struck in using poisonous gases for the cottony cushion scale. Mr. Morse of the University has returned to the fight on the Chapman place, and sent us the other day a box of the insects which Mr. Chapman had dosed with the gas four weeks before. We were gratified to find that the eggs had apparently been completely killed. We gave the specimen a careful examination with the microscope, tearing open the sacks and examining the contents. We found the eggs shriveled and discolored. In the sacks we found many larvæ, in some as many as 50, and all dead. It looks now as though the application would kill all hatched larvæ even before emerging from the sack, and the unhatched eggs also. We have kept the specimen during the last week under conditions suitable for incubation, but no living thing has appeared. This is much better than was anticipated, for in the earlier samples we had of the treatment the old ones were dead, but the young and eggs were in a healthy state. Of course, further observation is needed to establish such efficacy for the gas, but now it looks very promising.

We notice that the Los Angeles supervisors have set apart \$250 for continuing experiments with the gas treatment. They have rescinded their action of two years ago offering a reward of \$1000 for a perfect remedy, as the relief promises to come through public channels. Mr. Coquillette, who in connection with Mr. Craw devised a gas treatment, as was described some time ago in our columns, is continuing his work. He is now an agent of the U. S. Division of Entomology. It appears from a publication in last week's Los Angeles Herald that Mr. Coquillette is using the same material which Mr. Morse announced as an effective killing agent, viz.: hydrocyanic acid gas. Both these gentlemen seem to have had similar experience in ill effects upon the tree and both have apparently overcome it, as Mr. Morse described in his University Bulletin, by using carbonic and cyanhydric gases together. The following is a table showing proportions which Mr. Coquillette decides upon after his experiments:

Size of Tree, feet.	Cyanide of Potassium, fluid ozs.	Bi-carbonate of Soda, lbs.	Sulphuric Acid, fluid ozs.
4.....	.7	.05	.4
5.....	1.6	.11	.3
6.....	2.5	.20	1.3
7.....	4.0	.29	2.1
8.....	6.0	.44	3.1
9.....	8.5	.63	4.5
10.....	11.5	.87	6.2
11.....	15.5	1.14	8.2
12.....	20.0	1.50	11.6
13.....	25.4	1.90	13.5
14.....	31.6	2.50	16.6
15.....	39.2	2.92	20.7
16.....	47.5	3.55	25.2
17.....	57.5	4.23	30.1
18.....	67.7	5.05	35.8
19.....	70.9	5.93	42.1
20.....	90.5	6.93	49.2

The mode of conducting the treatment is as follows: The cyanide solution is prepared by dissolving 10 pounds of the solid salt in about two and a fourth gallons of water warmed nearly to the boiling point, stirring at intervals, cooling and then diluting to two and a half gallons. This solution will contain about one ounce of cyanide of potassium to two and one-half fluid ounces of the liquid.

The bi-carbonate of soda is pulverized finely and measured off in a vessel marked so as to designate pounds and fractions of a pound of the solid material. It is then placed in the generator and the dose of cyanide mixed with it, and, if necessary, a little water added to make it into a thin paste. After adding the measured dose of sulphuric acid, the pump is worked slowly at the first and more rapidly after the gas has passed into the tent. The time for each treatment must be determined by future experiments. Fifteen minutes seem to be quite sufficient when the cyanide alone is used, but it may be desirable to extend the treatment to 30 minutes when the foliage is protected by the carbonic acid gas.

The use of such an agent as prussic acid and the character of the appliances needed for its application makes it probable that insect destroying may become a business on the part of men who are competent to handle such agents. If the work proves as good as indicated by the specimens sent us by Mr. Morse, the fruit-grower can well afford to pay a good price to a professional, who will come with his outfit and treat the trees. It will be a great relief for the grower to escape the cost and bother of spraying frequently. We hope it may turn out in this way, although we must have, of course, much wider experiment to demonstrate the success of the effort.

Southern California.

[No. 7.—CONTINUED.]

San Diego and Its Surroundings.

[Editorial Correspondence.]

The city of San Diego will ever be a memorable spot in the history of California as the locality where the earliest steps in civilization on this portion of the Pacific Coast were taken. It was here that, on the 26th day of July, 1769, Father Junipero founded the first mission, which constituted the great chain of missions, which subsequently extended from thence northward as far as Sonoma, comprising 21 in all.

The City of San Diego

Is also the oldest municipality in California, having been organized as a pueblo, January 1, 1835. On the 7th of July, 1846, when the State of California passed over to the Government of the United States, the pueblo organization was maintained, and the city title to the pueblo lands having been guaranteed by the treaty of 1846, was finally confirmed by the U. S. Board of Land Commissioners in 1853. The extent of that landed area was 11 square leagues, or 32,000 acres. A subsequent effort to reduce that area from 11 to 4 square leagues was quashed by a decision of the Secretary of the Interior, made Jan. 31, 1872, and by a further act of the Legislature passed on the 23d of February following, whereby all prior conveyances of lands made by the municipal authorities were "duly legalized, ratified, and confirmed." Thus the land titles in that city are as perfect as judicial and legislative action can make them.

The Climate of San Diego

Is probably the most perfect seaside climate in the world. An official record kept at the U. S. Signal Office in that city, embracing the period from 1876 to 1885, both inclusive, shows that in these 10 years, embracing 3653 days, there were 3533 days in which the mercury did not rise above 80°, leaving but 120 days in 10 years on which it passed that point, an average of only 12 days in a year. Further, there were only 41 days on which the mercury rose above 85°; but 22 on which it rose above 90°; but 4 days on which it rose above 95°, and only one day on which it rose above 100°, and that was on the 23d day of September, 1883, when it touched 101°.

This record is a most extraordinary one for a locality a few miles below the 32d parallel, and which cuts the Atlantic States three degrees below the northern line of Mississippi, Alabama, Georgia and South Carolina! Of course there never can be anything like a "heated term" in San Diego, which has recently produced such fatal effects in most of the Mississippi and Atlantic States.

Then, taking the other extreme of the 3653 days above alluded to, there were only 93 days on which the thermometer fell below 40°; six below 35°; two as low as 32°, and none which fell below that point. On no day did the thermometer remain below 40 degrees more than two hours.

It would be difficult, if not impossible, to find any place among civilized localities on the globe averaging such an equable temperature.

In regard to high temperature it should be borne in mind that, on account of the dryness of the atmosphere, a temperature of 90° in San Diego is but a fair equivalent for 75° or 80° in any locality in the Eastern States, as outdoor work may be more comfortably carried on in San Diego at 90° than at the East at 75° or 80°.

The small comparative rainfall on the coast of Southern California also adds largely to the charm of its climate. The average number of days on which rain fell during the period alluded to was only 34 per year. There is no such thing as a "cold snap" in San Diego, as is so often met with in the more southern latitude of Florida. The cold days in Florida are produced by its being located directly on the edge of the "polar wave," which so often sweeps with such biting cold over the entire area of the Atlantic and Mississippi States, while the moderately cold days of Southern California are merely the result of dry northerly winds which sometimes sweep down over that portion of the State from the Mohave desert, bringing with them, it is true, clouds of dust, but only a very moderate degree of cold. The noonday temperature of San Diego is generally from 60° to 70° on the coast, and 65° to 80° in the interior. Its equable temperature is due to the cool ocean currents which, sweeping down the coast from the Aleutian islands, causing the uncomfortable coldness in San Francisco, but becoming gradually tempered until they reach San Diego, with just that uniform degree of temperature which gives them their best tonic influence, so valuable to all invalids except those suffering from throat and lung trouble. The latter, of course, should keep well away from even any slight dampness of the sea air, and seek repose and recuperation in the high, dry atmosphere of the interior, in localities like the upper San Gabriel valley and those beyond.

The Boom in San Diego.

Yes, there is a boom in San Diego. Perhaps it is being overdone, but when there is such a broad and fully acknowledged foundation for it, who knows? The boom at San Diego, as well as in all Southern California, is based on ample bedrock. It is a genuine business movement,

warranted both by the extraordinary influx of population in that direction and by the great commercial and business opportunities made possible by nature and largely increased by art and enterprise. The indications are most undoubted that even the large expectations of the business men there—both old citizens and those who have been but recently attracted thither—will be fully realized. There is evidently something even beyond climate—important as that certainly is—upon which to build. Its position on the Pacific touching the business of Australia and the Indies, is bound, at no distant day, to attract a large share of the business which must pass over the Pacific ocean from East to West and vice versa. Until quite recently such prospects have been merely hope and talk, but something more tangible has now fully come to pass. San Diego is already the terminus of one of the continental railroads, and another is rapidly pushing on a connecting link to share with the first corner a portion of the expectant business. Arrangements have most undoubtedly been made by which trans-Pacific steamship communication will soon become an accomplished fact. Capital is pouring in there by millions, seeking both investment and active business. It may never become anything like a serious rival to San Francisco, but it most assuredly will soon occupy a subordinate position of no small importance both as a commercial place and a seaside sanitarium. Its citizens have taken hold of the work of city building in earnest. Elegant residences are going up in every direction, first-class stores and city blocks are beginning to make their appearance in all its principal streets. Street-car lines and motor roads were the first thought, and they have been built in every direction, bringing distant points into ready and convenient communication. New hotels are also being built and old ones reconstructed and enlarged to accommodate the rush of visitors. The people are evidently in earnest, and determined that San Diego shall not be merely a paper city. It is a live town, and there is no mistake about it.

National City.

About four miles south of San Diego, still fronting upon the bay or harbor of that name, we come to National City. Here the California Southern railroad—now the Atchafson & Topeka—has its Pacific terminus, after passing directly through the city of San Diego. Here, also, that road has its machine, car and repair shops and its Pacific Coast wharves where ship and car meet. Here is everything incident to the terminus of an important continental railroad. The city proper has a frontage of some two miles or more upon deep water—a magnificent natural harbor, deep, commodious, secure, easy of entrance, with no dangerous rocks or currents, and remarkably free from fogs. Were these its only resources, the harbor and railroad would be amply sufficient to secure for the site a city of ample dimensions and large commercial importance. But aside from these are the combined advantages of a climate of the most remarkable salubrity, rich and fertile lands in its immediate vicinity, capable of producing all the semi-tropical fruits in the greatest perfection and abundance, as well as those of the temperate zone. Olives will, no doubt, be made a specialty here, as they are produced in quality and profusion nowhere else excelled.

National City and San Diego will undoubtedly, at no distant day, grow into each other and form one municipality. Contrary to the general impression abroad, such a city will have a very large back country for its support. Careful estimates have been made which show that the country has over 2,000,000 acres of mesa and valley land capable of the highest cultivation. Such an extent of land divided up as it will be, in time must contain a very large population, all of which will be tributary to the great city which must eventually grow up at the bay. We have no means of arriving at any very reliable estimate of the present population of either San Diego or National City. Both places are growing very rapidly.

The latter is already assuming quite a business-like appearance. In addition to the railroad terminal business, and its army of employees in offices, repair-shops, etc., quite a large general business is growing up. A large and commodious hotel has recently been built, a fine two-story schoolhouse, a horticultural hall, a Grange hall, several church edifices, etc. A motor road connecting it with San Diego was in course of construction at the time of our visit, which, we presume, is now in full operation. This road has been built by the Land and Town Company and will be continued through National City to other places which are being built up beyond. Several important valleys will be reached in its progress. The mode of building up towns here seems to be to put in order all the conveniences for a town, such as water, railroads, etc., and then build the town, the reverse of the mode of town-building usually adopted. National City has been laid out in blocks 250 feet square. The two principal avenues are 100 feet wide; all other avenues and streets are 80 feet wide.

Fruit Culture.

As already said, fruits of all kinds flourish in great perfection here. Among the principal orchards at National City are those of Warren C. and Frank A. Kimball, Mr. Geo. Kimball, E. and J. Steele, Messrs. Sholl, Floyd, Walker, etc. Olive culture on an extensive scale has been undertaken by Mr. Frank Kimball, who is authority on all matters pertaining to this culture. Mr. Kimball has built an oilmill, to

provide a home market for the fruit. The capacity of the mill will be increased from time to time, so as to be able to work up all the fruit that may be presented. The mill is under the management of experienced Italians, who are producing an excellent quality of oil.

Mr. Warren Kimball, with the same end in view—the development of the new city—has recently erected a planing mill, with all the appliances for turning out every kind of machine work that is needed in house-building. This mill will also be enlarged as occasion may require, until others come in to extend the industry and reap the advantages to be derived from a new and growing city.

Extent and Character of Land.

For the better handling and more ready development of the lands in and about National City, an organization has been formed and known as the San Diego Land and Water Co., which includes under its control about 50 square miles of territory, including the chief portion of the National ranch, the Otay rancho, and other portions of adjoining tracts. These lands embrace every variety of soil, and are suited to an infinite variety of cultivation. They are subdivided into tracts of 5, 10, 20, 40, 80 and 160 acres. The title to these lands is as perfect as any in the State—a grant confirmed by United States patent.

Irrigation.

Irrigation in some form is necessary for cultivation on the most of this land. On much of it ordinary wells find water at from 35 to 85 feet. So little water is needed that a good windmill will raise water enough from a single well to irrigate a 10-acre tract. In some places artesian water is found at a depth of 300 feet. But the chief source of water supply will be derived from an extensive ditch enterprise, having its initial point on the Sweetwater creek, at a locality seven or eight miles distant from the bay. A dam is in process of construction here which will be carried up to an elevation of 50 feet, which may, at any time when needed, be still further raised to the height of 80 feet. This dam will be 36 feet wide at the bottom and 20 at the top. It is now nearly or quite completed to the height first mentioned. Its length will be about 60 feet on the bottom, and 200 on the top—arching up the stream. Being constructed of huge blocks of stone and laid in cement, it will be as indestructible by floods or elements as a solid ledge of unbroken granite.

This dam will form a reservoir covering 690 acres, which will be annually filled by the melting of the winter's snow, and will furnish an abundant supply for an immense tract of country. The water will be brought down in iron pipes under pressure for both irrigation and domestic purposes.

We have no space for any special reference to the numerous enterprises of town and city building outside of the two leading localities already alluded to. Our impression is that the town lot business is being overdone. Much of the success in that direction is counted on from climate. How much that will do no one can tell, but we do know that one of the most potent aids to individual comfort and State and national progress is an equal and genial climate. Tropic heat and Arctic cold greatly reduce mental and physical energy, and consequently seriously interfere with all the various fields of activity. As we have already said the climate of Southern California, and of San Diego in particular, is most remarkably equable, and tonic in its influence. Col. Scott, the famous railroad man, and a man as thoroughly posted in general commercial matters as almost any person of his day, once said of San Diego: "I have seen many parts of the world and have made some study of this subject. It is the question of climate—of your latitude—that I refer to. You are here, in the 32d parallel, beyond the reach of the severe winters of the northern latitudes. You have a great capital in your climate. It will be worth millions to you. This is one of the favored spots of the earth, and people will come to you from all quarters to live in your genial and healthful atmosphere."

When those words were spoken but little was known to the world in general of the climate of San Diego. The facts to which he alluded have now become well known and just what he predicted is coming to pass. How long this rush will continue no one can tell. But there is a genuine bedrock for the movement, and we can see no reason for its cessation until the conditions on which it has been started have failed to exist. That can only occur when the country is absolutely filled with people who are seeking the advantages which can be enjoyed in greater perfection here than perhaps anywhere else on the globe. It is only men and women of intelligence and means and enterprise that are coming or that are wanted. It is of such that Southern California is now being built up. We dare not say that one, two or three years or more will see the end of their coming. The same inducements are constantly held out. There will never be any failure in the climate. The land may give out.

A NEW USE FOR MOLASSES.—An Austrian inventor some years since patented a method for using 1 to 1.5 per cent molasses as an agglomerate of pulverized coal or dust along with sawdust. The percentage of molasses used being very small, the expense attending its use is slight. Satisfactory results have also been obtained with pulverized coke; and it is asserted that bricks thus formed may be used for the manufacture of gas.

Can Cancer Be Cured?

We have been deeply interested in the serial papers that have appeared from time to time in the *Scientific Press* and *Millman and Mechanic* under the above caption. The fact that we have been so peculiarly circumstanced as to witness much suffering from this lethal malady may have awakened more than an average curiosity on our part. And now comes the intelligence that our old friend ex-Speaker W. H. Parks, after intense suffering for three years from a cancer on the face, has passed away.

There can hardly be a doubt that cancer is fearfully on the increase. From the report of the Registrar-General, we learn there were 80,049 deaths in England from this cause during the 10 years from 1860 to 1869, an annual increase of 248. From 1870 to 1872 the annual increase was 327. Though we have no statistics at hand, medical practitioners are generally inclined to admit this disease is alarmingly on the increase in the United States.

It seems to be more prevalent in the heated and intense life of cities than in the country; among the rich and well-to-do than among the poor. According to French authority, the proportion of cancer in France among the wealthy classes is about 106 in 1000; among the poor classes 72 in 1000, 10 per cent of the former and 7 per cent of the latter. It seems to be a morbid growth upon civilization, as it is rarely found among savage men. Like the scale and other fruit pests that prey upon our orchards and vineyards, the shadow of this baleful parasitic growth hovers around the homes of ease, luxury and high living rather than pioneer cabins, the camps and huts of miners, loggers, hunters and fishermen. Observation shows that it is fond of localities. It is said to be wholly unknown in the Faroe islands. In Iceland in one year there were only 37 cases out of 50,000 inhabitants. Considering the geographical extent of England, it is more prevalent, malignant and fatal there than elsewhere, and among English-speaking people than any other race. It is to be found more largely among women than men, and more among those who have been mothers. It is most likely to appear between the ages of 35 and 60. It stands almost alone as a disease that increases with our excited life and prosperity, and while health-laws and improved sanitation are raising the standard of health, this hideous and loathsome malady rears as a blot upon our vital statistics.

Dr. H. Percy Dunn of the West London Hospital has had great opportunity for the study of cancerous patients. In a paper contributed to the *Pall Mall Gazette*, he controverts the opinion that this disease should be classed as hereditary. Still the fact is admitted that it is frequently consecutive in certain families, but not sufficiently so to constitute hereditary quality, while all other characteristics are absent. But he seems to give away his case when he says that, while not transmissible as a disease, a predisposition may be inherited. The term is vague and hard to define. The law of diathesis is one of the most occult in medical lore.

As far as known cancer does not arise from any micro-organisms or germs and consequently is not infectious or contagious. It cannot be caught nor given. But if it be true that cancerous persons do not propagate the disease, it is almost certain they beget consumptive children; and consumption is always a result of debility, want of general health, whatever may be the immediate cause. Still, cancer often attacks persons in the most vigorous health, and consequently is hard to classify in terms of causation.

It is a sad commentary on our boasted healing art, with its rich heritage of more than a thousand years, that this disease is still classed among the incurables. Many of our most learned and widely-experienced physicians confess they have no faith in any known remedy, and believe that all that can be done is to mercifully let the wretched sufferer as softly into the grave as possible. Fowler's Solution, Chian turpentine, were at one time believed to be attended with a little success, but are now regarded with very little favor. Many will remember what a spasmodic excitement there was over Chundurango a few years ago, but it soon died away. There are a few who still think that electricity may furnish some alleviation, but as a curative agent it has but few followers. It seems to be a melancholy concurrence among medical men that no confidence can be placed in medication, and that as long as the etiology of the disease is wrapped in mystery it is a waste of time to discuss its therapy. The knife is now about the only accepted remedy with the profession throughout the world, but even that it is admitted can only avail in the incipency of the disease, and even then is liable to break out again. It is always a local disease at the start, but spreads by means of blood-vessels and lymphatics, first to the nearest gland, then more distant, and when this occurs it is no longer local but constitutional, and the surgeon with glittering knife is powerless; and at the start the cancer seems so closely allied with the tumor family that it has usually become constitutional before it unmask itself. Once in the blood it is hopelessly beyond all surgical eradication.

It is this piteous and despairing wail from cancer-beds and hospitals that invests the aforesaid papers with a new and absorbing in-

terest. Here is an array of evidence, placing beyond all dubitation the fact that there is existing in our city a specialist who has apparently a successful cancer record unknown to the medical world. The witnesses are numerous, intelligent; they are living in our midst and scattered all over the State; their names and residences are given, and their diseases in nearly every case were diagnosed by the most distinguished and conservative members of the medical profession. And it is also noteworthy that the few physicians, some seven or eight, who have been induced to make an investigation, through the humane and untiring zeal of one of our leading citizens, have in each case come to the conclusion that cancer can be cured, and almost to an absolute certainty taken in reasonable time where the barbarous and torturing knife has not been used.

Why the medical faculty of San Francisco should evince a disinclination to add these facts to their pathological knowledge is only another illustration of the many in history, of the human mind being hampered by theory, warped by prejudice and manacled by absurdly limiting and restraining rules. Vaccination had to fight its way through the prejudice and bigotry of the learned world, and there was not a physician in Europe, says Sir William Hamilton, over 40 years of age who would tolerate Harvey's theory of the circulation of the blood.

Can any good thing come out of Nazareth, is a very ancient shape of prejudice, and if this is the hindrance to a fair and honest investigation of the facts now in the court of public opinion, these learned and diplomaed gentlemen should remember that it is no strange thing for nature to pass by academies and laboratories of science and place the crown of discovery upon an obscure and unscientific head. A poor Indian, sick and wasted with malarial fever, crept to a spring on the slope of the Cordilleras in which lay a branch of bitterwood, and elaked his thirst and was cured, and hence the discovery of the value of Peruvian bark as a febrifuge. Their big dispensaries are full of remedies that had vulgar origin. The fact is, nature loves to drop pearls in the lap of the lowly and modest worker.

But it is said that this particular specialist uses secret remedies, and there is a professional impropriety in a great and learned body under such circumstances condescending to advertise her business. This is most likely the real point where the shoe pinches. It would not be difficult to show that many practitioners of the regular school, whose names stand high on the roll of fame, have used secret remedies that were not revealed till near the close of life. These learned men practice their art to make money, and as human nature is all off the same piece, we have serious doubts if there is one of them, who, if in possession of this specialist's secret, would not keep it under cover until he had reaped a rich harvest from his skill and experience. This is human nature; this is the history of inventions, and the patent office is crowded with the recipes of hundreds of graduated physicians who were not proof to the mercenary temptation. But after all this cuts a very sorry figure in the case, for the possessor of this remedy challenges the most rigorous investigation of her skill, and if a committee under the auspices of an established medical society should report favorably the means could be readily found to give this secret to the world. And there is a growing public feeling that the professed guardians of life and health should do this much for suffering humanity and not huddle on a technical propriety. This specialist's business does not need advertising, for she has all she can attend to; but suppose it did—it is no more than many members of the profession are doing every day when they send patients to oculists and aurists for treatment. But this is more than a question of dollars and cents, or even professional dignity—it is a question of life or death, and the doctor who admits that he is powerless in the presence of cancer, and lets his patient die when he has indubitable proof or even presumptive proof that there is a remedy not far away, and will not use it nor recommend its use because there is a little mystery hanging over its composition, would seem to the outside world as committing a crime little short of murder. The fact is the attitude of the faculty in relation to this matter is too silly for controversy, and stands upon the same plane as that of the Frenchman who was so exquisitely polite that he would not rescue a drowning man because he had not been introduced to him.

W. W. M.

AMERICAN HARDWARE.—The value of the hardware produced in the United States each year is now about \$60,000,000, and nearly half of it is made in Connecticut.

WILLOW FURNITURE is best cleaned with boiling water made strong with ammonia and applied with a whisk-broom.

The Cogswell Polytechnic College.

A New Technical School for San Francisco.

A few weeks since we chronicled the fact that Dr. Henry D. Cogswell, of this city, had donated property worth \$1,000,000 to found a technical school where our boys and girls may prepare themselves for the trades and vocations of life. On this page we give the elevation of the main building of this new institute of learning, the plans of which were drawn by Chas. Geddes, the architect. The structure will be of pressed brick with stone trimmings. It is to be located on the lot corner of Folsom and Twenty-sixth streets, with a frontage of 245 feet on the first-named street and 182 feet on the latter.

The building will be three stories high, and from its imposing and substantial appearance will be the most notable structure in the southwestern portion of the city. It will be 71 feet in width by 85 feet in depth, not including the projections. On each side will be a wing two stories in height, each 35x40 feet. The building will be surmounted with a high roof, covered with ornamental metal Queen Anne shingles and have handsome cresting on the ridges. In front a high tower rises to the height of

to modern skill will be introduced to make ventilation perfect. They are to be lighted with electricity, and electric bells and speaking-tubes will be run throughout the structure.

A short distance in the rear of the main edifice will be another building in which the shops and laboratories are to be fitted up. It will face to the north and be 152 feet in length by 40 feet wide, and two stories in height. The ground floor will be devoted exclusively to iron work, both designing and molding, having departments for filing, fitting and chipping. A laboratory will be established in a room 35x40 feet, and fitted with all the essentials for thorough instruction in polishing, fitting and setting up of various pieces and descriptions of machinery. A machine-tool laboratory will be 40x40 feet in size, and completely equipped with iron lathes, a drill-press, planers and rollers, by the aid of which pupils will be instructed in the arts of turning, drilling, and planing iron, so that they will be qualified to construct tools and small pieces of machinery. A forging furnace and laboratory will also be established and occupy a space 40x40 feet. The founding laboratory will be 35x40 feet in size, and contain a furnace and other necessary appliances.

The second floor will be devoted to the chemical, wood and physical departments. The carpentry department will be 40x35 feet, and be

essential to the many mechanical pursuits. A course will also be given in mechanical and architectural drawing, embracing both free-hand and perspective. Business forms, single and double entry bookkeeping, telegraphy, photography, commercial law and correspondence will also receive special attention. A notable feature of the college will be its recognition of the coming education for the preparation of progressive teachers.

The school will be open to the boys and girls of this city and State who may have completed the third grammar grade in the public schools. Tuition will be absolutely free, the endowment of the college being fully provided for by the donation of its generous founder.

The cost of the buildings alone will be some \$85,000, and the machinery and tools \$25,000 or \$30,000 more. The school will be under the personal management of James G. Kennedy as president and Mrs. M. E. Arnold vice-president, who have already been engaged to fill those two important positions. Mr. Kennedy supervised all the plans of the building and many details were suggested by him. As soon as the construction of the building is fairly under way, Mr. Kennedy will go East and visit institutions of a similar nature, study the methods of work, and ascertain just what will be needed in the shape of machinery and scientific appliances to make the school all that it should be, and all that its generous and thoughtful founder wishes to make it.

RIVERSIDE APRICOTS IN CHICAGO.—We had a call on Tuesday from L. M. Holt of the *Riverside Press and Horticulturist*. He has a good exponent of the Southern boom in his pocket and it seems to do him good. He told us several interesting things about Riverside, among them of the shipment of some apricots by Dr. Jarvis, which gave very satisfactory results as an experiment. The apricots were allowed to ripen on the trees and then shipped by refrigerator car to Chicago. They arrived in splendid condition on July 9th, and after three days' exposure after that in Eastern summer weather were still good. The Chicago people enjoy apricots which ripen on the trees more than the fruit which has to be picked so green to stand shipment. It is likely that cold shipment must become general before we can give our Eastern friends our fruit in its best condition.

IRRIGATION ISSUE IN STANISLAUS.—There seems to be considerable opposition in Stanislaus county to the recent organization of an irrigation district under the Wright law. It is telegraphed from Modesto that there was a meeting of land-owners last week at which it was decided to employ attorneys to endeavor to obtain an injunction to prevent the Directors elected from going on with the work until the matter is decided by the courts. They claim that of the 156 votes cast against irrigation, more than 150 were cast by actual and bona fide land-owners, who own 70,000 acres of land out of 108,000 comprising the district.

The same parties also claim that the Board of Supervisors went beyond their jurisdiction in taking into the district the city of Modesto, when the bill explicitly reads that only lands susceptible to irrigation shall be taken in, and that the courts will sustain them in this claim if in no other. It will be well to have such issues settled as early as possible, that methods of procedure under the Wright law may be more clear.

PROTECTING ANIMALS FROM FLIES.—At this season of the year the annoyance caused to animals by flies and mosquitoes often amounts to positive agony, and at all times, in what is called good corn weather, it is sufficient to prevent the stock eating enough to keep them in good condition. The animals will stand in the water or pass the greater part of the day in the shade, rather than expose themselves to the sunshine, going out to eat only when driven by hunger. They quickly lose flesh, the flow of milk shrinks, and a loss is incurred that cannot be easily made good again. At all times a good feed of grain is beneficial to stock, but it is especially so when flies are very annoying, since it will do much to prevent shrinkage of flesh and milk. Horses and milch cows may be protected, in a great measure at least, by wiping them all over with a sponge dipped in soapuds in which a little carbolic acid has been mixed. Bulls confined in stables often suffer enough from the attacks of flies to drive them half mad, and there is no doubt that the continued fretting caused in this way develops a savage disposition. The most satisfactory results have followed from sponging, with soapuds and carbolic acid mixed a Jersey bull confined in a stall.

FINE bunches of dates have been successfully grown and ripened upon the estate of the late Col. Hollister, in Santa Barbara county.



THE COGSWELL POLYTECHNIC COLLEGE, SAN FRANCISCO.

127 feet, the apex topped with a revolving crystal star set in a copper pinnacle. On the face of the tower, above the third-story line, will be the dial of a clock, and still lower down will be the name of the school. The main entrance is spacious and surrounded with a wide porch. On each side of the door is a niche for the placing of pieces of statuary. There are also two side entrances—one for boys and the other for girls. The main-entrance porch is approached by a broad flight of stone steps. The main hallway is ten feet wide, and opens into a cross-hallway 12 feet wide, which crosses the building from end to end. From the cross hall, stairways lead to the second story; stairs also lead to the stage at the rear and to the front of the assembly hall, in the story above. It will thus be seen that the means of egress are unusually excellent, there being three wide doorways from the ground floor to the street and two from the second story to the assembly hall.

There are to be 10 classrooms, each 28x30 feet, four to be on the main floor and the other six to be in the second story. On the first floor also will be the offices of the president and secretary, a reception parlor, a library 16x28 feet, and a museum 20x28 feet, besides a number of dressing and toilet-rooms. A spacious assembly hall occupies the entire third story. It is 68x70 feet in size and will have a seating capacity for 1000. It will be used for the delivery of scientific and other lectures in connection with the regular courses of study in the school. This hall is to be handsomely furnished and provided with a stage with all the necessary adjuncts for completeness. All the rooms are well lighted, and every appliance known

supplied with an extensive assortment of tools. A wood-turning factory will be 40x40 feet, and be supplied with lathes, a planer, a circular saw, a bandsaw, a mortise machine, a molder and several other machines. The remaining space on the floor will be at the disposal of the physical and chemical departments. One room, 20x20 feet in size, will be fitted up with shelving inclosed in a glass front, where all the philosophical apparatus will be kept that is used in experiments in chemistry and physical instruction. The furnaces in connection with this department will be in an adjoining room, 40x50 feet in size.

The department for the instruction of girls will be fully as complete in detail as that of the boys. Here instruction will be given in wood and metal carving, sewing, cutting and fitting, as well as other mechanical studies. In the basement will be well-lighted lunch-room for the boys and girls; also rooms for the janitors and others who will reside permanently on the premises. There is also some additional space which may be utilized for classrooms or shops that may hereafter be required or found desirable. All the departments of machinery will receive motive power from a 75 horse power horizontal engine, which, together with the boilers, will be of the most approved pattern.

In connection with the instruction in the mechanical arts and sciences, a four years' course of instruction will be given to those pupils who may so desire. The course will include a thorough English education, together with German, Spanish and French. Arithmetic, geometry and algebra will be embraced in the English course, and special attention given to all branches that may in any manner be deemed

TWENTY-SECOND INDUSTRIAL EXHIBITION AND MECHANICS' FAIR.

SAN FRANCISCO, 1887.

Opens September 1st, closes October 8th

The Trustees of the Mechanics' Institute take pleasure in announcing that the coming Exposition promises to be the most attractive and important to the producers of this State of any yet given.

Several Counties have already applied for space to make a general exhibit of their resources, and it is now an assured fact that the whole of the immense pavilion, with its annexes, will be filled with California's choicest productions, both natural and manufactured.

An Orchestra of 50 celebrated soloists and musicians, under the leadership of the celebrated Trombone Virtuoso, Fred N. Innes, has been engaged, and will perform each afternoon and evening.

The immense Art Galleries will be filled with choice works of Painting and Sculpture; the Machinery Hall and the Agricultural Machinery and Implement Department will contain the best and latest inventions in mechanic art.

Intending Exhibitors should lose no time in applying for Space.

Liberal Premiums in Each Class will be Awarded.

No Charge for Space, Steam or Power.

PRICES OF ADMISSION—Double Season Ticket, \$5; Single Season Ticket, \$3; Adult's Single Admission, 50 Cents; Children's Single Admission, 25 Cents.

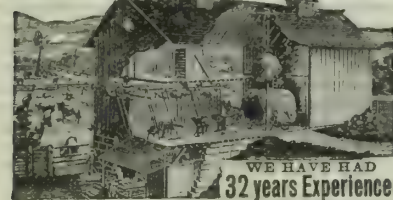
Season tickets to members of the Institute at half price.

Full information given or sent on application to the office, 31 Post Street.

A. W. STARBIRD,
Secretary.

P. B. CORNWALL,
President.

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DIVIDEND NOTICE.

The German Savings and Loan Society.

For the half year ending June 30, 1887, the Board of Directors of the German Savings and Loan Society has declared a dividend at the rate of four and thirty-two one-hundredths (4 32-100) per cent per annum on term deposits and three and sixty one-hundredths (3 60-100) per cent per annum on ordinary deposits, payable on and after the 1st day of July, 1887. By order.

GEO. LETTE, Secretary.

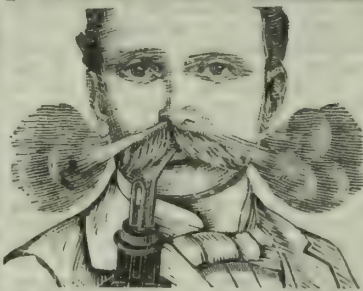
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And all diseases of the head, throat and lungs. One test, one look will convince intelligent people that this is a rational and scientific treatment. It is the only advertised remedy endorsed by the medical profession. A hundred physicians and thousands of citizens are our references. Established in 1882. Children enjoy it. A household treasure. Lasts a lifetime. Cost, with medicine and prescriptions for duplicating same, only \$2.50; can be sent by express. Consultation and test free. Send for Circular. Office, 229 Kearny Street, San Francisco.

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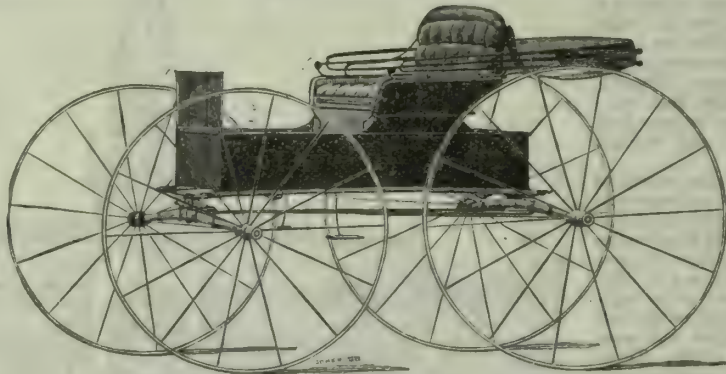
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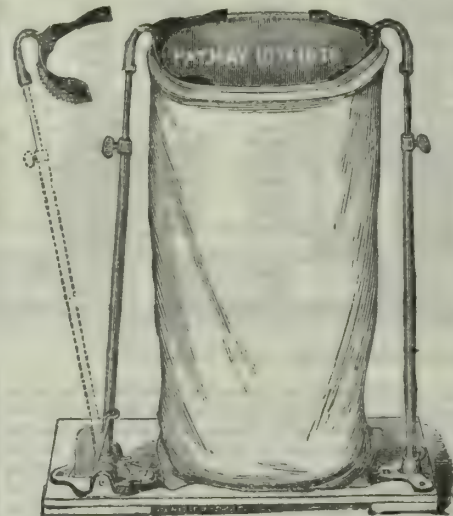
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AGENTS

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Celebrated

GOLDEN GATE

Windmills



Howell Mountain, Napa County.

Beautiful Mountain Scenery.

As the traveler journeys toward the upper terminus of the fair valley of Napa, he will observe, and in observing note with pleasure, the magnificent chain of mountains on the right.

It presents a striking contrast to the dry Coast Range chain in general. As far as the vision extends, its sides are ornamented with a vesture of living green, and its bold crests are surmounted by ranks of fringing pines, whose shaft-like plumes meet and mingle with the clear blue of the sky. Taking the stage at St. Helena, the ascent begins, up, and still up, over a broad and pleasant thoroughfare, until, at the summit of the main plateau, an altitude of over 1500 feet above sea level is reached. Here, traveling over the smooth road bordered for miles by a dense forest, one has time to note the wealth of beautiful trees and the various species represented, beside the variety of shrubs and lovely flowers that form a tangle of undergrowth.

Mountain Trees.

In this wondrous region are still found groves of the lofty redwood, the stately sequoia, now fast disappearing from our coast, and which threatens to become ere long an extinct tree. Most of the old monarchs have long since fallen victims to the greed and careless waste of man, but in their place groves of the young trees have sprung up, which grace and beautify the dark canyons and mountain slopes. By their side is found the feathery plumes of the lovely fir, which in spring is gay with its dress of tender green. Mingling with them both, and a very rival, is that lovely king of the mountains,

The Madrona.

And rare as it is lovely, since there are only a few chosen sections it will grace with its presence. It has been termed by some the "most beautiful of all trees," adorned as it is by its luxuriant, dark, glossy leaves, growing in cluster, and in spring covered with snowy blossoms of rare and delicate perfume, and again in winter its dark-green foliage is radiant with crimson berries, on which flocks of wild pigeons delight to feed. This tree, abounding as it does in a region of natural wonders, possesses a peculiarity not often seen in nature. It sheds its foliage in summer soon after blossoming. The dark-green leaves gradually fade to an autumn tint, and drifting down, they sweep and scurry before the summer breeze; the new growth then appears, luxuriant, green, and glossy; and so, changing from one form of loveliness to another, it stands among its companions, one of the most beautiful and most wondrous trees of the forest.

Here is also the black oak with its broad and shining foliage, the stately pine of different varieties, the maple, the alder, and the old, familiar dog-wood, besides many other trees whose names are unknown to the writer, all growing and reveling in a soil of almost unsurpassed fertility, and watered by numberless cool springs which leap from their hidden haunts and go singing on their way, over moss-covered rocks and among gigantic ferns and flowers.

Orchards and Vineyards.

During the last five years a wonderful change has occurred among these mountain forests. Many broad acres have been cleared of their dark woody growth, and vineyards and orchards now blossom in their place. Such is the quality of the grapes grown in this deep, loose soil that Howell mountain grapes are now in demand, and command a higher price than valley grapes—they are noted for their fine flavor and quality. Year by year new vineyards are set out, and more acres added to those already commenced, and Howell mountain now boasts of many fine and flourishing vineyards, besides comfortable homes, with their ample orchards and small fruits which flourish here in abundance.

So inspiring is the drive along this fascinating mountain highway, after leaving the busy marts of trade or the dry and dusty valley, that pen can scarcely describe the effect it has on one who is a lover of nature and whose soul finds companionship in its beauty.

A few miles from Helena bring us to

Conn Valley.

Or the road leading thereto on the left. The road takes its winding and devious way down hill and up and over, until it is lost to sight amid the verdant vineyards and cozy homes that lie among the undulating hills. While yet absorbed in the scenery, we are conscious of our near proximity to an open space in the forest-green meadows to the left, watered by a crystal stream, which speeds its tiny waves across the road. A short distance on, and we come in sight of the fine summer resort of

Angwin's on the Mountain.

It presents the appearance of a neat rural village hotel, dining-hall, numerous cottages, bath-houses, adjacent barns and stables, its large Chinese garden, orchard, etc., and still further on the secluded coves and dips and angles of hill and dale which comprise the camping-ground. Altogether it makes a bright picture of coziness, rest and peace; albeit there is plenty of gaiety and pleasantry among the throngs of ladies and gentlemen that are collected in groups on the verandas, or in the

shade of stately trees, and no lack of mirth and fun among the players on the croquet-ground. It would seem that here they had found their ideal of rural life realized—plenty of bright sunshine, the purest and best of cold spring water, while the air is freighted with that sweet aroma of pine, balsam, redwood, and all the brotherhood of aromatic and fragrant trees.

Oh, give me a home in the wildwood
Where the free bird singeth ever,
And the moss-green bank of the forest glade
Hangs over the rushing river,
And the grand old trees of the western land
Shall stand by my cot forever.

And there by the forest's darkling rim,
Lit up by the sun's soft splendor,
I love to live—and I live to love
With a heart as light and tender
As the birds themselves, whose winsome songs
Sweet homage unto me render.

Oh! what were the world's proud boast of wealth,
Or its fever dreams of glory,
To peace and rest in the wildwood's breast,
With the dark trees bending o'er me?
And lips I love and hearts that are true
Breathe ever the old sweet story.

The proprietor, Mr. Angwin, is indefatigable for the comfort of his guests, and has lately been enlarging and improving his dining-hall and other buildings, the better to accommodate his constantly arriving visitors. Being only a few miles from the railroad station at St. Helena, this popular summer resort has gained a deservedly high reputation, located as it is in the heart of this wonderful and fascinating evergreen mountain. At Angwin's, we are scarcely half across the mountain; and the northern slope nestling in the warm belt, where frost harms are almost unknown, with its pleasant homes, its bright and sunny people, its rich vineyards and orchards, its beauty of scenery and healing waters, with numberless attractions, will be reserved for some future article. MALLIE STAFFORD.

Vacaville Notes.

EDITORS PRESS:—The rush of apricots is over and people now have time to breathe. For three weeks they have been running in every direction to get boxes, trays and sulphur. The supply of sulphur in Vacaville gave out, and for two days in the busiest time, and the only way to get it was to borrow. Shakes were all sold at the lumber-yard for trays, and then borrowing or hiring trays was the next move. Some went 12 miles to get trays. The crop of dried 'cots between Vacaville and Putah Creek is estimated at 250 tons and will probably over-run that amount.

The driers have generally proved a failure in drying 'cots, and while many think they will do better to dry peaches, the sun is the best drier for apricots. They will be of a brighter color if dried in the sun and can be dried much cheaper.

H. A. Bassford is packing peaches to ship East and some few are sending grapes, but most of the fruit-raisers here got enough of the Fruit Union last year, and the way the Union is managed at present looks as though a few big shippers were making money at the expense of the many little shippers. Senator Buck's opinion of the intelligence of the fruit-raisers must be very low indeed if it was true that he said, as was printed in the Sacramento Bee July 6th, that they must not be told the price that the fruit sold at, as they cannot comprehend where the expense of shipping comes in.

The labor problem seems to be pretty well solved so far as white labor is concerned. Several thousand dollars have been paid out in the neighborhood to women and girls for cutting 'cots. Merchants and others doing business can already see the difference in times caused by money being paid to white persons instead of Chinese.

A man who has made a business of drying fruit for several years says that a woman will cut as much fruit as two Chinamen and give much better satisfaction in doing the work. He says he will never hire another Chinaman if he can get any other help.

Your correspondent of Tulare county speaks highly of the Peach apricot. It may do well there, but it certainly does not here. It does not bear regularly like the Royal, and while one side is soft the other will be as hard as it ever was. We have an apricot here, a seedling, which originated in Pleasant valley. It looks very much like the Royal, but ripens five or six days sooner, coming in after Thissell's seedling, and is the first freestone apricot.

The peach crop was injured by the hot north wind which checked the growth of the peaches, and a large part of the crop will only be fit to dry. Several are fixing to scald their peaches in lye, which is said to answer just as well as peeling, and is much cheaper. I think, however, there is too much lie about that process. Vacaville, July 24th. G.

CANADIAN RESTRICTION.—It is announced from the Canadian capital that a new order has been issued by the council prohibiting the importation of meat cattle from the United States into Manitoba, the Northwest Territory and British Columbia, except for breeding purposes or in transit from one point to another in the United States.

PACIFIC COAST WEATHER FOR THE WEEK.

(Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.)

DATE.	Portland.				Red Bluff.				Sacramento.				S. Francisco.				Los Angeles.				San Diego.			
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.
July 21-27.																								
Thursday....	.00	62	N	Cy.	.00	86	S	Cl.	.00	78	SW	Cl.	.00	61	W	Cl.	.00	92	W	Cl.	.00	76	N	Cl.
Friday.....	.00	64	CM	Cy.	.00	90	S	Cl.	.00	82	SW	Cl.	.00	59	W	Cl.	.00	92	W	Cl.	.00	72	SW	Fr.
Saturday....	.T	74	S	Fr.	.00	92	N	Cl.	.00	82	SW	Cl.	.00	62	SW	Cl.	.00	92	W	Cl.	.00	72	SW	Cl.
Sunday.....	.00	62	S	Cy.	.00	88	SW	Cl.	.00	82	SW	Cl.	.00	60	W	Cl.	.00	86	SW	Cl.	.00	70	W	Cl.
Monday.....	.00	66	NW	Cl.	.00	92	N	Cl.	.00	84	NW	Cl.	.00	66	W	Cl.	.00	86	SW	Cl.	.00	70	W	Cl.
Tuesday.....	.00	68	NW	Cy.	.00	92	SE	Cl.	.00	84	SW	Cl.	.00	61	W	Cl.	.00	82	SW	Cl.	.00	70	NW	Cl.
Wednesday...	.00	74	NW	Cl.	.00	80	S	Cl.	.00	70	SW	Cl.	.00	55	SW	Cy.	.00	80	W	Cl.	.00	68	W	Cl.
Total.....	.T				.00				.00				.00				.00				.00			

EXPLANATION.—Cl. for clear; Cy., cloudy; Fr., fair; Fy., foggy; — indicates too small to measure. Temperature Wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING JULY 19, 1887.

- 366,765.—NUT LOCK—Cunningham & Peppin, Coyote, Cal.
366,826.—BIT BRACE—Gavin & Cromer, Eureka, Nevada.
366,828.—SAFETY CAR—T. G. Gilfillan, Union, Oregon.
366,839.—BUILDING CONSTRUCTION—P. H. Jackson, S. F.
366,840.—SIDEWALK CONSTRUCTION—P. H. Jackson, S. F.
366,667.—PLOW—H. & G. Jelinsky, Oakland, Cal.
366,783.—OPERATING TABLE—Benj. Marshall, S. F.
366,863.—LAMP BRACKET—E. T. Naylor, S. F.
366,864.—FEED-WATER GREASE-EXTRACTOR—W. D. Nelson, S. F.
366,791.—SLATE-PENCIL SHARPENER, ETC.—W. H. Ostrander, S. F.
366,872.—CAR AXLE—J. Pettinger, Santa Barbara, Cal.
366,792.—LIFTING JACK—Fred'k Quint, Willows, Cal.
366,795.—SAWMILL SET WORKS—Roe & Harback, S. F.
366,798.—TWO-WHEELED VEHICLE—J. Sovereign, Woodland, Cal.
366,938.—GAS STOVE LID—W. H. Wiester, S. F.
14,601.—TRADEMARK—Bristol Bay Canning Co., S. F.
14,602.—TRADEMARK—Bristol Bay Canning Co., S. F.
14,624.—TRADEMARK—J. P. Smith, S. F.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates and in the shortest possible time.

Mery's Pioneer Barley Crusher.

Below will be found a few of the many testimonials received from parties who are using Mery's Improved Pioneer Barley Crusher:

DURHAM, May 21, 1887.
Mr. M. L. Mery—DEAR SIR: In reply to yours of the 19th, would say that I crushed from two to two and a half tons per hour, but could crush three and a half tons per hour if my elevators were large enough to carry the barley from the machine. The No. 1 machine I used at Gridley was run on a sack a minute, but if we got behind we could run through five tons an hour, and do good work. The machine I use here is a No. 2. Yours, WM. M. TAYLOR.

GRAINLAND, Butte County, Cal., June 9, 1887.
Mr. M. L. Mery—DEAR SIR: We have used one No. 2 Roller Barley Crusher now for eight years and have used it steadily during that time; have crushed 45 tons a day, and the crusher is as good to-day as when it came out of your shop. I am satisfied that it is the best mill made. You may reconstruct this testimonial to the best advantage for you and sign our names, for you cannot overrate the merits of your mill. F. E. REAM, JOHN P. SUTTON.

CHICO, Cal., February 1, 1887.
M. L. Mery, Esq.—DEAR SIR: The 9x14 Barley Crusher bought of you and used in the California Mills, gave entire satisfaction; have crushed 8000 pounds an hour. I have also crushed as much or more on set rocks when working for General Bidwell, which set he is using in his mill to-day. Yours truly, GEO. SHAND.

TRAVEL, May 7, 1887.
We have one of Mr. M. L. Mery's Barley Crushers in use, and can say it is the best we have ever used. Having had a good deal of experience with such machinery, can say it does better and more work than any we know of. KIMBLE & GREEVE.

TRAVEL, May 3, 1887.
Having used one of the Barley Crushers manufactured by M. L. Mery, of Chico, Butte county, I can say it will do all that is claimed for it, and to those wishing an A No. 1 machine, I would recommend it as the very best. I have crushed 35 tons in 11 hours' work. J. D. GOLDEN.

M. L. MERY, Manufacturer, Chico, Cal.

The King of Soaps.

With the King of Soaps the family washing can be done as easily as any other of the household duties.

THE Oregon State Agricultural College has just issued its 22d annual catalogue. There were 110 students enrolled during the past year, but only two graduated.

DEATH OF HON. W. H. PARKS.—The death of W. H. Parks of Marysville removes a prominent figure from the political arena of California. He came early to California from his birthplace in Ohio. He was a successful farmer and stock-raiser, but was best known in public affairs. He was a member of the Assembly in 1881 and 1885, serving as a Speaker of the House during each term. He was a Director of the Drainage District, No. 1, and was elected president of the Board. He was a prominent candidate for the United States Senate, to fill the unexpired term of the late General Miller. He was a valiant fighter in the anti-debris movement. He fell a victim to the dread disease cancer, and has suffered greatly during the last ten months.

PREPARATIONS FOR THE STOCKTON FAIR.—The Stockton Independent states that the working force on the new pavilion has been largely increased, and the huge building is beginning to assume shape. Last evening the stars and stripes were floating from a flagstaff over the pinnacle on the northeast corner of the pavilion. The building will be completed in time for the coming fair. There is a feeling on the part of the people of the city and county to co-operate with the directors of the Agricultural Society in making the fair a success, and from present indications the display of the agricultural and industrial products of the district will compare favorably with any similar exhibition in the State.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and, as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription rate, \$3 a year. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

Inducements to Subscribers.

To favor subscribers to this paper, and to induce new patrons to try our publication, we will furnish, to those who pay fully one year in advance of date, if requested the following articles (while this notice continues), at the very greatly reduced figures named at the right:

- 1.—The Agricultural Features of California, by Prof. Hilgard, 138 large pages, illustrated, cloth, with colored maps (full price \$1).....\$0.25
- 2.—World's Cyclopaedia, 794 pages, 1250 illustrations; (exceedingly valuable)......50
- 3.—Dewey's Patent Elastic Binder (cloth cover), name of this paper stamped in gilt......50
- 4.—Niles' Stock and Poultry Book for Pacific Coast, pamphlet, 120 pages, illustrated......25
- 5.—Kendall's Treatise on the Horse and Diseases, 89 pages, instructive illustrations......05
- 6.—To New Subscribers, 12 select back Nos. of the RURAL PRESS, "good as new".....Free
- 7.—Any of Harper's, Frank Leslie's and most other first-class U. S. periodicals, 15 per ct. off regular rates.
- 8.—European Vines Described, 63 pages......25
- 9.—Webster's Dictionary, 634 pages, with 1600 illustrations; very handy and reliable......50
- 10.—Architecture Simplified, 60 pages......05
- 11.—Mother Bickerdyke's Life with the Army; patriotic and ably written; 168 pp., cloth, \$1.00......50
- 12.—Ropp's Easy Calculator, cloth, 80 pp......25
- 13.—How to Tell the Age of a Horse......05
- 14.—Percheron Stud Book—French—bound in leather, 192 pages (full price, \$3).....1.00
- 15.—What Every One Should Know; a cyclopaedia of valuable information; 510 pp.; cloth; (full price \$1)......50
- 16.—Knitting and Crochet, by Jennie June; 144 pp., 200 illustrations......25
- 17.—Needle Work, by Jennie June; 126 pp., 200 illustrations......25
- 18.—Ladies' Fancy Work, by Jennie June; 152 pp., 700 illustrations......25
- 19.—The Way to do Magic; illustrated, 60 pp......10
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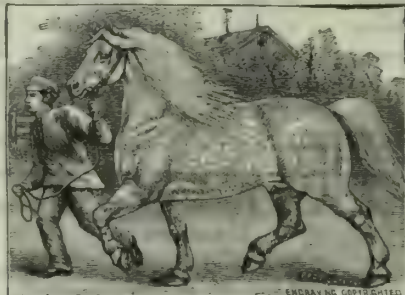
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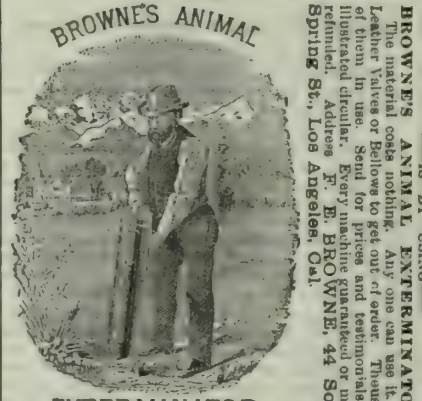
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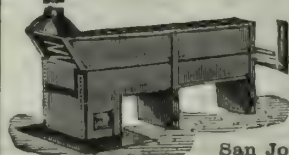
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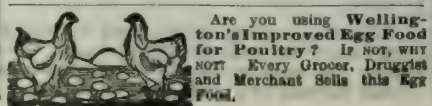
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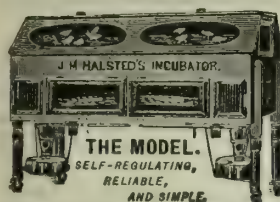
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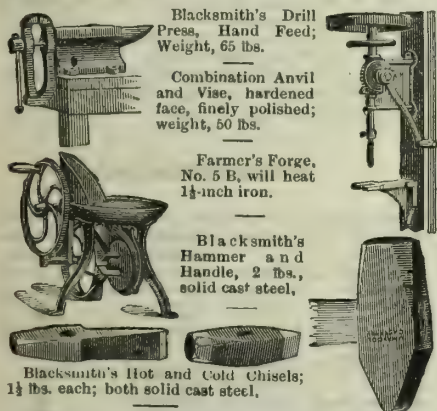


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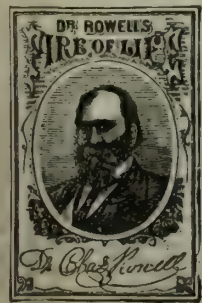
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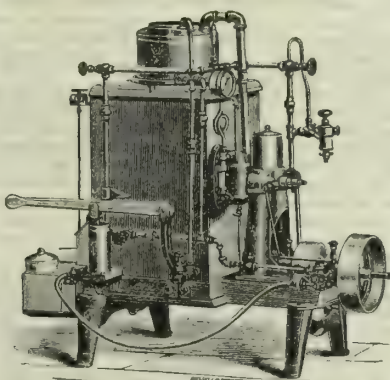
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S. H. MARKET REPORT

NOTE.—Our quotations are for Wednesday, not Saturday, the date the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, July 27, 1887.

Continued fine harvest weather insures the gathering of all kind of cereals and farm products in most excellent condition. The bulk of the grain has been cut and thrashed, and now farmers are delivering as fast as possible so as to take advantage of the present prices. Eastern markets have fluctuated considerably the past week. European markets have ruled quiet and weak. To-day's telegrams are as follows:

LONDON, July 27.—Wheat off coast, dull; wheat on passage, inactive; just shipped, 39s; nearly due, 39s; Mark Lane, English and foreign wheat, weaker; Mark Lane, English and American flour, quiet; Liverpool spot, steady, at 6s 11d to 7s 2d. English country markets, quiet. Wheat on passage to U. K., 1,890,000 qrs; to continent, 525,000 qrs.

Foreign Review.

LONDON, July 25.—The *Mark Lane Express*, in its review of the British grain trade during the past week, says: "The continued drought is rapidly maturing wheat. Part of the Southern crop is already out. If the dry weather holds, the whole crop will be harvested and thrown on the market, and prices will decline to zero. On the other hand, if rain sets in, the grain will have a chance of being converted into pig's feed. This will result in a spurt of trade, but there is wheat enough in the world to again bring values below the present level. The English wheat-grower stands irretrievably ruined whether his wheat goes to a straight market or to the rats. Trade is sick unto death. The sales of English wheat during the past week were 24,199 quarters at 34s 3d, against 27,295 quarters at 31s 3d during the corresponding week last year. Trade in foreign wheat is on the smallest possible scale, values are in the buyers' favor and Liverpool prices are down 1d per cental. There were four arrivals of wheat cargoes and two sold. Four cargoes were withdrawn and three remain. At to-day's market there was no inquiry for wheat. Flour was a fraction cheaper. Oats were firm. Corn, beans, peas and linseed were unchanged.

NEW YORK, July 23.—The Produce Exchange's weekly review of the condition of the world's grain market says: "Latest advices from the United Kingdom represent the wheat crop in excellent condition and making rapid progress toward maturing. Barley, oats, peas and beans have, however, suffered from drought, especially on light, sandy soil. Wheat on passage from India, July 5, is estimated by *Beckham* at 8,696,000 bushels, including 5,512,000 bushels to the United Kingdom and 3,184,000 bushels to the continent. Of the quality on passage to the United Kingdom 3,256,000 bushels are from Calcutta and 2,256,000 bushels from Bombay and Kurrachee. One year ago the quantity afloat from India was 7,720,000 bushels, comprising 5,632,000 bushels for the United Kingdom and 2,088,000 bushels for the continent.

Crops at the East.

CHICAGO, July 24.—The *Farmer's Review* this week will say: "While the local rains in some localities have come in the nick of time to save the corn crop, our reports this week indicate that the drought has lowered the average condition of crops in almost all the States reporting. The winter wheat yield in different States, according to reports by our correspondent, is as follows: Sixteen counties in Illinois have an average of 16½ bushels; ten counties an average of 16½; ten counties in Missouri, 18½; 14 counties in Ohio, 15½; 11 Kansas counties, 14. Considerable damage to spring wheat by chinchbugs is reported from some districts in Wisconsin, Iowa, Minnesota, and Nebraska.

Eastern Wheat Markets.

NEW YORK, July 24.—Wheat closed heavy—July, 80½c; Aug., 80½c; Sept., 82½c; Oct., 83c; Nov., 84½c; Dec., 86½c.

CHICAGO, July 27.—Wheat, firm; cash and August, 69½c; Sept., 72 3/16c.

Eastern Wool Markets.

NEW YORK, July 24.—The market is without special animation. Among sales were 80,000 lbs California spring, private terms; 40,000 lbs Oregon at 20½c; 40,000 lbs Territory at 21½c.

The Boston market shows some improvement. Among sales were 472,000 lbs spring California at 19½c; 25,000 lbs fall California at 13½c; 153,000 lbs Territory at 19½c; 40,000 lbs Oregon, part at 17c.

The Philadelphia market continues dull. Among sales were 67,000 lbs fine medium Territory at 21c; 32,000 lbs Territory, fine, at 19½c; 1500 lbs Territory, bucks, at 13c; 2000 lbs Territory, low, at 19c; 2500 lbs three-eighths Territory, at 25c; 2000 lbs three-eighths Territory, at 21½c; 5000 lbs Territory at 19c.

California Products at Chicago.

CHICAGO, July 25.—California green fruit arriving is in good order and has a good demand, except for netberries, which are green and in poor order and not wanted. Large ripe plums have good demand, while small varieties, such as Hative, are not wanted. Bartlett pears are selling fairly at \$2.50@2.75 per box. Early Crawford peaches in 20-lb boxes bring \$1.75@2 plums, \$1.75@2 per 20-lb crate, German prunes, \$2@2.25, and Sweetwater grapes, \$1@1.25. These prices are about the average obtained for fruit in good condition, while inferior lots sell for less.

CHICAGO, July 26.—Several carloads of California green fruit were received here to-day and it was nearly all disposed of before dark. The fruit consisted mostly of pears, which are in splendid condition. With the exception of some few peaches and Sweetwater grapes, all the fruit was in fine order. The pears brought \$2.65@2.75 per box. Sound peaches sold at \$2 per box, while fruit of that variety in off condition brought a dollar less, having to be repacked. Columbia plums were in good shape at

\$1.40@1.50 per box; Sweetwater grapes, \$1@1.50.

California dried fruits are quiet. A few apricots have been received. The market is rather quiet and fully settled. Pitted plums, evaporated, 10@11c; do, sun-dried, 10@10½c; apricots, evaporated, future delivery, 14½@16½c; do, cash, 16½c; prunes, 9@11c; raisins, London layers, 20-lb boxes, \$1.30@1.40; do, loose Muscatel, \$1 box, \$1.15@1.25; do, California layers, \$1.15@1.25.

Reports from the Pacific Coast concerning hops show that dry weather is said to be doing some damage to that crop there, but up to this time the outlook has been good. Spot goods are selling in a small way at 18@20c for California grown.

California Fruits in New York.

NEW YORK, July 23.—A carload from Sacramento was sold at auction to-day at the following prices: Bartlett pears, \$1 box, \$3.25; Crawford peaches, \$1 box, \$1.75@2.60; assorted plums, \$1 box, \$2.60@2.70. Bidding was lively. Saturday is the poorest day in the week for selling fruits. No auctions of Mediterranean fruit are held that day.

NEW YORK, July 26.—The auctions of the Fruit Union have attracted the attention of everybody interested in California fruits. To-day one carload of Bartlett pears sold, at private sale, at \$3@3.25 per box.

Local Markets.

BAGS—Several large short sellers filled at higher prices. The market is barely steady at 7@7½c.

BARLEY—The market on Call gradually settled up to Monday, when a steadier tone was noticed. It looks as if large operators are buying options. Receipts continue free. At to-day's Call sales were as follows:

Morning Session: Buyer 1887—100 tons, \$1.10½; 800, \$1.10½; 200, \$1.10½. Seller 1887, new—100 tons, \$1.20, 99½c; 300, 99½c; 100, \$1 per ct. Afternoon Session: Seller 1887, new—100 tons, \$1.10, 99½c; 300, 99½c; 100, 99½c; 100, 99½c; 200, 99c. Buyer 1887—500 tons, \$1.10½; 300, \$1.10½; 300, \$1.10½ per ct.

BUTTER—The market for gilt-edged is very strong under light receipts and a good demand. Some pickled and also solid are being sent off on orders.

CHEESE—Although supplies are liberal, still the market has a firmer tone.

EGGS—Strictly choice fresh laid continue scarce and in demand at full figures, but Eastern and poor Californian are hard to sell.

FLOUR—The market is very strong for the better known brands. The demand is confined to actual wants.

WHEAT—The syndicate steadily advanced options throughout the week; each day the shorts thought would be the highest, still the end was not to-day, but it now looks as if it is near at hand. The pool will call for 20,000 tons of buyer options within a day or two—so says report—which makes the shorts do considerable work to meet. One large short seller is said to have already put up over \$300,000 to keep his margins on seller contract good; he sold seller '87 option and as long as he keeps his margins good he cannot be forced to fill. To-day's sales on Call are as follows:

Morning Session: Seller 1887—500 tons, \$2.06½; 100, \$2.06½; 100, \$2.06½; 500, \$2.07. August—100 tons, \$2.06½; 100, \$2.06½. Buyer August and September—100 tons, \$2.12 per ct. Afternoon Session: Seller 1887—300 tons, \$2.07½; 100, \$2.07½; 300, \$2.07; 600, \$2.06½; 200, \$2.06½; 200, \$2.06½; 100, \$2.06½; 1200, \$2.06; 400, \$2.05½. August—100 tons, \$2.07 per ct.

[COMMUNICATED.]

Market Information.

Cereals.

European mail advices regarding wheat crops are as follows: In Italy and Spain, the month of June has forced the grain into a maturity which lacks one of the most important elements for making a good crop, namely, gradual growth. Shriveled kernels are the natural result of a month of tropical fever following on a bleak and untoward spring. Italy, which is an important wheat-buyer from India and Russia, is likely to repeat in 1887-88 the considerable orders of 1886-87, while Spain may also be a purchaser of foreign wheat. The wheat crops on the continent are now of very fair promise in those parts where harvest is just beginning, namely, France, Austria-Hungary, and the winter wheat districts of southern and central Russia. In France, great heat has been accompanied by thunderstorms, which have, however, cooled the air without bringing rains heavy enough to beat down the crops. The French wheat-fields have enjoyed an extraordinary favorable earing and blooming time, the air everywhere being still as well as warm. The French wheat crop is now estimated as likely to yield 2 qrs. to the acre on 17,500,000 acres, or 35,000,000 qrs. (101,500,000 hectolitres). This quantity, however, may easily be exceeded to the extent of 3,000,000 qrs. (8,700,000 hec.), or more, if July prove uninterruptedly fine, and the perfect development of the wheat in the great wheat-growing districts of the north, northwest and northeast be favored. The existing outlook being favorable, an out-turn of 37,000,000 qrs. (107,300,000 hec.) would not perhaps be an unduly sanguine estimate. The wants of the French people are about 40,000,000 qrs., and the imports in an average year now equal about 5,000,000 qrs. The Austrian harvest is variously estimated as likely to yield from an average to 5 per cent above the mean. In the winter wheat districts of Russia the past month has been hot, but with frequent showers! Here and there, indeed, the rainfall has been too heavy, but this has been the exception and not the rule. Russia has at present a fair promise of an average yield of spring wheat, while the winter wheat crop will be a great improvement of the poor out-turn of last year.

In estimating on the European crop and probable requirements, one very important fact should not be lost sight of, that is, the very light reserve held by both the supply and demand countries. This will more than offset any increased yield over last year. India's crop is 2,000,000 qrs. (16,000,000 bushels) less than last year's. In the United States the new crop of spring wheat, though covering 6 per cent more area than in 1886, promises in consequence of drought, the Hessian fly and chinchbug ravages, a smaller aggregate output than the 146,000,000 bush-

els of 1886. The winter wheat crop with a per cent decreased area in 1887, and important deficiencies in several of the large wheat-growing States, will have a diminished aggregate output as compared with the crop of 1886, which was 301,000,000 bushels. Returns from four winter-wheat States alone show that the deficiency may reach 20,000,000 bushels. Incomplete reports from seven other winter-wheat States also indicate a diminished output of about 20,000,000 bushels.

From June 30 to July 1 the exports of wheat from the United States compare as follows: 1886-87, 153,816,862 bushels; 1885-86, 94,741,720 bushels. To ship the former, although the crop was largely in excess of that of 1885, the usual carryover or reserve stock was reduced to a lower figure than for many years. It is claimed by well-informed writers and operators that the United States will not be able to ship over 85,000,000 bushels this season. If this proves correct then prices must advance abroad before the close of the year.

Were it not for the bull movement in this market No. 1 wheat would not now sell at over \$1.20@1.25 per cental and No. 2 at over \$1.10@1.15; and yet some so-called friends of farmers are crying down the movement and doing all they can to break the deal.

The Eastern wheat market continued to decline up to Tuesday, when it began to recover. The Chicago house of S. S. Floyd & Co. of this city telegraphed that cash wheat on Monday sold at 67½ cts per bushel. This is the lowest figure at which it sold for over 24 years. On Tuesday the market gained strength, owing to heavy buyers coming in. The New York Produce Exchange Reporter says: "Wheat is being sold too low; no country in the world has any reserve of moment of old wheat, and with the steady increase in its consumption from year to year, it cannot be denied that with a crop this season of about 400,000,000 bushels, we are selling our wheat very low. The wants of the country are not less than 345,000,000 bushels, the increase in population and in the wants of manufacturers considered, so that to retain any reserve at the close of the year we shall not have anything like our usual quantity for export; hence the situation we regard as very important and full of interest."

In this State the bulk of harvest work is finished. The wheat now being cut is said to show better than that harvested early in the season. Buyers continue to take freely all the better grades of wheat on the basis of \$1.90 to \$1.95 per cental delivered here. No 2 shipping wheat is also being bought up. Fair receipts of Walla Walla wheat are coming forward, but the grade, as a rule, does not come up to buyers' wants.

From the New York Produce Exchange Reporter of July 16th, we obtain the following: "An arrival of 16,000 bushels of Walla Walla wheat via the Northern Pacific railway, was quite a surprise to the trade, because at the prices current for it in the Walla Walla valley it cannot be placed here to any advantage at present rates of freight. It was sold at 80c delivered, which is a low price for so good an article."

The corn crop of the West, although not quite so favorable looking, promises a decided increase over last year. The stock of old corn at the East is very light. The corn market with us is fairly steady.

The barley market has ruled quiet weak, with lower sales reported. A large operator is said to be quietly buying all the options he can on Call without advancing prices. A further reduction in freight by the Pacific Mail Steamship Co. on barley to New York has created an increased call for brewing grades. Advices from the East report the barley crop, with the quality, not up to former seasons.

Free receipts of oats cause a weak market at lower quotations. The grade shows an improvement on former receipts. The demand is light, owing to buyers waiting for lower prices.

This season's standard of wheat, barley, etc., has not been fixed by the Produce Exchange yet, but samples are being received for that purpose. No 1 shipping wheat for the season of 1886-87 weighed 61 lbs to the bushel, and for 1886-87, 60½ lbs.

S. S. Floyd & Co.'s Chicago telegram received to-day reports August wheat opened at 69½c, advanced to 70½c and closed at 69½c; September opened at 71½c, fluctuated between 71½c and 71½c, closing at 71½c.

Estimated crop of wheat, without rains, for 1887 in the United Kingdom is 96,000,000 bu, or about 30,000,000 bu larger than 1886, and 14,000,000 bu larger than in 1885. The average crop is about 75,000,000 bu.

Feedstuff.

Bran and middlings are still scarce, but the demand is less urgent, owing to the relative cheapness of rolled and also ground barley. The latter appears to be gaining in favor among consumers.

Hay, if choice, finds many buyers, but the poorer grades are slow. The crop this year is undoubtedly short of last year, but it averages better. The consumption is about double that of 1886.

Fruits.

Receipts of apricots and peaches are the heaviest within the history of the trade. Canners are, in consequence, masters of the situation. The pack of both will be all of double last year's. Canners pay 1 to 1½c per lb. for apricots, and the same for peaches. Plums are sold at from 1½ to 2½c per lb. Canners clean up the market daily. No egg plums yet.

Pears continue in liberal supply, with lower prices ruling. Canners are not in the market yet for Bartlett's, owing to their being held too high; but as receipts are increasing, it is thought dealers will have to soon begin to clean up to them.

Berries are in free supply, but prices keep well up, owing to the large increased consumption.

Grapes are in free supply, but the quality is, as yet, only fair, but lately they have been improving. Muscates are making a little better showing.

Dried apricots are coming in in large quantities, but they move off equally as free, under liberal buying from distributive points at the East. Peaches are beginning to come in by samples.

The stock of raisins is worked down to a low point. The demand is slow, as buyers are waiting for the new pack later on.

Eastern advices report a light apple crop, as they also do of cherries, berries and pears. The cherry crop was almost a total failure. All this will have their influences on dried fruits.

Live-Stock.

Choice condition bullocks are in better inquiry,

with an advance asked, but butchers are slow in paying it. The supply of other kinds is not so free. Mutton sheep are in fair supply. The tendency appears to be to stiffer prices. Hogs, if grain-fed, and in good condition, find ready buyers, but poor hogs are slower. In work-horses, there is nothing doing. For roadsters and general utility horses the demand continues free.

The following are the wholesale rates of slaughterers to butchers:

BEEF—Extra, 7@7½c; first grade, grass fed, 6½@7c per lb.; second grade, 6c; third grade, 4½@5½c.

MUTTON—Ewes, 5@5½c; wethers, 6@—c.

LAMB—Spring, 7@8c.

VEAL—Large, 6@7c; small, 6@8c.

PORK—Live hogs, 4½@4¾c for heavy and medium; hard dressed, 7@7½c per lb; light, 4½@4¾c; dressed, 7@7½c; soft hogs, live, 3½@4c. On foot, one-third less for grain or stalled, and one-half less for stock running out.

Vegetables.

Potatoes, if choice and well matured, move off well at quotations, but poor qualities slow. The crop this year turns out better than that of 1886.

Onions are barely steady at quotations, and supplies are liberal, with a fair demand ruling. Hard keepers are in request to fill distant orders.

In roots there is nothing new to report outside of free receipts and a fair demand.

Cabbages rule steady at the lower quotations.

Tomatoes are coming in more freely, causing prices to shade off. Some consignments had to be cleaned out at low prices to canners. Heavier receipts are looked for from now on.

String beans continue to be received, but the demand is slow.

Green corn is in liberal receipt, but prices keep fairly steady under a good demand.

Other reasonable vegetables are in good supply, with the market ruled from day to day by the supply and demand.

Miscellaneous.

The tonnage movement compares with last year at this date as follows:

	1887.	1886.
On the way.....	300,286	323,571
In port, disengaged.....	74,731	31,961
In port, engaged.....	40,239	39,101

Totals.....415,256 394,633

The above gives a carrying capacity as follows: 1887, 659,740 short tons; 1886, 631,412 short tons; increase over last year, 28,328.

The past week, over 1,250,000 lbs of the better grades of wool were sold, leaving the poorer grades on hand for which buyers bid down.

Hops, if gilt-edged, are quickly placed, notwithstanding buyers talk them down. Brewers are lightly stocked, while the crop is very irregular in yield and also in quality.

Poultry ruled quiet, but firm throughout the week, with the better conditioned scarce.

Hams and bacon show another advance, in sympathy with the higher market at the East.

San Francisco, July 27, 1887.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, July 27, 1887.

BEANS AND PEAS.

Bayo, old.....	1 90 @ 2 50	Paper shell.....	19 @ 20
Butter.....	1 75 @ 2 00	Brazil.....	11 1/2 @ 13
Poa.....	1 80 @ 2 00	Peanuts.....	9 @ 11
Red.....	1 40 @ 1 55	Peanuts.....	4 1/2 @ 5
Pluk.....	1 25 @ 1 50	Pilberts.....	10 @ 11
Small White.....	1 80 @ 2 00	Hickory.....	7 @ 8

POTATOES.

Idaho.....	1 75 @ 2 25	Burbank.....	— @ —
Old Pota, blk eye	1 00 @ 1 05	Cuffy Cove.....	— @ —
do green.....	1 00 @ 1 12 1/2	Petaluma.....	— @ —
do Niles.....	1 25 @ —	Tomales.....	— @ —

BECKON OVEN.

Southern per ton	50 @ 75	Humboldt.....	— @ —
Northern per ton	50 @ 75	do Kidney.....	— @ —

CHICORY.

California.....	51 @ 64	do Oregon.....	— @ —
German.....	6 @ 7	Peerless.....	— @ —
DAIRY PRODUCE, ETC.		Salt Lake.....	— @ —

BUTTER.

Cal. fresh roll, B.	17 1/2 @ 22 1/2	Sweet.....	1 00 @ 1 50
do Fancy brands	25 @ 27 1/2	POULTRY AND GAME.	
Pickle roll.....	20 @ 24	Hens, dos.....	6 00 @ 8 00
Firkin, new.....	16 @ 20	Roosters.....	5 50 @ 11
Eastern.....	— @ —	Broilers.....	3 00 @ 7

CHICKENS.

Quebec, Cal. B.	8 @ 9 1/2	Ducks, tame.....	4 50 @ 6
Eastern str.....	10 @ —	do Sprig.....	— @ —
		Geese, pair.....	1 25 @ 1 75

EGGS.

Cal. ranch, dos.	25 @ 27	do Goslings.....	1 25 @ 1 50
do, store.....	18 @ 20	Wild Gray, dos	— @ —
Ducks.....	— @ —	Turkeys, B.....	16 @ 20
Oregon.....	— @ —	do Dressed.....	— @ —

FEED.

Bran, ton.....	37 00 @ 29 00	Snipe, Eng. dos.	— @ —
Cornmeal.....	28 00 @ —	do Common.....	— @ —
Grd Barley ton.....	25 00 @ 26 00	Doves.....	— @ —
Hay.....	9 00 @ 10 00	Quail.....	— @ —

OIL CAKE MEAL.

Middlings.....	26 50 @ 28 50	Rabbits.....	1 00 @ —
Oil Cake Meal.....	26 50 @ 28 50	Hares.....	1 25 @ —
Straw, bale.....	40 @ 60	Vermon.....	— @ —

FLOUR.

Extra, City Mills	4 95 @ 5 70	Cal. Bacon.....	8 1/2 @ 9 1/2
do Country Mills	4 45 @ 5 45	Heavy, B.....	— @ —
Superfine.....	5 70 @ 4 45	Medium.....	— @ —

GRAIN, ETC.

Barley, feed, chl.	1 05 @ 1 12 1/2	Extra Light.....	11 @ 12 1/2
do Brewing.....	1 15 @ 1 25	Lard.....	8 @ 12

SONOMA.			SACRAMENTO VALLEY.		
Pickling.....	— @	—	Free Mountain.....	18 @	24
Red.....	40 @	50	N'hren defective.....	21 @	26
Silverskins.....	50 @	75	8 Joaquin valley.....	13 @	19
NUTS—JOBBING.			do mountain.....		
Walnuts, Cal. &.....	134 @	144	Cava & F'th'l.....	16 @	21
do Chile.....	— @	—	Oregon Eastern.....	18 @	25
Almonds, hd.shl.....	5 @	7	do valley.....	20 @	27
Soft shell.....	18 @	19	Southern Coast.....	11 @	18

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, July 27, 1887.			Figs, loose.....		
Apples, bx com.....	30 @	50	Nectarines.....	3 @	4
do choice.....	50 @	1 25	do evaporated.....	16 @	18
Apricots, bx.....	25 @	50	Peaches.....	— @	—
do Royal.....	35 @	50	do pared.....	— @	—
Bananas, bunch.....	2 00 @	3 25	do evaporated.....	— @	—
Blackberries, ch.....	2 50 @	3 50	Pears, sliced.....	5 @	6
Cantaloupes, cr.....	2 00 @	3 50	do qtd.....	— @	—
Cherries, wht bx.....	— @	—	do evaporated.....	8 @	10
do black bx.....	— @	—	Plums, pitted.....	9 @	10
do Royal Ann.....	— @	—	do unpitted.....	3 @	5
Cherry plums.....	50 @	—	Prunes.....	6 @	10
Crabapples.....	10 @	12 50	do French.....	8 @	12
Cranberries.....	— @	—	Zante Currants.....	3 @	—
Currants ch.....	— @	—	RAISINS.		
Gooseberries.....	— @	—	Dehesa Clus, fcy.....	2 40 @	2 50
Figs, black bx.....	— @	—	Imperial Cabin.....	— @	—
do white bx.....	40 @	60	et. fancy.....	1 75 @	—
Grapes.....	25 @	1 00	Crown London.....	— @	—
do Rose Peru.....	— @	—	Layers, fcy.....	1 50 @	—
do Muscat.....	80 @	1 25	do Loose Muscels, fancy.....	1 40 @	—
do Tokays.....	— @	—	do Loose Muscels.....	1 35 @	—
Isabel.....	— @	—	Cal. Valencia.....	1 25 @	—
Wine, Zinfandel.....	— @	—	do Layers.....	1 25 @	—
Limes, Mex.....	11 00 @	—	do Sultanias.....	1 25 @	—
do Cal box.....	— @	—	Fractions come 25, 50 and 75	— @	—
Lemons, Cal, bx.....	2 00 @	3 50	cents for halves, quarters	— @	—
do Sicily, box.....	6 00 @	—	and eighths.	— @	—
do Australian.....	— @	—	VEGETABLES.		
Nectarines box.....	50 @	75	Artichokes, doz.....	— @	—
Oranges, Com bx.....	— @	—	Asparagus, doz.....	— @	—
do Choice.....	— @	—	do extra choice.....	— @	—
do Navels.....	— @	—	Okra, dry, lb.....	15 @	20
do Panama.....	— @	—	do green lb.....	5 @	10
Peaches, bx.....	30 @	50	Fennels, doz.....	1 50 @	—
do basket.....	— @	—	Poppers, dry lb.....	10 @	—
Crawfords, bx.....	30 @	50	do green, box.....	25 @	50
do basket.....	— @	—	Pumpkins prtn.....	— @	—
Pears bx.....	30 @	75	Squash, Marrow.....	— @	—
do choice.....	— @	—	fat, too.....	— @	—
do Bartlett, bx.....	70 @	1 60	do Summer bx.....	40 @	65
Persimmons.....	— @	—	String beans lb.....	12 @	2 1/2
Jap, bx.....	— @	—	Tomatoes box.....	25 @	50
Pineapples, doz.....	4 00 @	5 00	do choice.....	50 @	75
Plums box.....	— @	—	Turkeys cl.....	25 @	60
Pomegranates, b.....	— @	—	Beets, sk.....	75 @	—
Prunes bx.....	— @	—	Cabbage, 100 lbs.....	50 @	—
Quinces bx.....	— @	—	Jarrets, sk.....	35 @	—
Raspberries ch.....	4 00 @	7 00	Eggplant, 3/4 bx.....	35 @	60
Strawberries ch.....	3 00 @	7 00	Garlio, lb.....	12 @	3
Watermelns, 100 lb.....	10 @	17 50	Green Corn, cr.....	50 @	75
DRIED FRUIT.			do sweet cr.....	1 00 @	1 50
Apples, sliced, b.....	— @	—	do large box.....	— @	—
do evaporated.....	12 @	13	Green Peas, lb.....	— @	—
do quartered.....	13 @	14	Sweet Peas lb.....	2 @	3 1/2
Apricots.....	6 @	8	Lettuce, doz.....	10 @	—
do evaporated.....	11 @	14	Lima Beans lb.....	— @	—
Blackberries.....	23 @	13	Mushrooms lb.....	8 @	20
Citron.....	38 @	30	Rhubarb bx.....	— @	—
Dates.....	9 @	10			
Figs, pressed.....	5 @	6			

SMYRNA FIGS.—Mr. W. C. West of Fresno, whose lively interest in fig-culture is well known, favored us with a call the other day. The reports, from whatever source, that "Smyrna figs are much like Florida oranges, consisting of many varieties, but seldom true to name, etc.," he pronounced incorrect. His own recent journey to those regions of Asia Minor whence come the best figs known to commerce, his studies there, and the carefully chosen and guarded nursery-stock which he brought home with him, are, to Mr. West, sure grounds for believing that he has, at last, secured the genuine article. He is confident of demonstrating the fact shortly.

OLIVE OIL FROM SONOMA.—Among our Agricultural Notes for May 14th it was stated that Col. Geo. F. Hooper of Sonoma had brought to Santa Rosa samples of fine oil made from olives grown in his own grounds on trees sprung from cuttings which he planted 10 years ago. The *Republican* added: "To Col. Hooper belongs the credit of having produced the first ripe olives and made the first pure native oil in Sonoma." One day this week there came to us, with compliments of the gentleman aforesaid, a bottle of the oil in question, and we take pleasure in testifying to its beautiful clarity, its richness and delicacy of flavor.

Grape Crushers.

MADRONE VINEYARDS,
GLEN ELLMAN, CAL., July 10, 1885.
GEORGE L. WENZEL, Esq., 309 Fulton St., S. F.—Dear Sir: When I bought one of your Grape Crushers and Separator, last fall, I promised that after I had fully tried it, I would write you whether it gave satisfaction or not. I crushed and stemmed my entire vintage of 1884—consisting of upward of 500 tons of grapes—with the machine you sold me, and it gives me pleasure to say that it did its work most satisfactorily. With two men to turn, I found that I could crush and stem from 25 to 30 tons of grapes per day, on your machine. I consider that the superior quality of my red wine of last year is largely due to the fact that the stems were thrown out by the stemmer, and not allowed to run through the crusher, as is usually done with other machines. Very respectfully yours,
ED. T. SHEPPARD.
Advertisement of Mr. Wenzel will be found elsewhere.

Don't Fail to Write.

Should this paper be received by any subscriber who does not want it, or beyond the time he intends to pay for it, let him not fail to write us direct to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to any one who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

MINERS FINED.—Judge Sawyer has fined the Milton Water and Mining Company \$500 on each of two charges of violating the injunction issued by the United States against hydraulic mining granted in the case of Woodruff vs. North Bloomfield Mining Company and others.

BOUND VOLUMES.—Back files of this paper bound in substantial cloth binding with leather back, containing six months' numbers in each, indexed, can be had at this office at \$4 per volume.

AN INGENIOUS TEST.—In a large factory one of the workmen carelessly allowed his hammer to slip from his hand. It flew half-way across the room and struck a fellow-workman in his left eye. The man averred that his eye was blinded by the blow, although a careful examination failed to reveal an injury, there being not a scratch visible. He brought suit in the courts for compensation for the loss of half of his eyesight, and refused all offers of compromise. The day of the trial arrived, and in open court an eminent oculist, retained by the defense, examined the alleged injured member, and gave as his opinion that it was as good as the right eye, and proved it. And how do you suppose he did it? Why, simply by knowing that the colors green and red combined make black. He prepared a black card on which a few words were written with green ink. Then the plaintiff was ordered to put on a pair of spectacles with two different glasses, the one for the right eye being red and the one for the left eye consisting of ordinary glass. Then the card was handed him and he was ordered to read the writing on it. This he did without hesitation, and the cheat was at once exposed. The sound right eye, fitted with the red glass, was unable to distinguish the green writing on the black surface of the card, while the left eye, which he pretended was sightless, was the one with which the reading had to be done.

IMPROVED PACKING MATERIAL.—An already extensive use of "wood wool" is reported in France—a new article, consisting of extremely thin and slender savings of wood, that are comparable to paper cut for packing. It weighs about 40 to 50 per cent less than the materials generally used for such a purpose, and its beautiful appearance, fineness, and extreme cleanliness have brought it into great favor. It was also soon found to be well adapted for the manufacture of mattresses, for the filtration of liquids, stuffing horse-collars, etc., the most suitable species of wood being selected for each of these uses. Its elasticity causes it to be considered the best material for bedding, after horsehair, and is, in fact, preferable to any other substance when it is derived from resinous wood, since it does not then absorb moisture. In workshops wood wool is tending to replace cotton waste for cleaning machines, and it has likewise found an application on the rolling-stock of railways for lubricating car axles; while it has the same property that cotton waste has of absorbing oil, its cost is many times less than that material—these various advantages explaining why the use of it has become so extensive in so short a period.

"I Would That I Were Dead!"

Cries many a wretched housewife to-day, as weary and disheartened, she forces herself to perform her daily task. "It don't seem as if I could get through the day. This dreadful back-ache, these frightful dragging-down sensations will kill me! Is there no relief?" Yes, madam, there is. Dr. Pierce's "Favorite Prescription" is an unfailing remedy for the complaints to which your sex is liable. It will restore you to health again. Try it. All druggists.

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There is danger ahead for you if you neglect the warnings which nature is giving you of the approach of the fell-demon—consumption. Night-sweats, spitting of blood, loss of appetite—these symptoms have a terrible meaning. You can be cured if you do not wait until it is too late. Dr. Pierce's "Golden Medical Discovery," the greatest blood-purifier known, will restore your lost health. As a nutritive, it is far superior to cod-liver oil. All druggists.

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RAPID WORK.—Some idea of the extent to which mechanical ingenuity and efficiency have advanced may be had from the following statement: "It is now possible to construct a complete sewing machine in a minute, or 60 in one hour; a reaper every 15 minutes, or less; 300 watches in a day, complete in all their appointments. More important than this, even, is the fact that it is possible to construct a locomotive in a day. From the plans of the draftsman to the execution of them by the workmen, every wheel, lever, valve and rod may be constructed from the metal to the engine intact. Every rivet may be driven in the boiler, every tube in the tube-sheets, and, from the smokestack to the ashpan, a locomotive may be turned out in a working day, completely equipped, ready to do the work of 100 horses." Without such machinery and the skilled labor to operate them, the civilized world of to-day would be an impossibility.

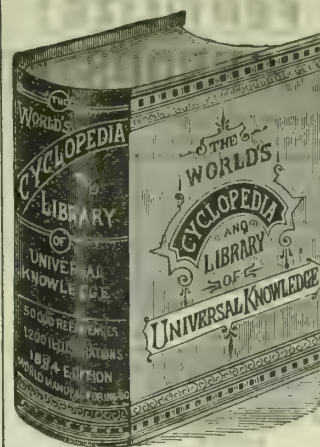
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CANNED FRUITS.—The pack of canned fruits in California this year is expected to be 25 to 30 per cent more than in 1886.

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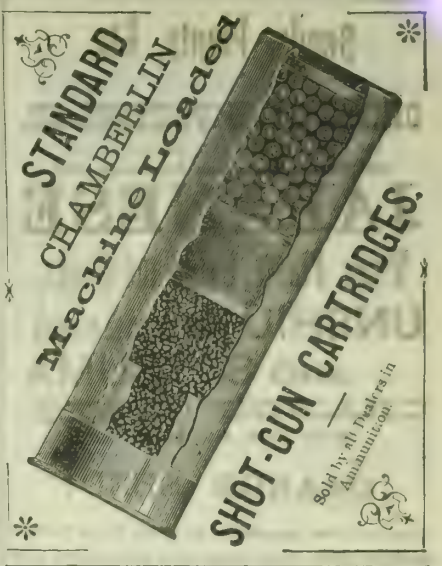
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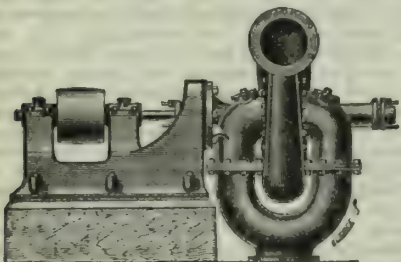
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Soluble Phosphoric Acid.....	12.90 per cent
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The above amount of Nitric Acid is equal to 0.85
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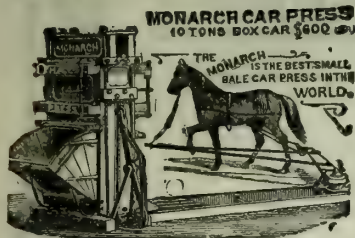
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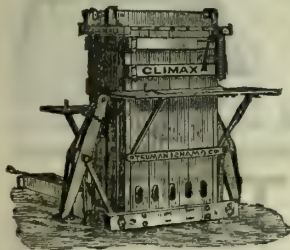
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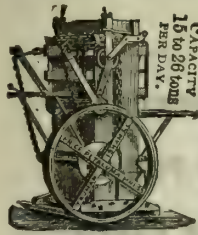


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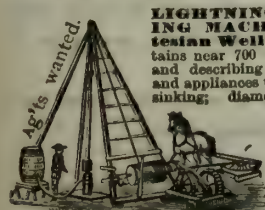
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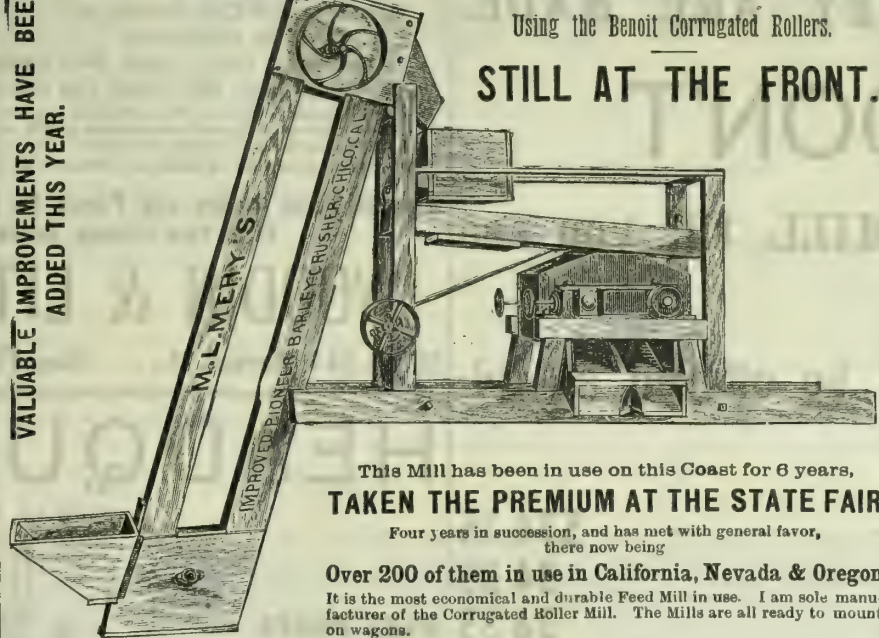


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This Mill has been in use on this Coast for 6 years, TAKEN THE PREMIUM AT THE STATE FAIR Four years in succession, and has met with general favor, there now being Over 200 of them in use in California, Nevada & Oregon It is the most economical and durable Feed Mill in use. I am sole manufacturer of the Corrugated Roller Mill. The Mills are all ready to mount on wagons.

I thank the public for the kind patronage received thus far, and hope for a continuance of the same.
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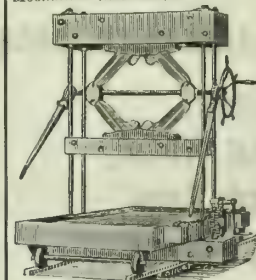
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Removes Pimples, Fleish Worms, Blackheads and cures Oily Skin. Either of the above articles sent post-paid for 25 cts. each, or 6 packages for \$1. Be sure and mention this paper. The W. Millard Co., Buffalo, N. Y.

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PACIFIC RURAL PRESS

Vol. XXXIV.—No. 6.]

SAN FRANCISCO, SATURDAY, AUGUST 6, 1887.

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Change the Patent Laws.

It is certainly true that our patent laws work sometimes exceeding hardship to honest and innocent users of fraudulently sold infringements on patented articles. It is a wonder that the evils have not ere now been so urgently complained of, not only by farmers but by many other industrial users in the United States, that our Congressmen should have heard their demands and given them relief by a change of enactments on this subject. While many serious abuses have no doubt occurred in the administration of the patent office for years, the main difficulty and overshadowing evils borne by our people come from the fault of the patent laws rather than from our general patent system. Faulty as it is, the United States patent system will compare favorably with the systems of older nations which our own superseded.

No time should be lost by Congress in so changing our patent laws that innocent users of patented devices should be protected from the annoyance and expense they are now being subjected to through the owners of patents, who in too many cases look mainly to the profits, regardless of justice, in their motives and actions for infringement. It is their policy to wait until the country is flooded with articles made in violation of their patents, and then make an onslaught on farmers and others using them. This course, unfortunately, the law allows them to adopt. Instead of this, they should be required to bring action within a reasonable limit of time against any manufacturer who violates their patents, and no user should be required to pay damages for articles bought in good faith.

Another change which should be made in our patent laws should provide for forfeiture of all patents that are not worked within a reasonable length of time after the patents are obtained. As it is now, many patents are taken out and remain dormant until they are found to interfere with inventions of a later date, and when such are made manifest, they stand, like a "dog in the manger," in the way of the later and better inventions. Congressmen throughout the entire United States should be petitioned and urged to have the United States patent laws revised and greatly improved through the appointment of a commission or otherwise.

If patentees were required to work their inventions practically before the public within

two years from date of their patents, or pay \$5 a year thereafter to the Government, at least two-thirds of the patents would be thus canceled and placed out of power to hinder others or do others mischief.

CHERIMOYER.—We kept the cherimoyer which was sent us by Joseph Sexton of Goleta, Santa Barbara county, until it was well ripened, and then attacked it with spoons and other implements of gastronomic warfare. The result was very satisfactory; the flavor was delicious and cannot be better described than by the term custard-apple, which is the English name

Forestry Congress.

The secretary of the State Horticultural Society has received from George W. Minier, president of the American Forestry Congress, a communication setting forth the fact that the sixth annual session of the congress will be held this year in Springfield, Ill., on the 14th, 15th and 16th days of September. At the last session of the Illinois Legislature a resolution was adopted by a unanimous vote cordially inviting said association to hold its next annual session at the capital of that State.

The circular sent out by President Minier

An Important Texan City.

The opening of the Sunset route is ministering to the growth and development of the country along our southern border and increases our interest in the region with which we have been brought into close connection in point of time. All along the line eastward California's influence is being felt and California's achievements are being emulated, wherever local conditions are favorable. Plants, trees and vines are sent eastward in considerable quantities, and barring some failures because of ill adaptation of the country, there will be a vast advance in the

horticultural interests of the southwest territory.

The engraving on this page, reproduced from Major Truman's pamphlet, shows the town of El Paso, situated on the line of the Southern Pacific railroad, at a point 800 miles easterly from Los Angeles, and 1283 miles southeasterly from the city of San Francisco. It occupies a handsome site on the banks of the Rio Grande, and, although located in Texas, is only eight miles from the Territory of New Mexico on the west, being separated from Old Mexico on the south by only the breadth of the



VIEW OF THE CITY OF EL PASO, ON THE RIO GRANDE, TEXAS.

for the fruit. It has all the richness of a well-made custard, and its sweetness is enlivened by a delicate tartness, characteristic of the best eating apples. The fruit was pear-shaped, about four inches in diameter, and when ripe was of a dark-brown color. The specimen contained about 80 seeds, most of which we returned to Mr. Sexton. For situations where the cherimoyer thrives, we should think it could be commended for planting—on a small scale, of course, at first, to test our markets for it.

GAS TREATMENT FOR SCALES.—We were misled by the Los Angeles *Herald* in crediting to Mr. Coquillett a statement concerning the use of hydrocyanic gas which emanated from Mr. Morse, and was published by him in a University bulletin recently. Mr. Coquillett has written a note to a subsequent issue of the Los Angeles *Herald* stating that the computation for length of treatment, etc., was not his but Mr. Morse's. The method devised by Messrs. Craw and Coquillett, some months ago, was to generate the gas inside the tent. Mr. Morse's plan is to generate it outside and diffuse and distribute it inside the tent by forcing it in with a pump.

concludes as follows: "As the conservation of our forests, as well as the reforestation of many parts of our country, are matters of deep interest to our common country, we hope your society will commission a delegate interested in this subject to attend our session."

This matter will come before the next meeting of the Horticultural Society, which will be held at 220 Sutter street on Friday, August 26. It is to be hoped that a member can be found who can be at the East at the date named. There is of course much interest taken in forestry by our fruit-growers, and they would like to be represented at the meeting of the congress. It is understood that one of the California Board of Forestry Commissioners will be present.

FENCE LAW OBSERVED.—The Secretary of the Interior is informed that the law of Feb. 25, 1885, to prevent the maintenance of illegal fences on public lands, has been generally complied with throughout the West, especially in Arizona and New Mexico.

A WINERY with a capacity of 100,000 gallons is being put up at Mountain View by the Jesuit fathers, and one half as large by Capt. Selinger at the same place.

river, here 250 yards wide. El Paso contains 3000 inhabitants, and is an active, rapidly growing place, contrasting strongly in this as in every other respect with the old Mexican town of Paso del Norte, standing on the opposite side of the Rio Grande. Indeed, the two places fairly represent all that is most noticeable in the ancient and modern civilizations—all that is most opposite in the wide-awake, go-ahead American and the dilatory, non-progressive Mexican. The history of the one covers nearly three centuries; of the other, hardly more than half a score years. On the north side of the river everything is new, many of the buildings being of large dimensions, stately and handsome, while all wear a substantial and comfortable air; on the south side are seen only the old mud-built structures, low and dingy, many of them with only barred windows, and scarcely any more than one story high, the signs of decay being impressed on everything, the people and the town alike.

The two places are connected by a tramway, over which the Mexican Central railway passes to the new city, its northern terminus. This tramway serves as a bridge, rendering communication easy between the two towns; too easy, for it leads to quarrelsome smuggling.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

From Saticoy to San Buenaventura.

EDITORS PRESS:—At the lower end of the Santa Paula country the mountains on the south side of the Santa Clara Valley of the South suddenly terminate, and that portion of the country lying south of the Santa Clara river spreads out into the great Saticoy plains and is considered as a part of the valley. We will in this communication have reference only to that section of the valley on the north side of the river between the Santa Paula country and San Buenaventura.

The village of Saticoy is only a small place situated on the S. P. R. R. coast extension, now well surrounded by thriving farm establishments, including many comfortable homes with handsome orchards, gardens and fields of thriftily growing crops. The foothills bounding the northern side of the valley from this point westwardly, rise into a low range of mountains, while still further back—miles away to the north—are seen the bold, dark summits of the mountains beyond the Ojai.

There is a beautiful legend connected with the origin of the name of Saticoy. Some springs are situated in the vicinity, and the legend recites that, in the olden time, the Indians came here in search of the waters of these springs, they having once been known, but now lost. When the springs were again discovered, the Indian first seeing them exclaimed in his native dialect, "Sat-i-coy!" ("Here they are!") or, as some translators have it, "I have found them." Thus, in the naming of the little village and the plains extending southwardly, the origin of the name is celebrated, and the glad-some exclamation of the Indian preserved as one of the few interesting incidents known to the present generation of the every-day history of a race now fast fading from the face of the earth.

The section herein contemplated is from 2½ to 3½ miles wide, has an undulating surface with a considerable inclination extending from the foothills to the river, and a soil much the same as that we find in the section next above and described in a former letter.

Field Crops.

As we descend the valley, the denser ocean fogs, and the winds which blow more or less, almost constantly, vary the climatic conditions, and while most of the products remain much the same, and fruits do well in many places, yet we find a larger proportion planted to beans and corn, and less to fruit; and especially do the citrus fruits almost entirely disappear. The bean is by far the most important field crop of this section and is planted extensively. Corn is, with some, a standard crop, and when the ground is well prepared before planting and the growing crop properly cultivated early in the season, the moisture retained in the soil and that furnished by the constantly recurring fogs is sufficient to produce corn of good size and of first-rate quality.

Orchard Fruits.

Of orchard trees that succeed well, the English walnut is considered by far the most important. Many are planting out orchards of this, generally setting the trees about 40 feet apart, filling up the ground between trees with lesser growth for temporary use, so as to realize from crops of quicker growth and earlier maturity, while the walnuts are making the necessary preparation for greater growth and longer life of usefulness in the years to come.

Next to the walnut in importance is the apricot, because of its vigorous growth and constant bearing. These two trees—the walnut and the apricot—seem to do well even near the coast without protection. While many other trees grow and produce, yet most of them thus near the coast do far better if protected by belts of evergreen; the Monterey cypress preferred because of its very thickly set branches and leaves.

The Best Varieties.

A. Everett, five miles southeast of San Buenaventura, nearly the same from the seashore, and a half-mile north of the Santa Clara river, has 60 acres in orchard. Of apricots he has the Royal, Large Early, and one locally known as Finney, which favors the Blenheim, and which he thinks may prove to be that famous variety. Some nurserymen have called it the Blenheim. It also resembles the Moorpark. It is later than the Royal. This tree has only fruited now the third year. Last year the apricot was a failure. This fact Mr. E. thinks is due to the alternate warm and cold spells of the winter preceding. Before 1886 his older apricots had for several years borne constantly. It is generally thought that the apricot raised in this valley fully maintains the high standard of California-grown apricots, and for canning purposes, sells for best prices obtainable.

Of apples that do especially well, Mr. E. names the White Winter pearmain, Newtown pippin, Fall pippin, and one here called the White astrachan, described as large, about 22 inches in circumference; flesh white, quite acid; ripens with the Fall pippin. As others which do fairly he mentions the R. I. greening and both the Yellow and White bellflowers. Of pears, most varieties succeed well. As in almost every place visited by us, the Bartlett,

owing to its good size and marketable qualities, is the favorite pear.

Peaches generally thrive and bear fairly to well, and are but little troubled with the curl leaf, as far as observation extends. Nectarines maintain a good growth and fruit well. Of prunes, the Petite (French) for drying does the best. It would seem, from observation in most places, that the people of this valley have necessarily to do without the luxury of cherries grown upon their own lands; but Mr. E. has one variety succeeding well, name unknown, large (1½ inches diameter), acid. It would be interesting to know the name of this variety, and, as it is doing well at this place, the fact may be suggested of its trial in many other places in the valley, and, if successful, might, in part at least, furnish a want which is almost universal throughout this portion of country.

Although a variety of the gooseberry, not yet cultivated, grows and bears well in its wild state, yet the domesticated varieties of both the gooseberry and currant, wherever tried thus far, are almost or quite complete failures. The fine jelly obtainable from the wild gooseberry might well justify its propagation to a limited extent, even if it should be found to have no other usefulness. In very many places the blackberry and raspberry repay the expenditure of cultivation.

In the higher portions of the valley, near the foothills, and a few miles away from the seashore, grapes fruit well and are pronounced of good character; otherwise are considered quite inferior.

Mr. E. has about 30 acres English walnut, one year old from seed, 50x50 feet. Apricots and prunes occupy the intermediate spaces 25x25 feet, thus making the whole orchard 25x25 feet. As the walnuts advance in size sufficient to occupy the whole ground, he expects to remove the smaller trees thus temporarily mixed in.

Ten acres of various kinds and varieties of fruit and nut-bearing trees, much older and now in bearing several years, show such good success that he has been encouraged to plant out a greater variety than most others in this section have attempted.

A. Bristol, in the same neighborhood, has 800 apple trees bearing every year. R. I. greening, White Winter pearmain and Newtown pippin, for value, stand at the head of the list. All his varieties bear well excepting Rome Beauty and Northern Spy. Has about 30 varieties of the pear. Two Flemish Beauties, ages 19 and 18, have borne full crops every year since they were old enough to commence. Crops are raised here, as they are generally throughout this section, without irrigation.

On land adjoining Mr. B., owned by Mr. Evans, has been raised on 50 acres an average of 2250 pounds flaxseed per acre.

Mr. B. says that it is ascertained all over this part of the valley, from well-digging, that the soil will average 60 feet in depth. There is no hardpan in this section and root crops and other plants run down to moisture.

Along the Telegraph Road

We see many very handsome residences, with orchards showing vigorous growth of trees, generally fruiting when old enough, and looking clean and well attended to. The well-cultivated lands, covered with the strong, healthy growth of beans and corn, exhibit a thrift that bespeaks for the owners an ample recompense for well-directed industry.

We would especially mention such places as those of Wm. Sexton, B. W. Dudley and E. E. Dunning. We regret that we were unable to find Mr. Sexton at home, so that we might have taken special notes from his handsome and well-established place. Mr. Dudley has shown the capabilities of the valley in raising considerable quantities of corn having all the characteristics of a superior production.

Mr. Dunning's young orchard trees are looking remarkably well from effects of good growth, close attention to pruning and proper tilth. We had the satisfaction of being shown some notably fine roses, the products of Mrs. Dunning's good taste in the selection of varieties, some of which are rather rare. In this valley roses grow and bloom to perfection, and there can scarcely be anything in plant life more satisfying to refined taste than the sight of their large, softly tinted and elegantly developed flowers and a sense of their delicious fragrance.

We here have a magnificent view of the "deep blue waters" of the Santa Barbara channel and beyond this picturesque "islands of the sea" that rise from the placid bosom of the great Pacific. We are able to watch the commercial ocean steamers, that, in plying their way up and down the coast, through the wide channel, unlike T. Buchanan Read's ships, alternating between extremes of sun and snow,

"These in their happy passage go
From lands of sun to lands of snow."

San Buenaventura

Is the county seat of Ventura county, situated at the extreme western limits of this section, extending from the lowest spur of the long line of hills bordering this section on its northern side to the sea-shore, its western limits reaching to the banks of the Buenaventura river. It is said to contain a population of 2500, and, under the impetus given it by the recent finishing of the S. P. R. R. extension to and beyond this point, is rapidly improving. It commands a large inland trade, and bids fair to become a city of considerable importance.

The place has three newspaper establishments—the *Free Press*, daily and weekly, published

and edited by that able writer and genial gentleman, Dr. Stephen Bowers; the *Ventura Democrat*, by J. McGonigle; and the *Ventura Republican*. We notice a Free Public Library, but at the time of our visit were unable to see the librarian. We learn that the library has some 3000 volumes. It is kept in a substantial building owned by the city.

Besides extensive warehouses, there are, worthy of note, two large fruit-drying and packing establishments. Considerable shipping has been done from this point, taking away great quantities of beans, grain, fruit, hogs and other products of the farm; also petroleum, which has been handled largely by the Mission Transfer Co. We find here a goodly number of public-spirited citizens who seem to take pride in their town and county, and who, by their energy and perseverance in this direction, give assurances of making their place still more attractive. The fine large schoolhouse, showing conspicuously on an eminence above town, evinces a love of culture not behind the general high-toned spirit of Californians, in the matter of furnishing, both childhood and youth, ample facilities for education. McD.

Ventura Co.

THE FIELD.

Propositions Concerning Alkali Lands.

EDITORS PRESS:—There are large areas of land in this State that farmers have hitherto fought shy of for the only reason that they were more or less afflicted with alkali. This substance to the average farmer has been, and is, a great bugbear, the writer thinks with but little reason.

He freely acknowledges that land of equal quality, without alkali, is more desirable. But the question is, whether, taking everything into consideration, there any land in the State more desirable than these dreaded alkali lands. He thinks not, and places before your readers his reasons for such an opinion.

He considers that there is more to be dreaded in imagination than in reality. It is true that there are lands so badly afflicted with alkali, and that of a decidedly injurious character, that to redeem them the application of a neutralizing chemical substance would be required to render them suitable for cultivation, and the expense of this would, from inaccessibility or other reasons, be greater than the cost of available good land that would require none of this extraneous expense. Land of this character can be left for the coming generations to conquer when other lands have reached a high value.

It is now, however, a well-determined fact that the great bulk of alkali lands in this State have not such a large proportion of these salts as will prevent the germination and growth of most of the desirable crops, whether grain, vegetables, grasses, fruits or vines, always provided that the alkali remains

Equally Distributed Throughout the Soil.

This is the solution of the difficulty, and it is at this point that most of the failures originate. The reason is obvious. The alkali usually encountered is only injurious when present in large quantities and in concentrated form. Alkali is readily soluble in water. Now, what would be the natural effect of a heavy rainfall or of an abundant supply of water applied to the soil by irrigation? Inevitably a solution of alkali to the extent of the amount of water applied, further governed by the distance to which it has penetrated the soil.

It is evident that no sooner does the application of water cease than evaporation begins, and proceeds with more or less rapidity according to the state of the atmosphere, as it may be more or less charged with humidity, or of a temperature ranging from hot to cold. In any case evaporation begins and continues. It goes without saying that this can occur at and from the surface of the ground only. As the water evaporates, a continuous supply of alkali in solution is brought to the surface by the capillary attraction of the soil. The water passes off into vapor, but the alkali salt cannot and remains behind at and on the surface. It is, of course, obvious that during this process of evaporation the solution of alkali at the surface is becoming more and more concentrated, until it is finally left as the pure caustic salt itself. We now ask, "What is the most delicate part of all plants?" Unquestionably the crown of the roots, where the stem or leaves of the plant begin. This being at or near the surface of the soil, where also is the concentrated alkaline solution, the result can be readily imagined. It is not surprising that the vitality of the plant is affected, if not totally destroyed. Now, what is the clear deduction to be drawn from our premises? Simply, that if possible, this concentrated solution of alkali must be prevented from coming to the surface, or rather, that a concentrated solution must be prevented from forming at all.

We now have these three propositions determined. First, that the alkali in concentrated form is injurious. Next, that if equally distributed throughout the soil it is not injurious. And finally, if we can prevent the first we can cultivate our alkali soil to advantage and profit; for it must be borne in mind that, with rare exceptions, these soils have the most valuable in-

redients of plant life in the greatest abundance, and in this respect are especially desirable.

To Prevent Concentration.

It now remains only to demonstrate whether we can, at slight expense, keep the alkali where it should be, distributed in equal proportions through the soil, and prevent it from reaching the surface in deleterious proportions.

Really there is nothing easier.

In preparing the soil for fruit trees or vines, or for any crop, the plow performs the first function in this important business by turning under and placing where it belongs whatever of the alkali may be at the surface at the time, and subsequent irrigation, properly done, or the next rainfall, will perform its part by making the distribution in the soil one of equal proportions throughout.

I now propose to confine myself to the consideration of lands that are habitually irrigated by artificial means. The proper deductions can be easily drawn from them as to the correct handling of the lands that depend for moisture upon the rainfall alone.

Let us start at the point where, in the case of fruit trees or vines, the land has been properly cultivated, the plants set out and irrigation about to commence. The first lesson we have learnt is, that in no case is the irrigation to be done by flooding the land, for that is what does all the mischief. The land has been placed in a fine condition of tilth, is deeply plowed and subsoiled and harrowed till it is as fine as it can be got. The deeper the plowing the better, for we then get our water where it is wanted, viz.: as deep into the ground as possible.

It is already said that we must not allow the water used in irrigation to flow over the surface of the soil. This is not only to prevent baking of the ground, but also to prevent as much as possible evaporation. (Every farmer knows that when any soil is in a condition of fine tilth the evaporation is reduced to a minimum.) We thus keep the alkali where it should be, underneath the surface and distributed through the soil. It is true that to a slight extent the tendency even then is for the alkali to concentrate near but not at the surface. This is of course cured by the cultivation which is invariably required in the successful growing of fruit or grapes.

To Properly Irrigate

Our orchard, or vineyard, therefore, we must do it in ditches and by seepage. The more porous and absorbent the soil the fewer ditches will be needed, as they can be placed well apart, or away from the trees or vines. With soil that does not readily seep or leach, the ditches must obviously be run closer to the plants. There is, however, no soil, be it ever so clayey, that will not seep at least three feet, provided the plowing and cultivation has been deep and thorough. The advisability or necessity of this deep and thorough cultivation with new and wild ground, and the necessity of summer-fallow to such, is too well known and acknowledged to require argument. It is an absolute requirement for future success; and with the soil so treated it is evident that a clean ditch that has had the subsoil plow run through its length will place the water deep in the ground, where it is important that it should go.

Growing Grasses and Alfalfa.

For forage crops, such as alfalfa, the treatment at first should be identical with that for fruit trees, except that we must form our field into beds by turning the furrows back on each other until a bed is formed similar to one for the growing of vegetables. (Each bed formed in this manner has, of course, a ditch on each of its sides.) This is, of course, more trouble than ordinary plowing for grain or grasses, but it is done but once, and for the proper working of alkali lands is absolutely necessary. The width of these beds is regulated by the seepage qualities of the soil, being from say four or six to 12 feet wide; the length to be governed by the slope of the ground, convenience or other circumstances. As this work can be done but once and for all time, remember that it must be most thoroughly done. The ground should be plowed in the spring or early summer, if possible a foot deep, and subsoiled for another foot. The ditches should also be subsoiled to an equal depth. The rough plowed soil having received its life from the light and heat of the summer sun, it should in the fall be well and carefully harrowed to prepare it for the seed. Supposing this to be alfalfa, it is sown about 10 pounds to the acre and lightly covered with a brush-harrow, or even left on the surface uncovered. Better this than getting it too deep in the ground. Now just before or at the time of the first rain is the time to first irrigate, which is done by running the water through the ditches in sufficient quantity to thoroughly saturate the soil. We reiterate, this water must on no account be permitted to flow over the surface of the prepared beds. The falling rain sinking gently into the ground meets the moisture we have placed there by irrigating, and the saturation is complete. The seeds germinate and grow and there is a supply of moisture to carry the plants along, though the next rains should keep off for many weeks; and during the prevailing rainy season no artificial irrigation will be required, even in districts where the rainfall is so light as in the southern part of the San Joaquin valley. During this portion of the year evaporation is so slight as hardly to be noticeable. The soil is open and porous, and the roots of the alfalfa have no difficulty in striking down to a good depth.

Now spring has arrived, the rains have ceased,

the air is becoming dry and warm, and evaporation begins to be great. Our alfalfa has made a good stand and covers the ground well, with its roots deep in the soil. More moisture is, however, needed, and we supply it by irrigating as before, through the ditches, still not allowing it to flow over the surface. In heavy soils, where the earth in the ditches has baked, so as to interfere with the seepage, it may be necessary before we turn the water on to again run the subsoil plow through them to break up the crust, and allow the water to go where it should go, as deep down as possible. It will be seen that having kept the water all this time off the surface of the ground we have prevented not only baking of the soil, but have prevented the alkali solution from concentrating at the top. Hereafter the evaporation from the surface is prevented by the growth of the alfalfa which shades it, and all future evaporation must take place through the leaves of the plants, and again we prevent the formation of a concentrated solution of the injurious salts.

This system of irrigation can be continued indefinitely, or in many cases the growth will have become so strong and vigorous that the plant will be beyond the danger of injury, and the land can be irrigated by flooding. In such case, of course, checks must be built, while in the former case checks can as a rule be dispensed with, as the water will do its work while running through the ditches. Stops can be set in the ditches at intervals if necessary. Each case must be governed by its surrounding circumstances.

It can be readily seen that there will be no difficulty in the free use of the mower and rake.

As to sowing alfalfa in the fall before the frosts, it is now settled beyond question that that is the best time for the purpose, as it requires a very low degree of temperature to injure the plant after it has gained its third leaf. The very decided advantage of the plant having the cool or cold weather in which to make its roots before the top growth is stimulated by the warmth of a later season is beyond computation, as this is the critical point of its life and welfare.

Taking everything into consideration, then, first that these soils are rich and will last for generations; next, that with but little extra trouble they can be successfully cultivated; and last, but by no means least, that they can be purchased at nominal figures, we again ask: Are there any lands in the State more desirable of possession, on the basis of a revenue-yielding value?

Proof of our statements is all that is needed to bring thousands of these shunned acres into cultivation and on to the market. Experiment only will furnish the proof or disproof. Try the experiment, unhappy owners of the "Bad Lands." Put all your strength, will and brains into a few acres, and many of you will find happiness and wealth where you now least look for it.

RECLAIMER.

San Francisco.

[Some of these propositions will, no doubt, call out discussion. The subject is of great importance, and full discussion will be of general value.—EDS. PRESS.]

HORTICULTURE.

Meeting of the State Horticultural Society.

The regular July meeting was held on the 29th in this city, Vice-President Hatch in the chair. S. L. Goldman of San Francisco and W. A. Fisher of Napa were elected members, and a number proposed for election at the next meeting.

Fruit Exhibits.

The exhibits of fruits were unusually large. There was a display of apricots from the experimental orchard of the University at Berkeley, among them being the Early orange, Turkey, Red Masculine, Beauge, Early Moorpark, Blenheim, St. Ambrose, Kaisha, Royal, Auberge de Montgamet and Early Golden.

W. H. Pepper exhibited several varieties of apricots, with cleaned pits of each, and at the request of the society gave his observation on the specific differences in the pits. We hope he will write out his observations on this point for publication in the RURAL.

James Shinn showed the Peen-to or flat peach of China, which he esteems for some of its characteristics.

A. D. Pryal showed his new apricot obtained by crossing the Royal and Blenheim, as described in last week's RURAL.

Mr. Klee showed the "Tragedy Prune," as grown to some extent along the Sacramento river. It is said to be a seedling of the *Petite* prune, and claimed to be exempt from San Jose scale. The tree is much like the *Petite*, except that the shoots are downy. Mr. Hatch said the variety came in in time to ship well this year.

Mr. Hatch exhibited a large yellow peach, grown in Santa Clara county, to which he desired those present to give a name. He caused considerable surprise by explaining that it was a specimen of Early Crawford, though considerably larger than Crawfords generally grow. He thought a region which could produce such Crawfords must be adapted to peach-growing.

R. J. Trumbull exhibited a branch holding fine peaches.

The secretary showed the King orange grown

by J. E. Cutter of Riverside which was recently noticed in the RURAL.

Report of Apricot Committee.

Gilbert Tompkins made a report for the committee appointed especially to investigate an apricot raised by R. J. Trumbull, as follows:

State Horticultural Society—GENTLEMEN: Your committee appointed to investigate an apricot raised by Mr. Trumbull has received the following letters from apricot-growers in different parts of the State:

E. J. Wickson, Esq.—DEAR SIR: I notice by report of last meeting of the Horticultural Society that you are on a committee to report on a large, very early apricot, exhibited by Mr. Trumbull at the previous meeting. I fruited a large early apricot this season that may throw some light upon the subject. I procured it from I. H. Thomas of Visalia, under the name of Eureka. He claimed that it was a new variety. Following is his description taken from his catalogue for 1883-4: "The Eureka—This is the earliest large apricot in the State, fully as large as the Moorpark, and four weeks earlier." It was the first to ripen with me this season (I have not the Pringle in my collection) of large size and good quality. This variety may have found its way to San Rafael; if so, the tree could not be over four or five years old.

The apricot from San Rafael, however, may be some old variety, Moorpark or Hems Kirk. There are so many circumstances that may change the time of ripening of a particular variety, or of a particular tree of the same variety, that it is not safe to give this a new name until we learn its history. My Moorpark this year ripened with the Royal, one tree at least a week before.

We are now using many more names on this coast than we have varieties of fruits; for instance, the Early York peach has been called Myer's Early and Strawberry peach. Royal Ann for the Napoleon cherry, Hungarian Prune and Grosse prune for Pond's seedling plum, and many others that I might name. I am in favor of correcting our nomenclature on this coast so as to conform to that of standard American authors.—W. H. PEPPER, *Petaluma*.

G. W. Thissell of Winters, from his examination of samples sent him, writes as follows:

If the tree is a good grower and bears well, if the fruit ripens between the Pringle and Royal, and has any color before it gets soft so it would be a good shipper. I think it would be a valuable apricot—but it should have all of these qualities to make it more desirable than the Royal apricot as a shipper.

As a canning apricot I cannot judge, but from my test of the sample you sent, as a drying apricot, I would pronounce it A No. 1. There is nothing against it but the color, and that is very fair.—G. W. THISSELL, *Winters, Cal.*

Mr. Gilbert Tompkins, *San Leandro, Cal.*—DEAR SIR: I received yesterday two apricots by mail from Mr. R. J. Trumbull, with instructions to give you my opinion of them. It is this. They are a smooth, regularly formed apricot of very fine color, are remarkably dry and mealy, therefore will make an unusual large yield of dried fruit to the pound of ripe fruit, and will, I think, make remarkable fine colored dried fruit. As to their qualities for canning, I cannot say, not knowing whether the mealy character of them would be objectionable or not. At any rate, such dried product as they would produce would be as profitable a way to use them as to can, if there is no objection to their meanness. I think them an excellent fruit, and worthy of large planting.—A. T. HATCH, *Suisun*.

Mr. Gilbert Tompkins, *San Leandro*—DEAR SIR: Mr. R. J. Trumbull of S. F. has sent me samples of apricots represented as coming in immediately after "Pringle," requesting that I give you my opinion of same. The sample was received in good order, and sufficiently ripe for eating. In size is somewhat larger than the average "Royal," color, good; texture, firm and somewhat dry; flavor no better, if hardly as good as Royal; quite uniformly ripe on all sides, which is very desirable for either eating or shipping. If the tree is healthy and a good bearer of fruit corresponding with sample, it must be valuable.—P. W. BUTLER, *Penryn*.

Mr. Code canned two cans of the apricot and thinks very highly of it. The committee refrains from opinion as to the determination of the variety, thinking it needs further observation.

GILBERT TOMPKINS (for the committee).

The report of the committee was received and placed on file. Mr. Shinn remarked that there was room for a new apricot which should unite the good qualities and correct the defects in the varieties we now have. He was disposed to think very well of the Blenheim.

Salt or Sulphur.

Mr. Coates showed two dried apricots, one of which had been immersed in weak brine before drying, as suggested by Prof. Hilgard. The other apricot was put upon the drier without treatment. The fruit which had been dipped in salt water was of a fine fruity color and translucent, and the other was brown and much less marketable. He had used one ounce of salt to six gallons of water, left the fruit in this brine five minutes and then placed on the Common-sense drier and evaporated it in 2½ hours. [The salt solution which is commended for trial by Prof. Hilgard has one-quarter of one per cent of salt. This would be about one ounce to three gallons, or about twice as strong as Mr. Coates used. However, if the weaker dose will do the work it is all the better. Systematic experiments will, no doubt, be made on this point at the University, and similar experiments should attract the attention of growers.—EDS. PRESS.]

Sulphuring of apricots was discussed to some extent by several speakers. Mr. Holt of Riverside thought the use of sulphur before the fruit was put to dry should not be called bleaching, but rather fixing the color. Several said they could not detect by the taste any difference in acidity of properly sulphured

fruit and that not sulphured. [It should be noted that it is loss of fruity flavor, as well as development of sulphuric acid, which Prof. Hilgard has claimed to be an ill effect of sulphuring.—EDS. PRESS.]

The Peach.

The subject appointed for debate for the meeting, "The Peach—Its Culture and Marketing," was then taken up, and the following essay read by Mr. Tompkins:

"The peach does best on its own stock in a light, rich, warm soil, and in a warm climate, moderately free from winds. At time of planting, the tree should not be more than a year old. Some prefer to plant trees in the dormant bud; others to plant seedlings where the trees are to be, and to bud to the varieties wanted in the following year. Authorities differ as usual.

"In fruit-growing, as in all other work, everything depends on putting the right thing in the right place. Don't try to raise any kind or variety of fruit that some one else can raise twice as well with the same amount of work. Don't try to raise peaches for market unless your locality, soil and climate will produce healthy trees, good fruit and plenty of it. If the fruit has not been tried near you, try it yourself in a small way. Enough men have been kept poor by planting large orchards that never could pay except in the mind of the planter. Don't add yourself to the number.

"All this applies not only to the different kinds of fruit, but also to the varieties of each kind. Take the Roseville Cling; it is a success at Suisun and a failure at San Lorenzo, where it curls badly.

"As a general rule, the warm interior valleys—Vacaville, Winters, Suisun, Sacramento, Marysville, Fresno, Tulare, among others—will produce peaches profitably. The coast and bay counties will not. While there are many exceptions, this will do to tie to as a general proposition.

"There are an enormous number of varieties, many of which are useless. Plant varieties that have a solid commercial value, either for shipping, canning or drying. Combine all the good qualities you can and see that the chosen varieties do not ripen all at once. Consult your neighbors who are successful in the business and the nearest reliable nurserymen. Do not get rattled if they all give different opinions, but put your judgment to sifting evidence, and see who ship the best fruit and the most of it. Go slow, but do not be a clam. Energy is as necessary as caution; nevertheless, misdirected energy sometimes becomes recklessness."

Discussion.

James Shinn spoke very strongly in favor of the peach in general as a profitable fruit to grow, and thought the essayist had pronounced a little too strongly against the peach in the coast valleys. Admitting that the interior grows the very best, it is not wise therefore for these places nearer the coast, which grow a good peach and do it profitably, to give up the culture. Of course varieties must be chosen for local adaptations, and there are places near the coast which differ greatly as to their fitness for the peach. His own vicinity at Niles was about the same distance from the Bay as Mr. Tompkins at San Leandro, but he could grow a good peach at Niles—in fact, has known but one failure of the peach in the 31 years that he has resided in the district.

The discussion was continued with remarks by Mr. Hatch, Mr. W. W. Smith, Mr. Klee and others.

Other Matters.

A paper on paralysis of the apricot tree, prepared by Rev. Mr. Ongerth, was read by E. Steele. We will give the paper at another time.

A communication was read from the New York Tribune, the sense of which was to secure the views of various associations as to the desirability of revising the tariff. Schedules had been sent out to enable the societies to act upon any item which affects their interests. Owing to the length of the communication it was referred to a committee composed of B. M. Lelong, E. H. Rixford and Rev. A. H. Perkins.

On behalf of the State Board of Horticulture, Mr. Lelong offered the society the use of two rooms belonging to the board, rent free, which offer was accepted. Mr. Lelong remarked that the new offices of the State Board are located at 220 Sutter street, S. F., have an elevator and other conveniences and will make a fine headquarters for assemblages in the horticultural interest, and such it is the wish of the State Board to make them.

Mrs. J. M. Dyer of 334 Fremont street, S. F., showed some fine specimens of wax models of California fruits, finished in such a way that they will bear handling. The specimens were most true to nature and were much admired. Such models would be excellent to preserve the image of any new variety or true forms of standard varieties. Mrs. Dyer will make an exhibit at the Mechanics' Fair.

Plums and Prunes

Were chosen as the subject for discussion at the meeting on the last Friday in August. S. F. Leib and J. H. Flickinger of San Jose were invited to open the discussion. The society then adjourned.

FISH REFUSE.—The oils, glues, fertilizing agents, etc., prepared from the refuse of the fisheries of the United States realize 14 per cent of the total value of the fish captured.

THE ORNITHOLOGIST.

Dr. Gally Observes the Road-Runner.

A Living Bird-Trap.

EDITORS PRESS:—By reason of my limited knowledge of ornithology and all the other ologies, I formed a high opinion of the fast trotting bird known to Pacific Coasters as the road-runner. I thought that bird was a friend to economic agriculture, and as such I praised him. I take it all back. The road-runner is a pirate, and a sneak, and a robber; but he is a talented "cuss." Let me now tell you what I saw a road-runner do on the 3d day of June, 1887. Among my other small possessions I have a very interesting farm, where I do not reside, on the wagon-road from Watsonville to Santa Cruz, at a cross-roads called Sandford's (or Sandy's) Corners, and this farm is partly level plow-land, partly tule marsh, partly hillside covered with trees and hazel-brush, and partly upland mesa; so, as you can see, it is a great place for a variety of birds, small "varmint" and reptiles—in fact it is a sort of natural zoological garden. The gentleman who does me the honor to reside there lives back from the road about one-eighth of a mile, in a quiet cove of the hills, beyond the tule marsh, far from the madding crowd, and he keeps bachelor's hall and amuses his quiet hours petting and communing with the birds and reptiles. Among his favorites is a domesticated road-runner, which comes every day, morning and evening, down off the hills, to stay around the cabin and stable for a half-hour or more, before and after making predatory excursions into the tule. This bird comes within ten feet of Mr. Dunlap and stands there, tilting its long tail up and down, while being talked to by Mr. D.; and yet the road-runner is believed to be the wildest and least tamable bird in California. This bird has been offered a taste of all the eatables for horse or man upon the place, but only raw, fresh meat meets the approval of his taste—a newly killed mouse, or snake, or lizard suits him very well; but no fruit, or seeds, or cereal product attracts him. During the latest spring of the year this bird caught the smaller insects, but as the season warmed up he quit the insects and turned his voracious attention to bird's eggs, turtle eggs, young birds, toads, frogs and snakes. I think he can whip and devour any ordinary snake; but it is no unusual sight to behold him coming, as fast as he can leg it, out of the tule with two or three blackbirds pelting at him. The blackbirds have caught him burglarizing, for, as I said above, he is a pirate, a thief and a robber.

It is a frequent sight to see this domesticated road-runner walking about with a bird, a frog, lizard, or snake in his bill; but on the 3d day of June aforesaid myself and Mr. Dunlap saw him do something that is almost incredible. There is a colony of bank swallows in that neighborhood and we were cutting heavy barley for hay about 4 o'clock P. M., from a knoll of land, and I suppose we aroused the gnats, or some very small insect, and in search of these gnats came many swallows soaring around and around, and over and across the knoll of new-mown hay. It is well known that a swallow is about as swift a bird on the wing as there is any need of, and it is equally well known, in California at least, that a road-runner does not fly any at all unless on the down grade; yet, at the time and place aforementioned, I saw this domesticated road-runner catch three swallows on the wing in less than half an hour. Here is to say how he did it. You have seen a ground squirrel crawl flat on its belly, and so the road-runner, among the swaths of hay, crawled under the soaring swallows until a swallow came within four or five feet, directly over the crawling bird's head, when snap! quicker than the spring of a steel trap, the road-runner leaped into the air and brought down the swallow.

This I saw him do three times; and, what seems strange, the swallows never made the least struggle after being struck. That is what puts me down on the road-runner, and I say that any carnivorous bird that will leave 20 acres of frogs, toads, snakes and lizards to go and sneak up on innocent insect-eating birds and kill them in cold blood is not deserving of any man's respect. I have not interviewed the insects upon this subject.

As near as I can find out, the road-runner belongs to the family of the secretary-bird or snake-eater (*Gypogasterus serpentarius*), and yet the secretary is a bird of South Africa; but then it is none of my business to account for how the Creator distributed animals over the earth's surface. I leave that matter to those arbitrary and firm fellow-citizens who seem to be much better and more intimately acquainted with Deity than I am; all of which is most respectfully submitted to an observing public.

P. S.—It is to be noticed that while the road-runner will travel a tule-marsh in search of food, it is not a wader (*grallator*) or swamp fowl, but emphatically a dry-land bird.

J. W. GALLY.

Pajaro Township, Santa Cruz Co.

THE FIRST VESSEL to be propelled by electricity ever built in the United States is now in course of construction at a shipyard in Newburg, N. Y. It is a yacht 37 feet long, 7 feet wide and 5 feet deep. It is to be operated by stored electricity. It is building for a Newark, N. J., electric company, and will be run between that city and New York.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

The First Combined Harvester.

EDITORS PRESS:—I send you a poem, by Hon. E. Lakin Brown, of Schoolcraft, Michigan, in honor of the great "Harvester," invented and patented by Hiram Moore in the year 1835, and built on Prairie Ronde, Kalamazoo county, Michigan. It cut, thrashed, cleaned and bagged the wheat in perfect order for market, in one operation. In 1836 a trial was made for me, cutting three acres. It was tried and harvested some each year, but not made perfect till 1842. I usually operated the machine for Mr. Moore, and in 1843 built one for myself, and used it every year, including the harvest of 1853, when I sold it to George Leland, who shipped it to San Francisco, and harvested about 600 acres in Alameda county, in 1854, mostly for Mr. Horner. Some time afterward the machine took fire and was burned.

Tulare, July 23, 1887. A. Y. MOORE.

When Ceres first her bounteous gifts bestowed
And first with gold the ripening harvest glowed,
No tempered scythe flashed o'er the burdened land,
No ready sickle armed the reaper's hand;
But slow with tedious care, the skillful swain
Plucked with his hand the years of ripened grain;
With rude contrivance shelled the dear-bought
prize—
A scanty horde his wants but ill supplies.

But soon invention, sprung of direst need—
That only good to art by Jove decreed—
Fashions some implement, some ill-formed blade,
The weary gatherer's tedious tool to aid;
Which slow improvement—in her progress slow,
Yet still progressive—as the ages flow
Changes and alters, till she can late produce
The light keen sickle for the reaper's use.

O blade more honored than the warrior's spear!
At thought of thee what rural scenes appear!
The wide-spread field of yellow waving grain,
The laughing damsel and the jocund swain;
In numerous pairs their grateful task they ply,
The while in mirth and rustic wit they vie,
And rocks, and woods, and distant hills prolong
The merry echoes of the harvest song!
Such were the scenes that blest those happy days
Ere late refinement changed the maiden's ways,
When she no more may wield the shepherd's crook
Nor with her lover ply the reaping hook.

But, classic instrument, thy work is o'er,
Thy ancient glory shall be sung no more;
No more at eve when gentle dews descend,
Thy graceful curve shall o'er his shoulder bend
When the tired reaper homeward wends his way
To close his labors with the closing day,
Nor yet the cradle shall its honors keep,
And cut the yielding corn with lengthened sweep;
With its long fingers grasp the precious grain,
And strew the even swath along the plain.

How shall I sing how skill and art prevail
To join the sickle with the fan and flail?
How at one stroke the laden ears are shorn,
And ready sack is filled with winnowed corn?

Vast the machine, which wheels immense sustain,
And twelve proud steeds propel along the plain;
Huge as that fatal gift that bore concealed
Those treacherous foes who caused proud Troy to yield;

Or that vast car before whose crushing wheels,
O blind to truth! the Indian Pagan kneels,
But not for me in tuneful verse to name
The various parts of that ingenious frame,
Which with such skill a cunning hand hath wrought,
They move consenting to the maker's thought;
And the glad farmer sees performed the while,
By tireless hands, his tedious three-fold toil.

O wonder-working art! By heaven designed
To bring relief to weary human kind;
The curse to soften passed on guilty man,
And e'en remove it, if aught earthly can;
Since first our exiled parents learned of thee
To clothe their naked limbs from leafy tree,
No single work of thine will farther go
To lift that curse from off the laborer's brow!

Yet something, sober art, we lose by thee—
Thou leavest not the poet's fancy free.
Thy noisy progress in confusion flings
His peopled world of fond ideal things—
No mermaid haunts the steamer's dashing side,
To wile the sailor 'neath the briny tide—
Nor where all day thy clattering wheels have been
At night will gentle fairies dance upon the green.

From Santa Rosa.

We had the pleasure of meeting on Tuesday Bro. E. W. Davis of Santa Rosa, Master of the Grange. He has been unusually taxed in his labors of late, and we were glad to see that a short vacation was doing him good. Bro. Davis assured us that local preparations for the State Grange meeting were going forward with vigor and the efforts of the local Grange were met with much interest and cordiality by the people of Santa Rosa and vicinity. Attendants at the State Grange may be assured of a warm welcome and of good arrangements for their convenience and comfort. Santa Rosa will be proud of her guests on that occasion and will take special pains to display the charms of municipal neatness and beauty, enterprise, etc., for which the town has a good name, for the interest and entertainment of the Order. Bro. Davis reports Pomona Grange of Sonoma county especially busy with arrangements for display at the leading fairs, a work in which the good Grange-workers have won such signal triumphs in the past.

Grange Work and Progress.

(Prepared Weekly by M. WHITEHEAD, National Lecturer.)

After standing the test of 21 years' trial, the Grange is now one of the acknowledged permanent institutions of our country. The only questions to be settled about it now are those of locality, which must be decided by each individual farmer, or the farmers of any one neighborhood, each for themselves—and they are these: "Do I need the benefits of this farmers' organization?" "Shall my wife and children enjoy its advantages?" "Shall we, the farmers of this community, for ourselves and for our families, have a Grange right here?" "Do we need it for its social advantages?" "Do we need it for its means of education to be found in no other direction?" "Do we need it for its business or financial advantages?" "Do we need it as voters, as American citizens?" "Having done what we can to give our neighborhood the advantages of churches and schools, have we performed our whole duty to ourselves, our community and our country until we have made earnest effort to have a good Grange established here also?" "Are we able to do what farmers are doing in thousands of other places—maintain an organization in our own interest and for our own benefit?" We ask all farmers, young and old, near and far, to calmly, carefully, deliberately—not hastily—consider these questions. Investigate the Grange thoroughly. The truth never yet suffered under the brightest light or closest inquiry, and we fear not the result. The Grange has ever found the greatest opposition from those who knew least about it. In past years it has even had members who came in and went out again before they had really found out its A B C. Because the truth is becoming known, because it is seen and felt, the Grange work goes forward under clear skies and with favorable winds.

"WHEAT sold in Chicago on the 21st at 68¢, the lowest in 25 years. At that time it cost 30 cents a bushel to get it down here; the cost now is only 13 cents. The break is the result of the collapse of the bull clique. We think it a great misfortune for the country. Low prices for grain keep the farmer poor, and while he is poor we do not think there can be any prosperity. The wheat bears are like the railroad wreckers of Wall street; their gain is the very blood of the producer. They are ruining him and feeding Europe with cheap food. The press of this town is constantly urging the claims of the consumer, and ignoring those of the producer. The low price for wheat is closing the markets of the continent. To protect their farmers, Germany, France, Spain and Italy have put an almost prohibitory tariff on wheat. If we lose those markets we can thank the bears in grain. The low price here has made low prices there."—*Chicago Paper*. True enough, and be it remembered the Grange is using its efforts to secure legislation to prohibit gambling on 'change in farmers' products.

"WHO taught the American people, and their representatives in Congress, that 'the creature must always be subject to the Creator,' and after years of labor so educated the people, and their representatives, that it became possible to pass the measure known as the Interstate Commerce bill? This bill, though imperfect, is a glorious triumph for our Order, and a victory for the American people, for henceforth it will be understood that there can be no capitalized power in this Republic greater or more powerful than the people. If this is the only work the Grange ever did, it is worth all the time and money spent in maintaining and perpetuating the Order."

THE GRANGE in our State has been the starting point for the last 12 years of every movement that has been of any practical benefit to the farmers and fruit-growers, and it stands to-day foremost in every effort calculated to advance the interests and increase the happiness and prosperity of all our people. It is truly a power for good, and therefore we will not rest until we can hail every farmer as a Patron, so that by their combined wisdom and power the highest aim of our Order may be attained, and general prosperity assured.—*A. N. Brown, Master Delaware State Grange*.

WHILE there is much enjoyment in a good Grange, it cannot be kept up for the fun of it. There must be work about it—earnest, thoughtful work on the part of the members. This work must not be spasmodic. If so, the condition of the Grange will ebb and flow with the work put into it, and the danger is that all ceasing to work, its life may go out. It is only by persevering efforts continually put forth that this work can continue. If the mission of the Grange is a good one, it is worth working for.—*Farmers' Friend*.

ONE of the strongest arguments for the Grange organization is that its whole tendency is against selfishness and in favor of making farmers mutually helpful. And it must be added that the chief objection of some farmers to joining it is to be found in the fact that if they did join they would be expected to give information as well as receive it.

WORTHY MASTER A. J. ROSE of the Texas State Grange, writes: "Our State Grange meets in Marlin, Falls county, on the second Tuesday in August. We shall have Brother James N. Lipscomb with us at the meeting. With good crops this year the Grange of Texas is on the eve of a prosperity not before reached. The letters from over the State received at my office and the reports of the lecturers all indicate this."

WE have never known an organization among farmers that had such a glowing prospect before it as stands out plainly and invitingly before our Grange. Farmers only need now to realize their most sanguine hope to remain true to themselves and the obligations they have taken.—*H. H. Shippard, Texas*.

THE county Grange of Vernon county, Missouri, conferred the fifth degree on 40 new members at its July meeting.

"Let thy light keep steadily burning,
It perchance a friend may guide,
Who, from darksome ways returning,
Will be cheered by the full tide."

The Worthy Master Away From Home.

[NUMBER 4.]

[Written for the RURAL PRESS by MRS. WM. JOHNSTON.]

Another hour was pleasantly passed in listening to sweet strains from the guitar, rendered by one of the King's dancers; after which "Luau," or dinner, was announced. The King took the lead, with Mrs. Atkinson leaning on his arm, followed by Mr. Atkinson with the Queen's sister, others falling in two by two.

The tables were to the Americans a marvel. They were made of boards raised three or four inches from the ground. This small elevation is a departure from the old custom. The arrangement of these tables was odd indeed. There were three long ones, about 60 or 70 feet in length, joined at one end by snugly fitting in another. Upon these were spread fine linen table-cloths, nicely tucked in under the edges. Over these again were placed fern leaves, laid so that the edges just touched each other, giving a beautiful effect. Next came the dishes. For each guest were laid two plates, two knives and forks, three glasses, one bottle of champagne, one bottle of beer, one dish of "poi" (a viand much used among the natives) and one butter-plate, with salt on one side and a savory dressing, like a jelly, on the other. Thus was each one equipped at the King's feast.

The table was thickly set with small dishes, containing raw fish and shrimps, roast dog and pig, chicken and potato salads, and an abundance of cake. The shrimps were quite too lively, as some crawled off the dishes, which were placed so close together that they overlapped. The dogs and pigs were prepared by wrapping them in "ti" (pronounced "tea") leaves, and placing them in a hole in the ground, then covering them over with hot rocks. Fish is often cooked in the same manner. Choice bouquets adorned the table, together with pyramids of fruits and flowers, which added beauty to the magnificent arrangement. You were not obliged to partake of the liquors, as ice-water was provided in abundance.

The King sat at the side of the end table, opposite the center table. For himself and his most honored guests was prepared an extra dish of dog. These animals were of superlative quality, fed from infancy on "poi," till they are grown and fat, when they are served up in a kind of stew. At this table was served the most dainty drink of the Kingdom, whereof none were invited to partake save our W. G. M., Atkinson and family. I did not see the process of making this drink, but was told by good authority that it was from a certain root, by natives chewing it and depositing the juice, slightly strained through the teeth, in a wine-glass, to be used by those that are fond of the precious beverage. This was not offered me nor mine, but had it been I could have truly said, "No, thank you! I drink nothing intoxicating."

But my description of the "Luau" is not complete, and I will proceed. Along the sides of the table were spread rugs of Chinese matting upon which to kneel or sit while eating. Scattered along back of the guests were about 50 native girls, dressed in white "Mother Hubbards" and provided with feather brushes nicely arranged on whip-stocks, which made them pliant and easy to wave over the heads of those at the table.

Above all this grandeur was stretched a tent upon poles planted in the ground, well braced and covered with heavy canvas. The sides were curtained with American and Hawaiian flags. The King's band was stationed near him, outside the tent. After the King's health had been drank and responded to by his Royal Highness, they burst forth in expressive song in their native language, which proved most charming. They also played during intervals of the feast, that we might not grow weary in well-doing.

After lingering, kneeling, lounging or sitting tailor-fashion for about an hour and a half, the company adjourned to the grove, where we again had the pleasure of sitting upon chairs, and witnessed a race to the top of a coconut tree by three natives. They performed the feat as readily as monkeys. The King's dancers again gave an exhibition of their skill, and then all returned to their hotels, highly delighted with the day's entertainment.

Sunday, many of the party went to church, and on Monday we were invited to a stroll through the Government grounds and building. Tuesday, at 12 o'clock, the steamer Australia sailed for San Francisco, carrying a number of our party. Wednesday, we, the remainder, spent in shopping and resting. Thursday in visiting the "Pali," and Friday we rested hard all day, and received news from home. Saturday, many of the party attended the races, while others wandered or drove about town.

(To be Continued.)

Sonoma Pomona Grange.

The meeting of the Pomona Grange at Santa Rosa July 20th is said by the *Republican* to have been the most interesting and successful ever held by that body. Every subordinate Grange in the county was represented. The fifth degree was conferred. The usual Grange dinner was served, and much work for the Good of the Order done. The literary exercises afforded a fine feast of reason and of wit. The select readings were appropriate and exceedingly well rendered. Mrs. G. W. Huntley, Mr. Harris, Mr. and Mrs. L. O. Coon and

Misses Litchfield and Wightman, all of Sebastopol Grange, furnished excellent vocal music. A strong preamble and polite resolutions were adopted asking the Board of Supervisors to make an appropriation for the purpose of inducing immigration to Sonoma county.

After speaking with generous appreciation of the service which the Grange has rendered by her splendid displays at various fairs in advertising the resources of the county, the *Republican* adds: "Pomona Grange of Sonoma county has grown to be one of the most influential and useful bodies of this city. We congratulate its members on the good work done, and urge them never to weary in well-doing."

A Pony Swindle.

Another scheme for fleecing such folks as hope to get something for nothing has been successfully worked in Monroe county, Penn., and is thus described in the *Farmers' Friend*:

About the 1st of July a stranger commenced calling on farmers, business men and others (selecting those having children), with photographs of a number of beautiful Shetland ponies, which he offered for sale at \$5 apiece. At the same time he would give a full pedigree of each pony, guaranteeing the little animals to be perfectly sound, kind and harmless as a kitten. He said the reason he offered them so cheap was that he owned a large stock-farm in N. Y., and that they bred so rapidly that he had all the large circus companies overstocked, and was compelled to kill them or ship them out on the prairies, and there allow them to roam until they died or were disposed of in some manner.

To make his argument still more plausible, he said that the Delaware, Lackawanna & Western Railroad Co. offered such facilities that they were easily shipped to Stroudsburg, and would be as soon as a carload was sold.

After a pony had been selected, he would inform the purchaser that he must have the required amount of money to pay the freight on it, at the same time stating that all railroad companies under the new law compelled shippers to pay in advance, and that what they paid was not for the pony, but simply to cover the expenses of getting it to the purchaser. In that way he would get the required amount of money from each one. During his conversation he produced the best references, including names of citizens familiar to those he was dealing with at the time. Those whom he swindled say that his story appeared to be as true as gospel, and that he told it so nicely that all of his victims were sure they would get a pony for the paltry sum of \$5. Two weeks later, the time when the ponies were to arrive, a number went to the station to get them. They returned home sorely disappointed but wiser men. It is said that about 25 persons fell victims to the pony swindle.

THE WINE CROP OF 1887.—As stated in the *RURAL* at the time, Secretary Wetmore of the State Viticultural Commissioners sent a large number of circulars to all parts of the State, asking for information about the vineyards and the prospects for this season's wine crop. Nearly all of these reports have now been returned. From them, as well as from other sources of information, Mr. Wetmore calculates that this year's wine crop will amount to 16,000,000 gallons. Last year it was between 17,000,000 and 18,000,000 gallons. Had the vineyards not been damaged by frost or conlure the product would have aggregated fully 30,000,000. Some 3,000,000 gallons this season will be made into brandy. It is expected that the must-condensing machines will reduce the wine product about 2,000,000 gallons. Bids for the location of the must-condenser are still coming in. The St. Helena growers offered to supply 3500 tons of grapes annually, \$15 being charged for Zinfandel, \$12 for Malvoisie and \$10 for Mission. Proposals from Fresno were not received. A committee from Cloverdale offered to furnish grapes at a smaller cost than any of the offers received, but the quality of grapes would not be guaranteed.

RETURNED FROM JAPAN.—Mrs. H. H. Berger of H. H. Berger & Co., importers of Japanese seeds, plants and trees, has returned from Japan after having formed most important connections to secure a first-class stock of Japanese material for this fall's planting. Mrs. Berger brings, among other interesting things, a collection of bamboo specimens, from the Giant, seven inches in diameter, to the smaller varieties. We will allude to the collection further at another time.

THE FIRST AND LAST OF THE FAIRS.—We are indebted to the managers of the San Diego Horticultural and Agricultural Fair, and of the third annual Horticultural Exhibition of Santa Clara county, for complimentary tickets to the same. As it happens, these two displays, the latter coming Aug. 15th to 20th, and the other Oct. 28th to 30th, mark the outer limits of the California fair season of 1887.

THE GRIDLEY MONUMENT.—The statue of Ruel Colt Gridley and portions of the pedestal were received from Italy last week and taken to Rural cemetery, near Stockton. The work of erecting the monument was commenced immediately; and it is pleasing to think that this fitting memorial to the efficient patriot is likely soon to stand complete in the center of the lot of the G. A. R.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

MT. EDEN ITEMS.—Haywards *Journal*, July 30: W. C. Blackwood's apricot-drying operations along the Mt. Eden road attract considerable attention. He has about 25 children and grown people dissecting, and 70 Chinamen gathering the fruit. Crops continue to turn out well. Jacob Harder received on the average over 22 sacks to the acre, while one piece went 27 sacks to the acre. From 56 acres he realized 1200 sacks of chevalier. N. Gading, from 33 acres realized 806 sacks of chevalier, and from 27 acres of common barley 810 sacks. The boss yield so far was on the Zeile place—1025 sacks of barley being secured from 30 acres.

Butte.

IRRIGATING COMPANY.—Gridley *Herald*, July 28: A number of local capitalists of Oroville, under the management of Maj. Frank McLaughlin, have organized and incorporated the Butte and Yuba Orange Belt Irrigating Canal Company. The objects of the company are to obtain water rights, construct canals to convey water and sell the latter for household, domestic, irrigating, mining and manufacturing purposes. It proposes to secure 100,000 inches of water from the Feather, and construct a system of canals along the foothills east and south of Oroville for carrying the fluid to parties desiring to purchase it. The capital stock is \$5,000,000, divided into 200,000 shares at \$25 each. Messrs. F. McLaughlin, Charles St. Sure, John C. Gray, J. M. Ward, D. Hilton, E. W. Fogg and W. M. Cutter are the Board of Directors. Shares to the amount of \$95,000 are already subscribed for.

Contra Costa.

SWARMING SQUIRRELS.—Martinez *Gazette*, July 30: Last Friday, as Thos. Duncan of Clayton was inspecting his wheat stacks, he noticed a number of squirrels running into a single hole. He got his shovel and pick, called his dogs, and began to dig for the squirrels. In the one hole he captured 42, three of which had been smothered to death, so thickly were they crowded. The next day Mr. Duncan killed 26 squirrels around the same stack.

Fresno.

EDITORS PRESS.—Still Bros.' ranch, near Madera, consisting of 21,000 acres, has recently been sold to a syndicate of English capitalists for \$400,000. This ranch had the honor of producing the first barley ever raised in Fresno county. The greater portion of the crops have been thrashed. It has been a better yield than was expected. It is a poor crop that will not average 15 bushels to the acre. Peaches, grapes and other fruits are plenty. It has been very hot here, the thermometer standing as high as 116°. The last few days, however, have been comparatively cool. Heavy fires are raging in the mountains near by.—*Jr.*, Madera, July 30th.

SELMA PRODUCTS.—*Irrigator*: Yesterday George Kirkham brought in a handsome bouquet, consisting of 15 varieties of fruit neatly arranged in a box. Among the lot were Early Crawford peaches weighing half a pound each, Morris White peaches, two varieties of nectarines, four of apples, three of plums, two of grapes, Bartlett pears, and blackberries. These are of the varieties of fruits raised in this neighborhood.

Inyo.

FINE COLTS.—*Independent*, July 30: G. W. Parish has a three-year-old colt that is a beauty. He is of a glossy black, with broad chest, round body, limbs straight and powerful, eyes full and clear, muzzle small, nostrils wide and full. This fine animal is admired by all lovers of horseflesh who see him. He is of Hamiltonian-Planter stock, and is now 16 hands 3 inches high. . . . W. R. Tibbetts has the largest three-year-old colt in the valley. He is of Norman-Planter stock, very dark brown, and of fine form and build. Mr. Tibbetts has two colts of fine form and build. Mr. Tibbetts has two or three colts from him that show all the best features of the sire.

GRASS AND CORN.—On his place down at the river, W. J. Lake has corn standing from seven to eight feet high. It is quite common to find two to three ears to each stalk. Ground broken last spring and planted with oats and alfalfa is bearing a heavy crop. It is worth mentioning that this ground is where "nothing at all would grow;" at least "everybody" said so, except Billy Lake. On the farm of W. S. Enos near town, the growth of blue joint just cut was so heavy that a man had to go in front of the machine and pitch the cut grass out of the way.

Los Angeles.

WESTMINSTER CROP NOTES.—*Cor. Times*, July 30: The corn crop is now well forward, tall and green to the base, promising a large yield. Alfalfa is being cut for the third or fourth time. The second crop of Early Rose potatoes is being planted on the uplands. The lowland single crop of Peachblows and other approved kinds gives excellent promise. Stock is in good order. The last of the apricots have just matured, the season lasting since June 11th. Good peaches are abundant. So are apples and pears. Markets for all produce are better than ever before. Add to this the pure artesian water and the cooling sea-breeze, and

the ocean baths so easily obtained, and it may be said that smiling comfort looks out o'er the plain.

Placer.

IRRIGATING SCHEME.—*Republican*, July 27: F. Birdsall has been making careful personal inquiries among the millmen and irrigators, and finds that the necessity for water has not been overestimated under present conditions, and that if the supply is increased the acreage that will be put under cultivation is enormous. This is particularly true of alfalfa. . . . Mr. Birdsall will begin work on the Bear river ditch at Newcastle Oct. 1st with 500 men, and work up to the dam, a distance of about 60 miles. He will enlarge the ditch so that it shall be 12 feet wide at the top, four feet on the bottom, and its average depth will be perhaps five feet, or large enough to carry about 2000 inches of water. The cost is variously estimated at from \$25,000 to \$40,000.

EARLY GRAPES.—G. H. Banfield had ripe Rose de Peru grapes on the Sunset ranch in Mount Vernon district on Tuesday of last week, July 19th. On Wednesday he shipped some of them at Newcastle, and so far as heard from these are the earliest grapes of that variety in the State.

San Joaquin.

THE MOKELUMNE CANAL.—Telegram from Lodi, July 30: C. E. Grunsky, who is surveying the Mokelumne Ditch and Irrigation Co.'s line, told the *Independent* correspondent last night that while they were progressing finely, it was still too early to describe in detail the location and dimensions of the proposed canal. "I can state, however," said he, "that there are no great obstacles in the way of the canal's construction. The old dam is in an excellent, picturesque location, just below the Westmoreland, or the Winter Bar, suspension bridge. The canal will follow the course of the river for about three miles, and then pass through a tunnel into Camanche Creek valley, down the same about a mile and thence southwesterly into the valley of Bear creek. The main canal above Bear creek will have a total length of between seven and eight miles, and the water will there be delivered at an elevation of about 160 feet above Hunter street, Stockton, an elevation sufficient to command practically all the level land of San Joaquin county."

LODI MELONS.—To-day a crate of watermelons was shipped to Riverside as a sample of the productiveness of this end of the county. There were one dozen melons in the crate, aggregating 380 pounds in weight. Fifteen carloads of melons were shipped from Lodi this week. From 1200 to 1400 melons are shipped in a car, and the freight to S. F. is \$22.50 per car. For the first melons, sent hence the 20th, \$2.50 per dozen was realized. There was, of course, a decline in price after the first lots. They are sending some four or five carloads a day, very fair as to size and quality. There are some 1100 or 1200 acres in melons in this vicinity, and it is said they will turn out pretty well, but a little late.

San Luis Obispo.

WHEAT, BARLEY AND OATS.—San Luis Obispo *Telegram*, July 28: Returns from the harvest-fields indicate a slight falling off from last year's wheat crop in this county and an increase in that of barley of nearly 100 per cent. The yield of both is 50 per cent more than was expected three months ago, and the quality is excellent. The barley on the coast is enormous, going from 60 to 88 bushels per acre. The wheat on the coast is double the usual quantity, but east of the mountains it was generally light, though some heavy crops are reported. The yield of oats east of the mountains is very large.

Santa Barbara.

IMPROVING NEW ADVANTAGES.—*Press*: Metcalf & Co., on Monday, July 25th, shipped a carload of dried apricots East on the new railroad—the first through carload shipment from Santa Barbara.

ARTESIAN WATER.—On the lots of E. J. and E. W. Hayward, at a depth of 86 feet, a flowing stream of pure soft water has been obtained, the water rising two feet above the pipe. Another flowing stream was recently obtained on the U. Roberts lot, on Haley street, at a depth of 81 feet. When 40 feet from the surface the drill penetrated a six-foot vein of blue clay, such as is used for glazing crockery and which contains no gritty substances. This clay is said to be hard to obtain and worth at least \$50 per ton. The same vein was struck in the Roberts well. These wells cost but about \$1.25 per foot.

SANTA MARIA APPLES.—*Times*, July 30: We have received a box of apples this week from T. B. Ables' ranch, about eight miles southeast of town. It contains some of the finest summer apples that we have sampled this season from any place in this section, and we also find them much superior in flavor and taste to any shipped to Santa Maria from abroad. The principal varieties were the Strawberry, Early Harvest and Red Astrachan.

THRASHERS PROGRESSING.—Bell & Trott's thrasher is working its way down the valley. Mr. Trott says: "Scarcely any farmer that we have yet thrashed for ordered grain sacks enough at first; usually they have had to make the second trip to town after sacks." While grain is turning out much better than was at first anticipated, the thrashing season will not last as long as usual, for the straw is so short that

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.]

DATE.	Portland.				Red Bluff.				Sacramento.				S. Francisco.				Los Angeles.				San Diego.			
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.
July 28-Aug. 3.																								
Thursday.....	.00	68	S	Sy.	.00	78	S	Cl.	.00	70	S	Cl.	.00	57	SW	Cy.	.00	82	SW	Cl.	.00	70	W	Cl.
Friday.....	.00	66	NW	Sy.	.00	84	S	Cl.	.00	76	SW	Cl.	.00	59	SW	Cl.	.00	82	W	Cl.	.00	66	NW	Cl.
Saturday.....	.00	70	NW	Sy.	.00	84	S	Cl.	.00	76	SW	Cl.	.00	55	SW	Cy.	.00	80	W	Cl.	.00	66	NW	Cl.
Sunday.....	.00	64	SE	Cy.	.00	84	SE	Cl.	.00	74	S	Cl.	.00	55	W	Cy.	.00	82	SW	Cl.	.00	68	W	Cl.
Monday.....	.00	64	S	Cy.	.00	88	NW	Cl.	.00	76	SW	Cl.	.00	54	SW	Cy.	.00	78	S	Cl.	.00	68	NW	Cl.
Tuesday.....	.00	64	NW	Sy.	.00	90	N	Cl.	.00	80	NW	Cl.	.00	60	W	Cl.	.00	80	W	Cl.	.00	66	W	Cl.
Wednesday.....	.00	66	NW	Cl.	.00	98	N	Cl.	.00	82	SW	Cl.	.00	63	W	Cl.	.00	80	W	Cl.	.00	68	NW	Cl.
Total.....	.00				.00				.00				.00				.00				.00			

EXPLANATION.—Cl. for clear; Cy., cloudy; Fr., fair; Fy., foggy; — indicates too small to measure. Temperature. Wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

the machines are putting it through at the rate of from 1500 to 2000 sacks per day.

Santa Cruz.

SUGARIE IN PROSPECT.—*Pajaronian*, July 28: It is reported that Claus Spreckels will construct a beet-sugar factory in this valley. We trust this rumor will become an assured fact. Years ago, when the Soquel beet-sugar factory was in operation, a large acreage in this valley was devoted to sugar-beet culture, and up to the last year it was found profitable. The yield of beets per acre was enormous, and no other crop then produced was as profitable.

Solano.

BIG BARLEY.—*Suisun Republican*, July 29: Returns from the Wolfskill barley-field, from which a large yield has been expected, have at last come in. Cal. Reams thrashed the eight acres, from which 400 sacks of clean barley were turned out, an average of 50 sacks to the acre—the finest yield ever recorded in the county.

Sonoma.

SILKWORMS.—*Cor. Petaluma Courier*: Prof. Joseph Neumann of S. F. brought to Sonoma, about June 4th, 175,000 silkworms, having previously ascertained that there were enough mulberry trees grown here to furnish food for that number. It has been very interesting to watch the development of those little worms from day to day, and to see with what energy they strive to fulfill the place that nature laid for them. The crop is about finished now, and is a grand sight. About 160,000 cocoons have been produced, and there are about 2000 yet to mature and spin that will take only a short time. Mr. Neumann has demonstrated practically that this valley has every advantage for the successful production of the best of silk on a large scale.

Sutter.

HOW THEY GROW.—Telegram from Marysville, Aug. 1: The growth of trees in the Abbott & Phillips orchard in Sutter county excites remark from all visiting nurserymen and horticulturists. The orchard embraces 395 acres, and consists of peaches, apricots, pears and plums. There are 300 acres of peaches alone. Despite the severe pruning of peach trees, 20 months from the time of planting budded yearlings have attained a height of from 14 to 16 feet and a diameter of trunk of from six to eight inches. The orchard has had no irrigation and is not on bottom land. In the same orchard are 200 orange trees, grown from seed planted on the place. These have never been injured by frost, although entirely unprotected since setting out. From last spring they have had no irrigation and have made an excellent growth. Phillips, the veteran horticulturist, says he believes considerable land in Sutter county is capable of raising oranges profitably with no irrigation. This soil is a rich loam 12 or 15 feet deep.

Tehama.

FINE APPLES.—Red Bluff *Sentinel*: The Board of Trade acknowledges the receipt of a box of fine white Astrachan apples from A. O. Pedan's ranch, seven miles below Tehama. They are the largest and best looking of the kind we have ever seen grown without irrigation.

Tulare.

NECTARINES.—*Visalia Times*, July 28: I. H. Thomas is now making daily shipments of nectarines south, and says his crop will net him three cents per pound—a larger profit than he makes on any other kind of fruit. On Monday he showed us a sample of the Downton, a yellow nectarine which will weigh three to the pound. It is certainly the most delicious fruit grown in this valley. Mr. Thomas says that the market for the nectarine is limited, owing to the fact that people generally know little concerning it. In the near future, however, he thinks that there will be an enormous demand for Tulare county nectarines, owing to their large size and delicious flavor. He says that at one cent a pound \$270 can be realized from an acre of ground set to nectarines. In this calculation he allows 108 trees to the acre, and a yield of 250 pounds to the tree. Mr. Anderson's orchard, near Farmersville, will yield 350 pounds to the tree this season.

TOMATOES.—In the Delta office may be seen sample tomatoes from the ranch of E. McClure, in the foothills northeast of Antelope valley and 25 miles from Visalia. Eight of these tomatoes weighed eight pounds, averaging one

pound each. Several tons of them are growing on Mr. McClure's place. The foothill region is well adapted to the tomato, and many instances have been chronicled in this paper of the vines living through the winter uninjured by frost.

Yolo.

GOOD RUN IN THRASHING.—A Yolo correspondent of the *Democrat* tells of the run made in one week by Hon. L. B. Adams' machine. He says: Monday, the 11th, on the ranches of Hiram Hurlburt and G. E. Schlosser, we thrashed 1600 sacks of wheat. Tuesday we thrashed 1358 sacks. Wednesday, the 13th, on the Bingham place, in grain owned by M. E. Clowe, we thrashed 1716 sacks of wheat, averaging 139½ pounds to the sack. Thursday, the 14th, on Ed. Bray's ranch and the Bingham place, we thrashed 1206 sacks and moved three miles. Friday, on the Anderson Bros. place, we thrashed 1379 sacks, and Saturday, same place, 1205, making a total for the week of 8464 sacks, which we think can't be beat. Mr. Adams has the latest-improved 40-inch Buffalo-Pitts separator and the Heald engine.

Santa Clara Valley Agricultural Society.

One of the oldest and most time-honored agricultural societies of the State of California will open the circuit of fairs and speed programs, commencing on the 15th of August and extending to the 20th, inclusive. The Board of Directors has made extraordinary efforts in the speed program, which has been well filled with our leading race-horses, by offering liberal prizes and other attractions that will make this, as they hope, one of the most important and attractive fairs ever held in the "Garden City."

The live-stock exhibition will be larger than any one ever held in this county, and extensive preparations have been made in building new stalls and sheds to accommodate the exhibitors. Prof. Van Tassel has made arrangements to ascend in a balloon, collapse it, when over a mile from the earth, and drop to the ground by means of a parachute.

As there are a large number of Eastern visitors in our midst, and thousands more who anticipate settling in California, we shall look forward with hopeful interest to such a showing as will attract the attention of those who may happen to be present, and will be the means of inviting others from Eastern States. With the attractions in and around San Jose, her beautiful grounds and accessories, this fair is expected to be one of the most marked events of the kind in the whole circuit. Everything points toward a most successful meeting.

'THE "Stockton Merchants' Exchange and Call Board" was organized last week with the following directors: J. D. Peters, George B. Sperry, J. L. Beecher, H. W. Weaver, L. B. Holt, C. Hurd and P. B. Fraser. The Board of Directors chose J. D. Peters, Pres.; Geo. B. Sperry, V. P.; J. M. LaRue, Sec., and P. B. Fraser, Treas. Daily sessions will be held as soon as the incorporation has been legally perfected.

THE \$160,000 which was appropriated by the last Legislature for the building of the jute-mills at San Quentin, it is said, will be barely sufficient to meet the demands for doing the work. By the strictest economy, however, and by lopping off here and there, the Directors hope to get along without creating a deficiency. The bids for the machinery, which are all in, are said to be very close to one another, showing earnest competition.

ABOUT 300 women and girls are at work canning apricots in the San Jose Fruit-Canning Company's factory, which is turning out over 2500 cans daily. There are now on hand at the factory 2000 barrels of sugar and 1,500,000 cans.

THE third issue of Scipio Craig's new Red-lands weekly, the *Citrograph*, comes full of meat, attractively and elegantly served, sustaining the promise of the opening number.

It is estimated that between \$500,000,000 and \$600,000,000 will be expended in railroad construction in the United States during the current year.

GRASSHOPPERS are preying upon the crops in Belgium.



My Friend.

To E. J.

(Written for the RURAL PRESS by FANNIE H. AVERY.)

'Tis little wonder that this friend
Has taught me to esteem her so:
Our hopes and aspirations blend
Together with an equal glow.

A many-sided soul has she—
All things have interest in her eyes;
No matter what my converse be,
She listens with a glad surprise.

Her heart she slights not that she may
Obtain of knowledge royal need;
But duty done, she flies away
To satisfy her mental need.

For she has learned that life's true goal
Is to attain a rounded growth;
And so she works for heart and soul—
Would raise the standard high of both.

Let me discourse of stars, or flowers,
Of mind and body, weakness, might,
Of Nature's forces, passing hours,
Of sorrow's depth or pleasure's height,

Lo! she attends with earnest ear,
And tender, sympathetic heart;
And adds, with feeling deep, sincere,
Her portion to discussion's part.

And when our children is the theme
On which we dwell in mutual thought,
In finer harmony we seem,
By little fingers nearer brought.

The present holds not all the good
We hope that both our lives may yield:
Our dear ones, now in babyhood,
For life's widespread and varied field

We would endow with lofty views—
With earnest, pure and thoughtful minds,
And all the strength that aye imbues
The spirits whom Right's influence binds.

San Francisco.

California Patriotism.

Centennial Fourth—Among the Rustics.

(Written for the PACIFIC RURAL PRESS by MALLIE STAFFORD.)

It has been said that "there is more patriotism in California to the square inch than in any other State in the Union." I indorse the sentiment in its fullest sense, will not abridge or take away a single point, or swerve from the assertion one inch.

Our marvelously fine climate is full of the lofty sentiment. Like an essence, and like the blue drapings of our grand and glorious mountains, it pervades all nature.

Living in an atmosphere the purest and clearest, and surrounded by such splendor of climate, such beauty of scenery, and so many natural kindly influences to woo and keep in tune a loyal heart, is it any wonder that the Californian holds in his breast the deepest and strongest sentiments of patriotism?

He loves his home and his adopted State with an ardor bordering on the wonderful, and entertaining such sentiments for his own beautiful adopted land, his love of country goes out, and radiates and expands until it reaches and embraces every nook and cleft of the whole broad Union.

Other countries boast of their grand fetes-days and many holidays. Rome may have her carnival, but with a pageant more splendid and a sentiment more lofty, our own "Queen City of the Sea" recently celebrated our National Independence.

It was an inspiring sight—the long lines of the procession parading the streets, headed by our distinguished General Howard; the buildings gaily decorated and adorned by the soft folds of the grand old flag; the pealing strains of martial music; the proud step and bearing as of old—the noble steeds keeping step to the inspiring strains.

There, too, were the war vessels, gaily decked in holiday attire, with banners and streamers floating from their peaks; and hark! across the bay, from the grim old fort of Alcatraz, gay with fluttering banners, came the deep boom of the cannon. The city and its environs, the bay and its islands—inland and sea—were a grand scene of gayety and festivity.

While this was being imitated in every city and town in the interior there was the same patriotism, the same lofty sentiment, though through force of circumstances less show and demonstration, among the rural population, particularly the grain-growing sections.

It was mid-harvest, and neither love of country nor love of ease and festivity could induce the average rancher to lay aside the header and thrasher, for there were miles and miles of ripened grain to be harvested. So it was a vital matter, one on which hangs thousands of dollars;

may more, there was "millions in it," and with a brow dripping with patriotic Fourth-of July perspiration, the "tanned toiler" entered the arena and garnered the shining grain.

A Rural Fourth-of-July Picnic.

Set in a niche of the temple of memory is one memorable anniversary that stands out brilliantly among—well, I will not stop to count—but it was Centennial anniversary in the country. All knew it was Centennial, but we were to have no celebration. Were there not thousands and thousands of acres of yellow grain waiting to be harvested, while the busy whirl and buzz of header and thrasher echoed through the length and breadth of the valley?

It were useless and idle to mention celebration; the swart grangers smiled derisively at the bare idea, and mounted their chargers in the battle for bread.

Cannot something be done? thought I, in my own heart. Must we, American citizens, with the blue blood of the Bunker Hill heroes "and cetry," surging through our veins, sit idly here alone on the glorious Fourth, while patriotic sentiment is on the rampage for a vent?

The question molded itself into an idea, and

It is too late to send to the nearest town. What can we do?

I was almost in despair; but my thoughts flew faster than my words, and remembering that I had some red and blue calico in the house, and of course muslin was at hand, I exclaimed "I'll make one!"

Just then my eldest daughter came in from the garden, and springing the "Fourth of July" on her "like a thunderbolt from a clear sky," I immediately brought out the materials and we went to work.

We had enough materials to make a tolerable flag. The stripes, by the aid of our handy sewing machine, were easily managed—but the stars! My Stars!

Nothing but the regulation five-pointed star would suit our Centennial-patriotic-Fourth-of-July-outburst, and it was some time before we succeeded in cutting them perfect. Cutting a five-pointed star is like a good many other things. It is easily done when you know how.

We had a deal of commendable patriotic pride in the manufacture of that flag. Wasn't it our flag and wasn't it Centennial Fourth? In view of these weighty facts that flag had to be perfect. There should be no country jokes cracked on it, no sly criticisms. We meant it



DRAPERY FOR MANTEL.

with a purpose and determination worthy of the cause, I gave it shape.

"June," said I, addressing my little daughter, "let's have a picnic on the Fourth."

"O mamma!" said the child, in delighted surprise.

"Now, June," I continued, "to day is the second, to-morrow is the third, and next day is the fourth. If we can get word to the Browns, and the Jones, and the Simpsons, and they will let others know this evening, I don't see why we can't have a fine Centennial picnic. But," I resumed, "it is now too late to call a meeting and arrange the program. So, June, you and I will constitute the meeting, and decide to have our picnic in the pretty grove of willows across the creek below the orchard."

"O mamma!" and the child jumped up with patriotism and enthusiasm bubbling out of every pore, "I can ride down the valley this evening and let them know. There is 'Old Croppy' now in the pasture. I can get the surcingle and be off in ten minutes." In less than ten minutes she had tied on her little straw hat, surcungled the trusty old horse, and was galloping down the road.

I then, having unanimously elected myself master of ceremonies, general in chief, and marshal of the day, began thinking of preparation.

Woman-like, the cooking was the first thought. But soon visions of far-away "Fourth's," with banners and flags floating gaily on the breeze, came to my mind. "A flag! Oh for a flag! I don't believe there is a flag in this poky little valley," I said aloud. "Not a blessed yard of Uncle Sam's bunting!

should be a flag which would not only grace the important occasion, but one which every lover of his country would be proud of.

Well, before the sun had set it was finished.

There was the requisite number of stars stitched neatly down on the bright, blue field, and when we attached it to a pole, pro tem., and flung its gay folds out to the breeze, do you wonder that our patriotic bosoms swelled with enthusiasm and pride? But we folded it away to keep as a grand surprise. Everybody knew (and now I look upon that community—myself one—with unfeigned pity and sorrow) that there was not a flag in the valley. And wouldn't they all stare and hurrah when they saw our flag floating gaily in the Fourth-of-July breeze?

When June came home she reported that the neighbors were unanimous for the picnic and there would probably be quite a gathering.

The next day was one of arduous toil—every Granger woman knows what it is to get ready for a picnic. There were the turkeys and chickens to kill, and pick, and stuff, and roast; cakes to bake, pies to make, coffee to prepare, in short everything, too numerous to mention.

The picnickers were astir early on the auspicious morning, and at a seasonable hour there came rattling up to the big gate the respective vehicles of the Browns, the Jones, the Simpsons, and the neighbors, all "loaded down to the guards," while following in their wake or centering in their van were straggling parties on horseback; so comprised a goodly company attired in holiday costume, and expectant of plenty of fun.

Early in the morning we had unfolded our

"starry banner to the breeze," and aloft on a pole full 10 feet above the top of the chimney, its dazzling folds toyed with the atmosphere of our Centennial anniversary.

As each party arrived they halted in front of the gate, and waving their hats and kerchiefs made the air ring with cheer after cheer for the flag, and many were the exclamations and questions in regard to its origin. When did you send for it? Where did you get it? etc. We did not, just yet at least, dare tell its low origin—how it had been "borned" and first caught the light in its dazzling folds in a lowly cottage far from the birth of freedom and seat of heroism, and had not been cradled under the shadow of Bunker Hill or first breathed the patriotic air of Lexington or Concord, or, fresher and more inspiring, that of famed Sumter or Gettysburg.

As the last reinforcements arrived, we adjourned to the grove indicated. I armed myself with a copy of the Declaration of Independence, and also the Centennial number of the *Rural Press*, which, having come with the mail the evening before, contained, besides other interesting "Fourth of July" matter, an illustration and history of the old famous "Independence Bell."

I omitted to mention that there were several well-grown youths in the company, besides a few superannuated and "unseaworthy" Grangers, who, through plea of headache, too much fat, or, more plausibly, in anticipation of roast turkey and Fourth of July good things, had deserted the army of harvesters and enrolled themselves in the ranks of patriotism. We were glad they had come; it looked good to see them there, more particularly when it came to transporting our heavy lunch-baskets across the stream, the place being of such a nature that our vehicles could not reach it.

It was a lovely stream, clear as crystal, flowing over a pebbly bed; every tree and rock and object was imaged in its clear depths. It averaged a depth of 18 inches and was about 50 feet in width.

There were many beautiful groves handier, but the chosen spot was just across the stream. As every one was in a mood centennial, there was no revolt, and across the stream we prepared to go.

There was a general pulling off of boots and socks, shoes and stockings. The young ladies, in their crisp muslins and gay with their fluttering ribbons, mused, and catching an idea, sent a small boy for a couple of saddle horses, but the matrons, less shy, and bent on taking in the day for all it was worth, bared their tender feet, and, amid shouts of laughter, were soon wading the stream. The Grangers, no longer superannuated, had suddenly merged into the stalwarts, and with lunch-baskets on their shoulders, were splashing through the clear water. What shouts of mirth; what screams, as the children and mammas and portly uncles and papas splashed and waded through the clear, cool water! Dignity was laid aside, and there was a perfect abandonment of mirth.

It was near noon before we were fairly across, and certain unmistakable symptoms in our anatomy began to warn us that lunch would be appreciated. The company was called to order, a few timely remarks, suitable to the occasion, were made. On motion, the Declaration of Independence was read by a good reader in a clear, distinct tone; everybody listening attentively as though it was a revelation from heaven—which it was.

A grand old song was next commenced in sweet and ringing tones by the owners of the fluttering ribbons, which was supported and assisted by the aspiring youths in rich tenor, and the deep bass of certain of the aforesaid stalwarts (nee superannuated). Out upon the stream and over across the tawny fields, its echoes floated, mingling with the breeze that dallied with the flag above our heads and the willows that dipped their waving foliage in the rippling waters. The *Rural Press*, meantime, had been passed from hand to hand, and it is worthy of remark here that the Independence bell and its famous history had never been heard of before by many of the younger members, also most of the children had never before heard the Declaration of Independence read.

The song was scarcely ended when a deep bass voice remarked, "It's time for lunch!" The cry was immediately seconded by the tenors and sopranos, until every tone of voice was represented, and it was taken up and encored among the juveniles.

"Lunch! Coffee! Who'll make the coffee?" But the coffee had already been made by one of the patriotics, and was brought steaming hot. Snowy tablecloths were spread and the Centennial repast ready.

Amid much merriment each one found a convenient seat, and with all absence of constraint and such riotous good feeling and genuine merriment, which latter is generally painfully absent in more elaborate and more ostentatious celebrations, we dissected the chickens and the turkeys, enjoyed the steaming coffee—intermingled with impromptu speeches, music, orations and burlesque toasts.

So passed the memorable dinner, and the hours following until near sunset were whiled away in games and amusements with no end to mirth and good feeling. Such was Centennial in the obscure valley of B. Will any one who was present that day see and recognize the picture? for, as Huckleberry Finn would say, "The truth is told—mainly."

There was one fact demonstrated that day,

that is, that patriotism may slumber in the American bosom—it never dies—and needs but a spark to kindle to warmth and splendor its brilliant beams.

Liddell, Cal.

Curios of Literature.

The following, though not a "phaximily," is a literal copy of a letter lately received by a San Francisco merchant from a country correspondent:

I wish you cood send me 2 man that can Trash by Hand, the good Trasher chanely comes from Baden Wurttemberg Baiern (ol Contry) I got Ry. it got to be Trasht with Flaile. I will pay for Trasher 1.00 and if He suds, if He can Trash with me I. will pay mor I. do not cear for 25. or 50. if I. can git 2 good Trasher, send one or both as soon as you can Franch and Irish som good Trashers I. will gif a Brandy by Starding in the morning. Bragfast 6 A. m. Lunch. 10. A. M. Diner 12. M. Lunch. 4. P. M. Soper. after 6. or 7m I. agra ono Month Work. if the man Suts al Somer

or er

Take Wuthamton Streed Warf for— Take Tiget Wuthamton Station. Contogter will sho the Hous from the Train if you ask for—'s Ranch. the Train goes throw the Ranch. Railroad Far. I. think. 1.25. to Witman St. Yours in Hast

A Visalia paper reprints, *verbatim et literatim*, a letter picked up at I. H. Thomas' fruit depot. The address on the envelope reads "ih tomomos, visalia, tilare county, Califona," and the letter is as follows:

"tocsone June th 21 22

mr tommas

Sir wood you please in form me i sea in the times that you ship frud to arsona and new mecco please in form me the cost of shiping say to tocsone for a smal lot 1 2 3 100lb at a time and wood you pay the frad if i send you the monny to pay for the frud and frad a nom ber one frud how long wil it be till you can ship aplea a good qualie please oblige

Direct to tocsone pemo co arsona"

Mantel Drapery.

This handsome and graceful mantel drapery is made of plush. Where the lambrequin is draped is placed a bunch of cord loops, and at the opposite side, where the slash is made, the edges are laced together with cord run through eyelets and tied at the bottom, the ends being tipped with large plush balls. A beautiful spray of flowers *en applique*, in two parts, decorates the lambrequin. The spray is a selection from Kursheedt's Standard satin floral appliques, of which there is a large variety. A board that fits the mantel perfectly is covered smoothly with the plush, and to it the lambrequin is secured. A few pretty ornaments on the mantel is all that is desirable, and when the fire is not lighted in the grate, a Japanese parasol will make a charming screen. China or India silk, Surah, cloth, cretonne, velvet, plush, pongee or any preferred material may be used for the lambrequin. On thin goods, painting or outline embroidery is very effective, and a fringe of small ornaments may be added to the edges, if desired. Ribbon may be used instead of the cord, with good effect.

HER PURPLE MUSTACHE.—"To catch up a bottle of perfume and dab the stopple at one's upper lip," said a fashionable girl to me, "is a fashionable trick with many women, I know. I've seen lots of women do it and did it myself till the other night. Starting to see Langtry, I did that trick in a dark room and have quit it altogether. You see I ran back for a glove-buttoner, and prowling over the dressing-case struck the glass stopple of a bottle of 'Cherry Blossom,' caught it up, and smoothed it across my upper lip, and gave two little dabs behind my ears, so my neighbors should have a smell. 'Tian't 'Cherry Blossom,' after all,' thought I; 'it's the 'White Rose' extract all the same.' And I pranced down and joined my party. We had got into a car when some one said: 'Good mercy! What have you got on your face?' 'The usual amount of powder, I suppose,' I replied aggressively. 'Why, you've got a dark purple mustache.' Great heavens, it broke on me in a minute. That nasty bottle of scented ink that I myself had carelessly left on the dressing-bureau. There was no Langtry for that night. Ninety-six washings only weakened the stain. Sandpaper and pomace-stone have removed some of my lip, but it's so dark now (ten days ago it happened) that folks say to me: 'You must stop using that vaseline, you certainly are getting a mustache;' and just behind my ears are two spots that look as if mortification had taken place."

HOW HE GETS THE 'SIMMONS.—One of our exchanges tells about a sagacious old ram in North Carolina that can not only distinguish the persimmon trees from others in the pasture, but has learned how to get the fruit down from them. This he does by butting the tree. He goes off a suitable distance, stands on his hind legs, and strikes the tree a vigorous blow with his head. When he has shaken the persimmons off he quietly eats them and goes on his way until his appetite demands more. This wise old ram used to rob the apple trees in the same way.

YOUNG FOLKS' COLUMN.

A Dolly's Lament.

I'm only a last year's dolly!
I thought I was lovely and fair—
But alas! for the cheeks that were rosy,
Alas, for the once flowing hair!
I'm sure that my back is broken,
For it hurts me when I rise!
O, I'd cry for very sorrow,
But I've lost out both my eyes!

In comes my pretty mistress,
With my rival in her arms,
A fine young miss, most surely,
Arrayed in her borrowed charms!
My dresses, and my slippers, too,
But sadder, O, sadder than all,
She's won the dear love I have lost,
For I'm only a last year's doll!

O, pity me, hearts that are tender,
I'm lonely, and battered, and bruised,
I'm tucked out of sight in the closet,
Forgotten, despised, and abused!
I'm only a last year's dolly,
Alone with my troubled heart;
O, sweet mistress, still I love thee,
Inconstant though thou art.

Don't be Afraid.

When Rev. Charles Deems of the Church of the Strangers in New York City wanted money to pay off a debt on the building, he called on Commodore Vanderbilt.

"Are you going to preach what I want to hear?" asked the old man, sternly.

"I shall try to preach acceptably," answered the clergyman, in an evasive manner.

But no sooner had he said the words than all the manhood within him rose in revolt, and the



THE CHILDREN'S FRIEND.

spirit of John Knox seemed calling him to account.

"I shall preach the gospel as I believe and understand it, and if you have any special sins I shall be most likely to preach against them."

"Humph!" said the Commodore, and ended the interview.

The next day he sent Mr. Deems a check for \$50,000 for not being afraid to do his duty.

Politeness Well Repaid.

On a crowded East Boston horse-car the other evening, the seats of which were nearly all occupied by men, a cutting rebuke answered by a neat compliment was overheard. Shortly after the car left the ferry there got aboard a young lady, whose pallid and careworn face marked her as an invalid.

None of those having a seat at their disposal deigned to offer a seat to the one who seemed most in need of the resting-place till at the further end of the car a roughly dressed workman, seeing her plight, beckoned to her, and, resigning his seat in her behalf, said:

"There don't seem, Miss, to be any gentlemen on this car."

"I beg your pardon, sir. I am sure there is one," she replied, gratefully, as she accepted the seat.—*Boston Budget.*

LITTLE CARPENTERS.—Teach the boys to be helpful in the house. There should be a set of carpenter's tools in every house, and if there are no boys in the family, very often the girls or the mother can handle a hammer or screw-driver almost as well as most men. All healthy boys like to work, and the kind that they prefer is usually something in which they can use hammer and nails, as the use of these tools comes as natural to boys as the needle does to girls. A handy boy around the house is a great help in keeping the furniture in repair. If there is a shelf wanted for mother's plants, he is always delighted to make it, and usually it is done very well and correctly. If a skirt-board is what is wanted, or, in fact, any of the many articles of this kind so much needed in the household, say a word to the amateur carpenter intimating the article needed and in a

short time he is at work with rule, plane and saw, trying to evolve to his and the house-keeper's satisfaction whatever is desired. Where there is one of these young mechanics in a family, the furniture is never out of repair, for he will attempt to mend almost anything, though he may not do it as well as a man who makes his living at it.

GOOD HEALTH.

Hints for the Sickroom.

The sickroom should have plenty of fresh air. This is especially necessary in cases of fevers. An inch at the top of a window and an inch at the bottom may be allowed even in cold weather. Sick persons will not take cold any quicker than well ones, if the draught does not strike them. Where there are windows in the opposite sides of a room the task of ventilation is easier, but there must be greater care with the draughts. If the bed is where a draught cannot be avoided, cover the patient up and let ventilation take place, at least three times a day. Keep the inside air as pure as that outside, without chilling the patient. A fire in the sickroom to take off the chill will enable one to give it full ventilation.

With sick and well folks the greatest danger from taking cold is in getting up in the morning. The circulation is then sluggish and exposure tells with double effect.

In most diseases there is much less heat generated in the body than in health, therefore the temperature of every sick person should be noted. If it is inclined to run down, raise it by means of warm bricks or hot water bottles. The period of greatest decline is apt to be in the morning, and on till 10 or 11 o'clock. If a sickroom becomes offensive, the best dis-

bedside from meal to meal. Sight of what not craved is repellent.

Don't fill a patient's plate. Have tempting quantities temptingly prepared and served. Cook with care.

As a rule, you can afford to give to a patient a little of whatever is craved, unless the physician forbids. Sometimes the craving is morbid; then you can refuse to gratify it.

Ever watch the bedding. Keep the sheets clean and dry. Change the clothing often. Never let a bed get damp or foul. Don't load a patient with bed-clothing.—*Ex.*

A SIMPLE CURE FOR RHEUMATISM.—A correspondent of the *English Mechanic* says: Let ail of "ours" know the following: My wife has suffered occasionally with acute rheumatism in her feet, with painful swelling, completely taking her off her feet for many days at a time. The following remedy was recommended recently and tried, and took away the agonizing pain in less than 15 minutes, and she can now walk very fairly, and in a couple of days she will be able to button her boots and walk without a stick or crutch: One quart of milk, quite hot, into which stir one ounce of alum; this makes curds and whey. Bathe the part affected with the whey until too cold. In the meantime keep the curds hot, and, after bathing, put them on as a poultice, wrap in flannel, and—go to sleep (you can). Three applications should be a perfect cure, even in aggravated cases.

DOMESTIC ECONOMY.

Time-Table for Boiling Vegetables.

The following is Catherine Owens' time-table for boiling vegetables:

Potatoes, half an hour, unless small, when rather less.

Peas and asparagus, 20 to 25 minutes.

Cabbage and cauliflower, 25 minutes to half an hour.

String beans, if slit or sliced slantwise and thin, 25 minutes; if only snapped across, 40 minutes.

Green corn, 20 to 25 minutes.

Carrots and turnips, 45 minutes when young, one hour in winter.

Beets, one hour in summer, one hour and a half, or even two hours, if large, in winter.

Onions, medium size, one hour.

Rule—All vegetables to go into fast boiling water to be quickly brought to the boiling point again, not left to steep in the hot water before boiling, which toughens them and destroys color and flavor.

This time-table must always be regulated by the hour at which the meats will be done. If the meat should have to wait five minutes for the vegetables, there would be a loss of punctuality, but the dinner will not be damaged. But if the vegetables are done, and wait for the meat, your dinner will certainly be much the worse; yet so general is the custom of over-boiling vegetables or putting them to cook in a haphazard way, somewhere about the time, that very many people would not recognize the damage. They would very quickly see the superiority of vegetables cooked just the right time, but would attribute it to some superiority in the article itself, that they were fresher and finer, not knowing that the finest and freshest of vegetables, improperly cooked, are little better than the poor ones.

How to Cook Veal Cutlets.

Wipe, remove the bone, skin and fat from a slice of veal; cut into pieces for serving; season with salt and pepper; roll in crumbs, dip in egg-crumbs, and egg and brown in salt pork fat; put into a stewpan; make a brown gravy by browning one tablespoon butter and two tablespoons flour; pour on slowly two cups of hot stock or water; season with salt, pepper, add one tablespoon of mushroom catsup and one teaspoonful Worcestershire sauce; pour over the cutlets and simmer 45 minutes.

A well-known market man says people often ask for veal for cutlets, but they haven't the remotest idea what portion of the meat they wish. A slice from the leg is used, and it should not be very thick; if too thick, pound it. Cut up into pieces of a suitable size for serving, and if some are not of good shape skewer into form with a toothpick and this will hold them in place until stewed, when it can be removed.

The object of the frying is merely to brown the cutlets.

Water will do as well as stock for this brown sauce, as the cutlets are to be stewed in it. For a brown sauce, which is to be poured over a dish of meat, the stock is better on account of the added flavor.

The two tablespoonfuls of flour is a rather large amount, but when flour is browned it needs a greater quantity than when a simple thickening is desired, as the browning uses up its thickening power. Season as directed in the recipe. Many will prefer the flavor of the mushroom catsup and will use that exclusively. Pour the sauce over the cutlets in a saucepan, cover, and stew slowly for three-quarters of an hour.

This is an excellent way in which to cook veal, as it gets thoroughly done and is very tender—a consumption most devoutly to be wished in any dish of veal.



A. T. DEWEY.

W. B. EWER.

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SAN FRANCISCO:

Saturday, Aug. 6, 1887.

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The Week.

The sensation of the week comes along just as we go to press on Wednesday. Wheat on Call, which has been overriding a world's values until it reached 2.17½ per cental, reached a climax this morning, when the sessions of the Call Board were officially discontinued until further notice. The leading spirits in the bull movement gave notice that the banks would not furnish them more money, and therefore they could not proceed. Consequently they make a proposition which is described in our market reports. Those who are supposed to know say that the arrangement if carried out will prevent a collapse and obviate a recurrence here of the disasters which fell upon Chicago when the corner broke there a few weeks ago. The fact of the matter seems to be that wheat has been rushed into the corner faster than it could be stored away and the men in the corner had to cry for quarter. Farmers have in many cases made haste to unload their grain at the wonderful prices, and the saying goes that everything that could run on a railroad has been covered with wheat and sent to tide-water. The Western farmers flooded Chicago with wheat at the time of the inflation there, and California growers also seemed to know a good thing when they saw it.

LATER.—Just as we go to press it is announced that the proposition of the corner as described in our market column is accepted, and it is expected that the affair will quiet

down without collapse. There will be some money lost, but affairs will not be unsettled as they were at Chicago. It is announced that the Call Board will not reopen until danger of a crash has passed.

The Pacific Railroad Commission.

The Commission appointed under a recent law of Congress to examine into the cost and management of the railways constructed with Government aid is now in session in this city. The Commission consists of three members, ex-Governor Robert E. Pattison of Pennsylvania, E. Ellery Anderson, a leading lawyer of New York City, and David T. Littler of Illinois. The sessions of the Commission's meeting are being held in the railroad building in this city, and promise to extend over considerable time. The public is entitled to admission except when the Commission consults executively. All testimony is given in public.

The investigation has but just begun, but it seems to be apparent that the Commission proposes to make a thorough investigation and to bring to light much that the public should know. It promises not to be content without full display of the books of the company and all kindred matters, and if the company makes statements of cost of construction, etc., they must be supported by evidence. This is the right way to proceed. It will be the only way to satisfy the public. There must always be a doubt how colossal fortunes could be built up in so short a time, if the construction actually cost the full amount of the Government's donation, unless it can be actually shown that the expenditures were really and legitimately made. It will be well both for the builders of the road and the public to have a clear light thrown upon the transactions, if there is really nothing to conceal. For example, Senator Stanford, at the meeting of the Commission on Tuesday, gave the cost of the Central Pacific at \$47,889,000, or \$55,600 per mile. Members of the Commission intimated that it must be shown that the payment of such sums of money by the Central Pacific Company to the Construction and Finance Company were not greater than the actual cost of the road would justify. Mr. Stanford affirmed that not a dollar was expended in a way that was not perfectly legitimate. On this point testimony will be welcomed by the public.

Another point advanced by Governor Stanford is that the company having built the road according to the specifications of the Government, was entitled to what the Government offered for such an achievement, whether the actual cost was less or not; that the railway was in no sense an agent for the Government, but a contractor to whom the Government should pay and could demand no accounting. One of the Commission properly suggested that in that event the railway should discharge its obligations in payment of the bonds the Government holds when they mature. Mr. Stanford replied that the Government had so hampered the working of the road that the bonds could not be paid.

All these matters will form topics for inquiry. We mention them merely to show that the investigation is taking a form which promises to allay much public doubt, and thus do much good. The Commission should enjoy the moral support of the people in its work, and we trust it will not be withheld. We look upon the investigation as one of the most important ever held.

THE STATE BOARD OF TRADE.—The idea which has been discussed for some months of uniting under a central head the various local Boards of Trade, was realized on Tuesday of this week by the organization of the State Board of Trade. At the meeting there were present about 40 delegates, representing nearly as many localities from Fresno on the south to Red Bluff on the north, and from the coast eastward to Sacramento. There were many representative Californians included and the movement seems promising. A. T. Hatch of Solano was elected president and the choice of minor officers was intrusted to the Executive Committee. San Francisco was chosen as headquarters and the next time of meeting set for August 15th.

THE evidence against the Chicago hoodlums is so glaring that three lawyers have withdrawn in disgust.

Constitution Centennial.

Great preparation is being made to celebrate the Centennial of the Constitution in Philadelphia, which occurs on the 17th of September. The Quaker City should not be allowed to monopolize this event. It belongs to the people and should be celebrated throughout the country. We spend a great deal of powder and rhetoric on the Fourth of July, but the birth of the nation really dates from the formation of the Constitution. All prior time was preparation and prophecy.

Perhaps no such convention ever assembled in the halls of a nation. It was composed of 55 men, giants in intellect, great in moral character and high social position. Twenty-nine were university men, and those who were not collegiates were men of imperial brain and pre-eminent common sense. There was Washington, the revered patriot and soldier, Franklin, the venerable philosopher, and Madison and Hamilton, the most profound publicists of the age.

Then their work was unprecedented. It was the first time the energies of a people had been girted in a written Constitution. Many English writers still think it is too stiff, artificial and methodical. They claim the English Constitution, founded on immemorial usage, is far better because it is more plastic and adaptable. That society does not run like clockwork. That the thoughts, feelings and passions of the people cannot be taught to run in long, straight, narrow flumes. The channel of public opinion and caprice is often very crooked, its motion uncertain; sometimes it dashes, surges, and foams with terrible fury, and sometimes it is slow and sluggish. Now they say it is too formal and mechanical to try and hold these ebbs and flows, these calms and waves of popular movement, in fixed and inflexible methods of action. Our Government holds indefinitely, but may be dissolved at any moment. Should there be a ground-swell of discontent among the people, we can immediately dismiss the obnoxious administration and go upon the country. You have no such safety-valve in your system which you can touch at any moment when under high pressure. And it does seem at the first glance that they possess some advantage over us, for they can at any emergency have just such men in power as they desire, while we must wait until the term of office expires before we can hold an election and select men in sympathy with a majority of the people. But we need waste no admiration upon the flexibility of the English system, for it is a notorious fact that members belonging to the opposition often vote for a measure against their own convictions for fear of defeating the ministry and bringing on a crisis in which they will have to incur great expense and danger in holding an election during a heated state of the public mind. We are in no such nervous dread of flying to pieces at every popular tumult. Our political life moves at fixed intervals with an unerring regularity as the tides, and that is certainly safer than to be compelled to go upon the country in a tumultuous storm at any moment.

Then our forefathers knew what they were about. The Constitution they made is not the stiff and inelastic thing these English writers think it is. It has life in it, and grows and expands commensurate with the growth of political ideas and the wants of the nation. Within a few years after its formation, it grew liberal enough to throw a bulwark of protection around the freedom of religion, speech and the press, protecting persons, homes and papers from unreasonable search and seizure, and securing to every one accused of crime a speedy trial before an impartial jury, and that cruel and excessive bail shall not be required. The Thirteenth, Fourteenth and Fifteenth Amendments garnered up all the legitimate results of the Civil War and made them a blessing to posterity for all coming time. Indeed it would seem the swift whirl of events for the past 25 years had put the Constitution of the United States to every possible crucial test.

And then our forefathers grasped the fundamental principles of humanity when they framed that instrument. Great changes have come over the governments of Europe; some changes have taken place in our national life, but our system has been found adaptable to the progress of the people. It voices the brotherhood of the race. It sweeps the horizon of

humanity. And now, as the first Centennial is nigh, we may proudly contemplate the work these men produced and the grand history we have achieved under it. It is a good time, not for windy eloquence but for thoughtful study of that architectural structure that roofs over all we hold dear in home and country.

San Joaquin Valley Irrigation Maps.

From time to time we have spoken of a grand map of the San Joaquin valley which has been in preparation for years in the office of Wm. Hammond Hall, State Engineer at Sacramento, embodying the results of long periods of field work. The original map is on the scale of one-half inch to the mile, with contour lines for every 20 feet of elevation. It was decided by the last Legislature that this map should be lithographed and issued in four sheets, with the scale reduced to one-third of an inch to the mile, and that the maps should be sold at about their cost to all who desired them. This work has been accomplished and we have received specimen copies. The map is in four sheets, showing four sections of the valley, beginning at the north. Each sheet is bordered so as to make in itself a complete map of its region; but the borders can be cut or turned so as to admit of the sheets being matched together, thus forming a continuous and complete map of the San Joaquin valley, from the Mokelumne river to Tehachapai pass, and including the foothills of the Sierra Nevada mountains and the Coast Range.

The maps seem to be very creditably done and probably set forth the topography and agricultural features of the large area better than any similar portion of the world. By means of the contour lines and the numbered land sections, one is able to tell the inclination from a certain point in the valley to any direction.

All canals and ditches are shown much in detail from original work of the State Engineering Department, thus affording a knowledge of the location of irrigation works never before attempted over this region. The lands irrigated are tinted in blue; the lands moistened by irrigation, in light-blue; swamp lands, in light-green; bottom lands, in darker green; and lands upon which water can be carried by means of large canals appear in light-rose color, while those to which water rights attach are covered with a dark-rose or red tint. All artesian wells, to the number of several hundred in this valley, are located on this map, and each is numbered to correspond with the number of its history and description to be printed in the report.

Thus can be seen at a glance what has been done in the way of actual irrigation, directly and indirectly, and what can be done or accomplished by large works, if the water supply proves to be sufficient.

Such a piece of work is very creditable to the State and will serve of practical benefit in many ways. According to provisions of law the maps are furnished at about their cost, viz.: \$1 for the set on paper or \$2.50 mounted on cloth. Applications for them should be addressed to Wm. C. Hendricks, Secretary of State, Sacramento, Cal.

THE STATE BOARD IN NEW QUARTERS.—The State Board of Horticulture has taken possession of its new office in the Hayward building, 220 Sutter street, where we had the pleasure of finding Secretary Lelong one afternoon this week. The office is on the fourth floor, to which an elevator lifts those who do not prefer climbing three flights of stairs. There is a suite of rooms, the front one, on Sutter street, being about 20 feet square and having sun most of the day; while the other, which can be shut off for committee meetings, etc., by ground-glass folding doors, is a trifle deeper and amply lighted from the hall. With woodwork stained a ruddy brown, marble fireplace, handsome carpet, black walnut chairs and tables and well-stocked bookcases—all fresh and commodious—the new headquarters of the State Board is a pleasant place for horticulturists to visit when in the city. The next meeting of the State Horticultural Society is to be held there on the 26th instant.

HON. HENRY VROOMAN has accepted an invitation to deliver the annual address before the Sonoma Co. Agricultural Park Association.

THE wild blackberry crop in Oregon is phenomenally large.

Spraying for Scale Insects.

California can claim credit for some of the greatest efforts at insect killing, whether judged by the ingenuity of the manner or the extent of the application. The engraving on this page, which is reproduced from Prof. Riley's forthcoming report, shows the arrangement used by some of our Southern California orange-growers for applying a spray to all parts of high and densely foliated trees. As the engraving shows, the tank of liquid is drawn in a wagon, and upon the wagon is fixed the force-pump which drives the material into the hose. This pump is operated by the driver of the wagon, while others manipulate the hose. The ingeniously contrived ladders on wheels are quickly put in place and enable the operator to approach the tree from any point upon its exterior.

Prof. Riley in his report will take issue to a certain extent with the California method of spraying. He thinks our way is wasteful and less effective than that common in Florida, and that to this fact is owing the partial lack of success attained with the kerosene emulsions which he recommends. To show this point and at the same time to introduce a new formula which Prof. Riley now commends for the first time, we make the following extract from his forthcoming report:

The essence of successful spraying of the kerosene emulsion consists in forcing it as a mist from the heart of the tree first and then from the periphery, allowing as little as possible to fall to the ground and permitting each spray particle to adhere. It is best done in the cool of the day, and where possible in calm and cloudy weather. With one fifth of the time and material now expended in California the spraying should be successfully done, so that three sprayings at proper intervals will be cheaper and far more satisfactory than only one as ordinarily conducted.

Without going into details as to reasons, we would therefore recommend the addition to every 50 gallons of the kerosene-soap wash, made after the usual formula, three ozs. of arsenious acid. Though the arsenical preparations are mainly effective against mandibulate insects, by poisoning through the stomach, they have also more or less effect by contact, and we are strongly of the opinion (which we hope soon to verify) that this combination, for the first time recommended, will give the spray more lasting effect, and that the few insects which escape the direct spray will be destroyed as they subsequently leave their protecting retreats or hatch from eggs and crawl about the tree. As a means of arresting the growth of the black-mold (which is, however, only the indirect consequence of the Coccid), so troublesome an accompaniment of the *Icerya*, a small proportion of sulphate of copper might also be added.

Just as there is now a great wastage of time and material in drenching a tree, so the spraying nozzle most in vogue in California is also wasteful. That most commonly used is the San Jose nozzle, in which the water is simply forced through a slightly flaring terminal slit in a more or less direct and copious jet.

The Cyclone nozzle has not yet had proper trial to impress its advantages, having scarcely been known prior to the experiments of Messrs. Coquillet and Koebel. That made and sold by G. N. Milco is patented in size and aperture after that which we designed to spray from near the surface of the ground. What is wanted for an orange grove or for trees is a bunch of nozzles of twice the ordinary size and capacity, the size of the outlet to be regulated by the force of the pump. There is no form of nozzle so simple and so easily adjustable to all purposes. We strongly recommend a bunch of four nozzles of twice the ordinary size and thickness—one arranged so as to have the outlet distally or at one end of the piping (which may be ordinary gas pipe) and the other three on branches, so that the outlet is at right angles, each about an inch below the other, and so placed that they are separated by one-third the

circumference of the main pipe. Such a bunch, with apertures properly adjusted to the occasion, worked from the center of the tree, will envelop it in a perfect ball of floating mist, which in a very short time will imbue all accessible parts. For tall trees a more forcible direct spray might be sent from the end by substituting an ordinary jet and the wire extension, which is simply an extension tube screwed over the nipple, the end of the tube being covered with wire netting, which breaks up the liquid forced through it, and which, for force and fine division of the particles, has some advantages over the San Jose nozzle. Finally, if a series of blind caps and several sets of caps of varying aperture are kept on hand, the spray may be adjusted at will, and to suit the conditions of wind, pump force, etc., that have to be dealt with.

We hope some experiments will be made to test the success of this suggestion of Prof. Riley as compared with prevailing methods here.

Reading the Thermometer.

Reports specifying the thermometer as standing so many "degrees in the shade" are often misleading so far as a fair test of the temperature is concerned. The mercury in a thermometer hanging on a porch or near a window upon which the sun shines will often indicate eight or ten degrees higher temperature than if it

The Mechanics' Fair.

Preparations are going forward with vigor for the coming fair of the Mechanics' Institute. Extensive improvements and rearrangements are going on in the Pavilion which we will describe more fully when they are more nearly completed. Suffice it to say that the Pavilion will be much larger and promises to be proportionally handsomer than ever before.

We desire at this time to present some points as to what several of our most enterprising counties are doing in preparation for the contests for the county awards. Of course all efforts do not always reach anticipated results, but we trust that the anticipations in these cases may be fully realized, and that mention of them may lead many others to enter the lists for the purpose of securing a creditable and representative display of State products.

The counties expected to make the most noticeable exhibits are Santa Clara, Sonoma, San Mateo, Placer, Napa (especially in the variety and number of the exhibits of wines), Contra Costa, Kern, Fresno and Humboldt. The exhibit from Humboldt will contain fruits that are out of season with us. Mr. John Vance of Eureka will send one of the largest redwood logs ever seen. The Board of Super-

intendent exhibitors from San Mateo will be W. H. Dimond, M. J. Brittain, John T. Doyle, Chas. N. Felton and Sam Jones.

Placer county as usual expects to carry off the first premiums, but will have more powerful competitors than ever before. Contra Costa is in charge of the Board of Trade of that county. They have had space assigned to them, and expect to astonish the natives.

The Fresno county committee has done good work; their exhibit is largely of dried fruits from the ranch of C. T. White, who has just planted one of the largest raisin vineyards in the State. It is one mile square, and he expects it will cost him \$200,000 before he receives a single cent from it.

Napa exhibit is in charge of H. W. Crabb, Fred Beringer, Chancellor Hartson, W. W. Lyman, H. A. Pellet, and Tubercio Parrott. Mr. M. M. Estee is largely interested in aiding the exhibit, and is to furnish a carload of foliage plants, orange tree in full bloom, etc. They promise unusually attractive features about which they are reticent, as they desire to create a sensation.

Sonoma county is under the charge of E. P. Overton. Among those prominent in Sonoma county are Wm. D. Sink of Cloverdale; W. N. Gladden of Healdsburg and Jno. Adams of Santa Rosa; Isaac D. Turk of that county and G. N. Whittaker of Santa Rosa. Pomona Grange will also have a fine exhibit.

All the northern counties like Sonoma, Mendocino and those lying along the line of the Donahue R. R., have been largely promoted by the R. R. Co., which gives free transportation to all exhibits. They have been extremely liberal in affording facilities to the Institute itself for distribution of circulars, etc., and transportation of agents. Col. Donahue is chairman of the Finance Committee of the citizens of San Francisco.

W. W. Boughton of the Lompoc Record will have charge of the Santa Barbara county exhibit, assisted by a committee, and will have a fine exhibit. San Luis Obispo is reported to be taking especial pains with its exhibit.

Wm. T. Coleman, one of the largest exporters of California fruits, will make a large display.

The system this year is to have large aisles and no blind alleys, so as to give plenty of room for visitors. The entire garden is to be devoted to county exhibits, as also is the entire space 30 feet wide running parallel and nearest it, while the south side of the building is to be devoted also to the county exhibits. Napa county takes up 140 feet of running wall space easterly. Placer county takes up the western side entirely. Santa Clara, San Mateo, Sonoma valley, Kern and Contra Costa counties are on the main floor nearest the garden. San Mateo has in addition one of the central spaces.

The fair will open on Saturday, the 1st of September, and close on Thursday, the 8th of October. As stated above, we will make mention of other leading features of the fair at another time.

THE INDIANA STATE FAIR is to come off at Indianapolis, September 19th and 24th, when the management expects to be prepared to show somewhat of the wonderful progress made in the various industrial arts and specimens of the best breeds of domestic animals in North America. We are pleased to acknowledge the receipt of a special ticket from the secretary of the Indiana State Board of Agriculture.

The canneries are short of hands.



CALIFORNIA METHOD OF SPRAYING ORANGE TREES TO KILL INSECTS.

were hanging where the heat of the sun was not reflected upon it. For this reason reports of extreme heat are often exaggerated. The mere fact of the thermometer being in the shade does not go to show that the average temperature is indicated.

The different degrees of heat, in their effect upon the animal system, also vary very much, according to the amount of moisture which may exist in the atmosphere at the place or time of observation. When the atmosphere is very dry a much higher degree of temperature can be sustained without inconvenience than when it contains an unusual amount of moisture. The degree of heat under the effect of which so many persons have lost their lives at the East during the last few weeks, where the air is very moist, would not have seriously affected any one in this State, where the atmosphere in the summer is always exceptionally dry. Sunstroke in California is a thing almost unknown, although the thermometer often stands many degrees higher than in places at the East where sunstroke is a common occurrence every year.

HIGH-GRADE ANIMALS FREE OF DUTY.—The Treasury Department has decided that animals of high grade and value, imported from distant countries for breeding purposes, are entitled to free entry, notwithstanding the fact that they may be for sale.

EL DORADO COUNTY FOLKS are promised the pleasure and profit of hearing John P. Irish, the gifted editor and speaker, at the Placerville fair.

visors of that county 'made an appropriation to aid the exhibit of that county.

One of the most noticeable exhibits in the line of agricultural products and wines, fruits of every variety, vegetables, etc., will be exhibited from the old valleys of Sonoma and Guilcos by the Sonoma Valley Association. It is largely gotten up by Capt. J. H. Drummond of Glen Ellen. He sent to almost every civilized portion of the world to obtain seeds, Hungary, Italy, Spain, Scotland, Portugal, etc., and has succeeded in obtaining some most astonishing results. Their display is to be supplemented by a unique floral exhibit and by a display of preserved fruits, the white glass bottles for which were brought from the East; also a large display of domestic articles.

Santa Clara exhibit has the Mayor of San Jose at the head. Mrs. Watkins will have charge of some portions of it, and for the floral display the nurseries of R. D. Fox and John Rock are to be largely drawn on. The Boards of Trade of San Jose, Los Gatos, Gilroy, Santa Clara, and the Saratoga Improvement Association have aided in getting up the display. Henry T. Phelps is president and W. T. Adel secretary. Hon. C. T. Ryland has also taken great interest in the effort.

The San Mateo exhibit is in charge of the San Mateo Development Association. Timothy Guy Phelps is president. The committee is largely composed of some of the wealthiest business men in San Francisco who have estates there. H. P. Boyce's show of palms and other plants is said to be remarkable. Among prom-

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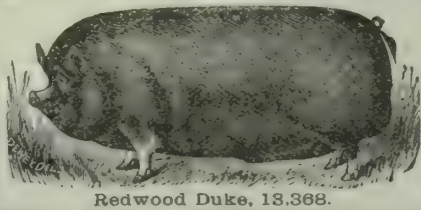
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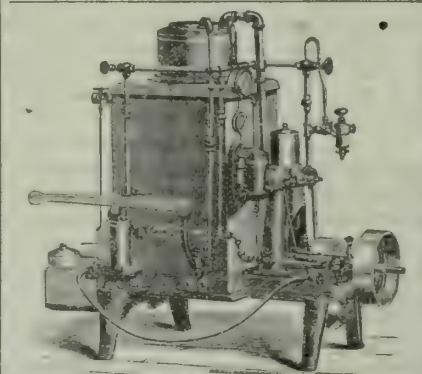
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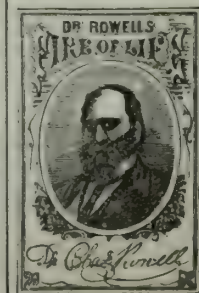
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There will be a Large Exhibition of Live Stock and Agricultural Machinery.

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SAN FRANCISCO, 1887.
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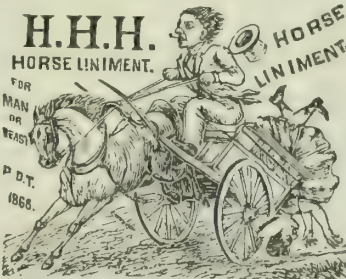
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Best of references. Send for circular. Call when in the city.

S. F. MARKET REPORT

NOTE.—Our quotations are for Wednesday, not Saturday, the date the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, August 3, 1887.
Delightful weather the past week has aided no little in harvest-work; the only objection has been that fruits matured too rapidly, necessitating sending them in more rapidly than the market was prepared to care for, which sent prices down. In wheat, the East has had a steadier tone, while in Europe the market ruled fairly steady. To-day's London cable is as follows:

LIVERPOOL, Aug. 3.—Wheat neglected. Cal. spot lots, 6s 10d to 7s 1d; cargoes off coast, quiet; on passage, buyers hold off; Mark Lane wheat, quiet; Wheat on passage to Continent, 480,000 qrs; wheat and flour to U. K., 1,872,000 qrs.

Foreign Review.

LONDON, Aug. 1.—The *Mark Lane Express* in its weekly review of the British grain trade, says: "The harvesting of wheat is becoming general. A large proportion of the oat crop is already cut. Values are tending downward. The crops being reaped are in good milling condition, and prices are expected to be lower than ever. The rates for foreign wheat are all in buyers' favor. Liverpool has recorded a decline in spot wheat every market day. Rye is very much depressed. Corn weaker. Barley is lifeless. Linseed is 3d better."

Eastern Wheat Markets.

NEW YORK, August 3.—12 M.—80½¢ for cash, 78½¢ for Aug., 80½¢ for Sept., 81½¢@81¾¢ for Oct.

CHICAGO, August 3.—12 M.—68½¢ for cash, 68½¢ for Aug., 70¢ for Sept., 71¾¢ for Oct.

California Fruit in Chicago.

CHICAGO, July 31.—A carload of peaches, raised near San Jose, and averaging 3½ inches in diameter, arrived yesterday and sold for \$4 and \$4.50 per box.

CHICAGO, August 2.—Several carloads of California fruit arrived to-day. Peaches had suffered somewhat from the heat. The late Crawford's were in finer condition than were the early varieties, the latter selling at \$1.25 per box, and the former at \$1.50@1.75. Orange clings brought \$1.25@1.50 per box. There was a good demand shown for all the fruit offered. The following quotations ruled to-day: Columbia plums, \$1.50; German and Gros plums, \$1.50@1.75; Bartlett pears, \$2.25@2.75; Burren Hardy pears, \$2.25@2.50; nectarines, \$1; Sweetwater grapes, \$1.25; Rose de Peru grapes, \$1@1.25.

California Dried Fruit.—There are no arrivals of new fruit, excepting apricots. A fair demand exists. Plums are inquired for, but there are no offerings. Raisins rule quiet at former prices. Pitted plums, evaporated, 10¢@11¢; do, sun-dried, 10¢@10½¢; apricots, evaporated, future delivery, 14¢; cash, 15¢@16¢; prunes, 10¢@11¢; raisins, London layers, 20 lbs boxes, \$1.30@1.40; do, 10 lbs boxes, \$1.15@1.25; California layers, \$1.15@1.25.

California Products at New York.

NEW YORK, July 30.—Mustard continues in demand and firm. California yellow in a large way might be obtained at 4¢, but for small lots, 4½¢@4¾¢ is demanded.

NEW YORK, August 1.—Two carloads shipped by the California Fruit Union, July 23, met with an accident on the way, and did not arrive until nearly midnight on July 30. The fruit had to lie sweating until this morning. Two more carloads came in time to be sold this forenoon. Altogether, 2997 boxes were sold at the following prices: Bartlett pears, 400 boxes at \$1.95@2.15 per box; peaches, 2400 half-crates at 45¢ to \$1.50; plums, 162 half-crates at 60¢ to \$2.95; grapes, 35 half-crates at 75¢ to \$1.30. The prices obtained were quite satisfactory, as the damaged fruit was hard to dispose of at any price.

Eastern Wool Markets.

NEW YORK, July 31.—Business the past week has been confined to a very few houses, and the majority have been able to sell only small quantities. Sales foot up 2,132,600 lbs of all kinds—an increase over the sales reported during the previous two weeks, but considerably below the record of last year. The quotation of Calif. spring is 19¢@22¢; Calif. fall, 12¢@18¢; Oregon, 22¢@25¢; and ordinary Texan and Territory, 19¢@22¢. Among the sales noted were 20,000 lbs fall Calif., 12¢@15¢; 12,000 lbs fine merchantable, 25¢@28¢; 5000 lbs fine unwashed, 22¢; 25,000 lbs No. 1 medium, 29¢@30¢; 10,000 lbs, 32¢; 20,000 lbs scoured Calif., 55¢; 20,000 lbs Oregon, 22¢@23¢.

The Philadelphia market is without important changes. Among the sales were 40,000 lbs unwashed, fine and medium Territory, 20¢@22¢; 57,000 lbs fine Territory, 19¢@22¢.

The Boston market is unchanged. Among sales were 125,000 lbs Calif. spring, 20¢; 78,000 lbs Calif. fall, 12¢@16¢; 73,500 lbs Territory, 18¢@27¢.

New York Hop Market.

NEW YORK, July 31.—Really choice Pacifics seem very scarce. Medium and poor goods are difficult to move, even at comparatively low prices. Coast crop 1886, best, 18¢@20¢; same, common to good, 15¢@17¢; 1885, good to prime, 9¢@12¢.

Local Markets.

BAGS.—The market is quiet, but steady.

WHEAT.—The market for options ruled strong on Call Board, up to Tuesday, when it eased off. Many farmers sold, delivered their grain and got their pay at the high prices. It is claimed that fully 100,000 tons of No. 1 white shipping changed hands at good figures up to to-day, when William Dresbach, who had been running the corner, gave notice that he could not meet his engagements. The Produce Exchange adjourned on receipt of this information, and consequently no business was done. Particulars of the proposition in settlement offered by Dresbach are given elsewhere. For sample wheat no quotations are obtainable, and will not be until the wheat-deal collapse is settled. The quotations we give are entirely nominal and what is likely to be if Dresbach's creditors accept his proposition.

BARLEY.—The market held weak up to Monday, when it was firmer. To-day there was no business, owing to the collapse of the wheat deal and the unsettled condition of affairs. The price of barley has

been hammered so low that many large operators have confidence in it and are buying freely.

BUTTER.—The market is stronger and quick at full prices. As high as 30 cts @ lb was paid by the single box for gilt-edged. The drouth at the West is creating higher prices at Chicago and other large western centers.

CHEESE.—The market is strong, at a slight advance in sympathy with butter and also a higher market at the East. The latter is caused by the drouth.

EGGS.—The market for strictly choice continues very strong under a good demand. Off grades are slow.

FLOUR.—The market is strong under light supplies.

[COMMUNICATED.]
Market Information.

Cereals.

When the Produce Exchange met this morning, William Dresbach, who has been running the wheat corner, notified the directors that he could not meet his engagements and made the following proposition in settlement: He to put 10,000 tons of paid-up wheat in the warehouse in the directors' name as security to the faithful carrying out of the following proposition, if accepted by his creditors: All sellers to him of buyer and seller options to be paid, as fast as the wheat is delivered, in cash, the difference between the price to which wheat was margined and \$1.70. The wheat delivered is to remain in the warehouse in the seller's name until the price \$1.70 is paid in four equal monthly payments. If this is accepted, then it is quite evident that No. 1 white shipping wheat will not go much, if any, below \$1.70, for the short sellers will be in the market for wheat, or else lose the money they put up to keep their margins good. A meeting of the creditors is called for this afternoon, and it is likely they will accept the proposition rather than lose the money which they have already put up.

Dornbusch's London grain circular, July 15, reports as follows: There is no "sound of abundance of rain" in the United Kingdom; the earth has become like iron, and the spring corn and pastures, especially on light lands, have suffered considerably from the protracted drouth. The bean crop is being injured by insects, and peas with little exception will probably turn out badly. On the other hand the wheat, barley and oats on heavy well-farmed land are very promising, especially the former, which stands well and will keep so, unless heavy rains come to lay the crops. In France some rain has fallen, but not enough to counteract the effects of the long spell of dry weather. In Belgium and Holland the crops are promising, and Germany, with lower temperature and moisture in the North, anticipates a favorable harvest.

Exports of wheat from India for the week ending July 23 were 500,000 bu., of which 380,000 bu. were to the United Kingdom and 120,000 bu. to the Continent. The total shipments from January 1 to July 23 were 22,260,000 bu. of which 11,000,000 bu. were to the United Kingdom and 11,260,000 bu. to the Continent.

Stocks of flour in Paris on July 1, reported at 467,000 bbls, against 503,000 bbls one year ago.

Area devoted to wheat in Manitoba this year is reported at 432,134 acres, against 384,441 acres in 1886.

The Chicago *Trade Bulletin*, just to hand, says that some damage to small grain, by insects has been reported in some sections in the Northwest, while dry and hot weather has checked the growth of corn in the West and Southwest. Yet the increased acreage of farm-land in the West which has been developed within the past year, will tend to partially offset any damage inflicted by insects or unfavorable weather, and the general opinion is that so far nothing discouraging has been manifested, which will bring the aggregate of all the crops below an average.

Private advices report that owing to the very light hay crop and the low price of corn, many fields of corn are being cut for feed.

The stocks of wheat and flour in France are small, and the domestic reserves of wheat in growers' hands are very light.

A large portion of the winter wheat crop of the United States has been harvested. The indications are, from the reports received, that the output will be at least 35,000,000 to 40,000,000 bu. less than in 1886, or about 270,000,000 bu. The acreage this year is 2 per cent less than last year. The spring wheat crop of 1887 has an area 6 per cent larger than in 1886. The output last year was about 146,000,000 bushels. The crop in parts of Iowa, southern Minnesota and Dakota, has been damaged from drouth, chinchbugs and fly. Indications now are that the output will not exceed 140,000,000 bu.

On this coast the bulk of harvesting is finished. Farmers' deliveries are in consequence increasing. The quality of the grain in Washington Territory and Oregon is superior to last year. The yield to the acre is also more. In this State the grain is very irregular, as was the yield. The bulk of the wheat is inferior, while the bulk of the barley is nothing to boast of if the samples sent to this market are a fair representation.

The stock of wheat in this city and at Port Costa, on August 1, was 131,939 tons, an increase for the month of 19,405 tons.

Receipts of barley last month are reported by the Produce Exchange to have been 10,380 tons, but other authorities make it about 12,000 tons. Although receipts were so large still the stock on August 1 was only 3948 tons larger than on July 1. This shows for this city a very large consumption—larger than ever before known. Owing to the high price of ground feed and hay, more ground or rolled barley is going into consumption. Barley ruled weak at low prices up to Monday, when a stronger tone set in. Although the daily papers quoted No. 1 feed below 1¢, yet at no time could it be bought even at less than \$1.01¼ per cental, and seldom at that low. There is a large increased call for brewing grades of barley, both for home and shipping to New York.

Heavy receipts of oats cause a weak market at lower prices. The demand at the lower prices appears to be increasing.

Corn is very strong and hard to get except at an advance, in sympathy with a higher market at the East, where the crop is said to be damaged by drouth.

The Cincinnati *Price Current*, July 28, reports

as follows: The past week has afforded some relief to suffering cornfields by rains in many districts of the West, but there is a very considerable breadth of grain in Ohio, Indiana and Illinois, especially in the southern portions of these States, still very much in need of rain to assure anything like a good crop. West of the Mississippi, corn in Iowa, Missouri and Nebraska is generally in good condition, and this is to be said of much of Kansas, but in the latter State the conditions are not so uniformly favorable. Take it all in all, a large portion of the corn crop of the West is now in a critical condition, and notwithstanding the fact that this grain can withstand much of dry weather, following a good start in growth, the point has been reached when relief must be had from rains very quickly over a large breadth of the corn belt or the yield will be most seriously cut short. The dry weather has cut short pasturage to a large extent and hastened the marketing of stock, and has curtailed the yield of various crops more or less, including oats, potatoes, hay, etc.

Feedstuff.

Receipts of bran from Oregon are increasing, but still they are light. The market for both bran and middlings is strong.

Rolled barley continues to gain in favor, owing to its relative cheapness. The consumption is very large.

Hay rules very firm at full prices. The consumption is quite large, fully one-quarter more than last year at this time. Owing to high water the Oregon crop is short, while the drouth West made a short crop there.

Live-Stock.

Both beef cattle and mutton sheep rule low. The continued low price is a disappointment to butchers, who expected a higher range of values. The condition of the stock sold is good, fully up to last year, when there was better pasturage. Veals are firm. Hogs are weak and lower, under free offerings. It is thought they will go still lower, if the selling pressure continues.

In horses there is nothing new to report. There is a continued good inquiry for general utility horses and also roadsters. Work horses meet with only a fair inquiry.

The following are the wholesale rates of slaughterers to butchers:

BEEF—Extra, 7¢@7¼¢; first grade, grass fed, 6½¢@7¢ per lb.; second grade, 6¢; third grade, 4½¢@5½¢.

MUTTON—Ewes, 5¢@5½¢; wethers, 6¢@—c.

LAMB—Spring, 7¢@8¢.

VEAL—Large, 6¢@7¢; small, 6¢@8¢.

PORK—Live hogs, 4½¢@4¾¢ for heavy and medium; hard dressed, 7¢@7¼¢ per lb.; light, 4½¢@4¾¢; dressed, 7¢@7¼¢; soft hogs, live, 3½¢@4¢. On foot, one-third less for grain or stall fed, and one-half less for stock running out.

Fruits.

The market has been glutted the past week with all kinds of seasonal fruits, causing extreme low prices to rule for peaches, plums and apricots. Canners bought liberally, but receipts were greatly in excess even of their increased requirements. It appears as if everything ripened at once. Dealers had to clean up consignments even at a less figure than quoted. Berries were also in liberal supply, and claimed attention from canners—cool weather had much to do against the demand. Many consignments of fruits were received too ripe, and had to be placed for what they could bring.

Apples are in liberal supply. The market favors buyers.

Grapes are coming in freely, with the better varieties in good supply. Advices from the different grape-growing sections are conflicting, but the general tenor of reports is to effect that the yield will be larger than last year, owing to more vines bearing. Wineries are running in some sections.

Dried apricots continued to come forward freely, but owing to the continued good inquiry, concessions on asking prices are hard to get. The quality this year is better than last year. Peaches are coming in, but as yet they are poor and do not command attention. Choice are wanted, and will fetch full figures. Dried figs are selling for less money. The East reports a good demand for California dried fruits.

Seed.

Advices from Western Idaho and Eastern Washington Territory report a good yield of flaxseed. Eastern advices report that the crop of flaxseed will be much smaller than last year. The reason for this is reduced acreage, and in some sections dry weather. It is a well-known fact that flax exhausts the vitality of the ground more than any other crop—not more than three consecutive crops can be raised successfully. This partially accounts for the reduced acreage. Less new ground was sold to flax this year. The quality of the crop is good.

The crop of timothy at the West is considerably below an average.

Vegetables.

The drouth at the West is reported to have very materially reduced the crop of cabbages; in consequence high prices are looked for, with a free call on this coast for supplies.

In seasonable vegetables the market is liberally supplied, with prices largely in buyers' favor. Tomatoes are being taken by canners, while picklers are taking pickling onions and cucumbers.

Potatoes continue to come in freely. The crop in Oregon will be below an average, owing to the bottom lands having been flooded. In this State the crop is more than an average and of superior quality. As the crop at the West will be short, it is stated that our market will improve later on this year.

Miscellaneous.

The tonnage movement compares with last year at this date as follows:

	1887.	1886.
On the way.....	300,286	323,571
In port, disengaged.....	74,731	31,961
In port, engaged.....	40,259	39,101
Totals.....	415,276	394,633

The above gives a carrying capacity as follows: 1887, 659,740 short tons; 1886, 631,412 short tons; increase over last year, 28,328.

Honey is very stiff under light supplies, short crops at the East and a good demand.


Wool, unless medium to fine, is slow to place. The assortment is poor, and sales are few in consequence.

Dealers in hops are still engaged in the pleasing, to them, task of talking the market down. Owing


to the warm weather at the East and in Europe, the consumption is larger. Crops abroad have improved, but still are less than average. New York advices are of the same tenor heretofore noted.

Poultry ruled fairly steady throughout the week. Large, good-conditioned fowls have ready sales at a slight advance on outside quotations, but poor are hard to place.

San Francisco, August 3, 1887.



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Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Aug. 3, 1887.

BEANS AND PEAS.	
Bayo, oil.	1.90 @ 2.50
Butter.	1.75 @ 2.00
Peas.	1.80 @ 2.00
Red.	1.40 @ 1.55
Pink.	1.25 @ 1.50
Large White.	1.90 @ 2.00
Small White.	1.75 @ 2.00
Lima.	1.75 @ 2.25
Old Peas, blk eye	1.00 @ 1.05
do green.	1.00 @ 1.12
do Niles.	1.25 @ —
BROOM CORN.	
Southern per ton	50 @ 75
Northern per ton	50 @ 75
CHICORY.	
California.	52 @ 64
German.	50 @ 70
DAIRY PRODUCE, ETC.	
BUTTER.	
Cal. fresh roll, D.	17 1/2 @ 22 1/2
do Fancy brands	25 @ 27 1/2
Pickle roll.	20 @ 24
Irish, new.	16 @ 20
Eastern.	— @ —
CHEESE.	
Cheddar, Cal., D.	9 @ 11 1/2
Eastern style.	11 @ 12
EGGS.	
Cal., ranch, doz.	25 @ 27
do store.	18 @ 22 1/2
Ducks.	— @ —
Oregon.	— @ —
Eastern.	16 @ 18
FEED.	
Barley, ton.	27 00 @ 29 00
Cornmeal.	28 00 @ —
Grd Barley ton.	25 00 @ 26 00
Hay.	9 00 @ 15 00
Middlings.	29 00 @ 30 00
Oil Cake Meal.	26 50 @ 28 50
Straw, bale.	40 @ 60
FLOUR.	
Extra, City Mills	4 95 @ 5 70
do Country Mills	4 45 @ 5 45
Superfine.	3 70 @ 4 45
GRAIN, ETC.	
Barley, feed, cbl.	97 1/2 @ 1 05
do Brewing.	1 10 @ 1 25
Oats.	1 50 @ 1 65
do Coast.	— @ —
Buckwheat.	1 00 @ 1 20
Corn, White.	1 15 @ 1 25
Yellow.	1 10 @ 1 20
Small Round.	1 20 @ 1 30
Nebraska.	1 07 1/2 @ 1 15
Oats, milling.	1 60 @ 1 65
Choice feed.	1 45 @ 1 50
do good.	1 37 1/2 @ 1 40
do fair.	1 20 @ 1 30
do black.	— @ —
do Oregon.	— @ —
Eye.	1 25 @ 1 50
Wheat milling.	— @ —
Gilt edged.	1 75 @ 1 80
do Choice.	1 70 @ 1 65
do fair to good	1 60 @ 1 65
Shipping Choice	1 70 @ 1 65
do good.	1 60 @ 1 65
do fair.	1 40 @ 1 50
HIDES.	
Dry.	14 @ 16
Wet salted.	7 1/2 @ 8 1/2
HONEY, ETC.	
Beehive, lb.	20 @ 22
Honey in comb.	10 @ 13
Honey in comb.	— @ —
do fancy.	13 1/2 @ 14 1/2
Extracted, light.	5 @ 6 1/2
do dark.	3 1/2 @ 4 1/2
HOPE.	
Oregon.	17 1/2 @ 22 1/2
California.	15 @ 22 1/2
ONIONS.	
Pickling.	— @ —
Red.	40 @ 50
Silverskins.	50 @ 75
NUTS—JOBBER.	
Walnuts, Cal., lb.	13 1/2 @ 14 1/2
do Chile.	8 @ 10
Almonds, hdshl.	5 @ 7
Soft shell.	18 @ 19 1/2

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Aug. 3, 1887.

Apples, bx com.	
do choice.	50 @ 1 25
Apriots, lb.	1 @ 1 1/2
Bananas, bunch.	2 00 @ 3 25
Blackberries, ch.	2 50 @ 3 50
Cantaloupes, cr.	1 00 @ 1 50
Cherries, wht bx.	— @ —
do black bx.	— @ —
do Royal Ann.	— @ —
Cherry plums.	— @ —
Crabapples.	50 @ —
Cranberries.	10 00 @ 12 50
Currants ch.	— @ —
Gooseberries lb.	— @ —
Pears, black bx.	1 00 @ 1 50
do white bx.	1 00 @ 1 50
Grapes.	25 @ 50
do Rose Per.	— @ —
do Muscat.	50 @ 1 00
do Tokays.	— @ —
Isabel.	— @ —
Wine, Zinfandel	— @ —
do Mission.	— @ —
Limes, Mex.	11 00 @ —
do Cal. box.	— @ —
Lemons, Cal., bx	— @ —
do Sicily, box.	6 00 @ —
do Australian.	— @ —
Nectarines box.	50 @ 75
Oranges, Com bx	— @ —
do Choice.	— @ —
do Navel.	— @ —
do Panama.	— @ —
Peaches, bx.	20 @ 40
do basket.	— @ —
Crawdords, bx	20 @ 40
do basket.	— @ —
do choice.	— @ —
Pears bx.	30 @ 50
do choice.	— @ —
do Bartlett, bx	40 @ 85
PERSIMMONS.	
Jap, bx.	— @ —
Pineapples, doz.	4 00 @ 5 00
Plums box.	— @ —
Pomegranates, b	— @ —
Prunes bx.	— @ —
Quinces bx.	— @ —
Raspberries ch.	4 00 @ 5 00
Strawberries ch.	3 00 @ 5 00
Watermelns, 100 lb	10 00 @ 17 50
DRIED FRUIT.	
Apples, sliced, lb	12 1/2 @ 13 1/2
do evaporated.	13 @ 14
do quartered.	5 @ 6
Apriots.	11 1/2 @ 14
Blackberries.	13 @ 13 1/2
Cherries.	28 @ 30
Dates.	9 @ 10
Figs, pressed.	6 @ 7 1/2

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FOR THE WEEK ENDING JULY 26, 1887.

367,127.—OIL-PRESS MAT—G. S. Andres, S. F.	367,177.—ROTARY ENGINE—Geo. Barr, La Center, W. T.	367,086.—CABLE PROPULSION FOR RAILWAYS—R. F. Bridwell, S. F.	367,191.—WHEEL FENDER FOR WAGONS—Coughlin & Curtis, Oakland, Cal.	367,273.—OIL CAN—J. M. Coulter, Portland, Ogn.	367,134.—TREE COVER AND FUMIGATOR—John P. Culver, Los Angeles, Cal.	367,137.—CABLE RAILWAY—George W. Douglas, S. F.	367,343.—FLOOR, ROOF OR AREA COVERING—P. H. Jackson, S. F.	367,152.—DUMB-WAITER STOP—J. J. Mahony, S. F.	367,122.—WINE PRESS—Toulouse & Delorieu, S. F.	367,124.—FURNACE BRIDGE-WALL—E. W. Tucker, S. F.	14,632.—TRADEMARK—W. T. Coleman & Co., S. F.
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Owing to the sale to Senator Stanford of the land at Menlo Park, used by F. H. Burke as a stock ranch, Mr. Burke has decided to dispose of his thoroughbred stock by auction. The horses will be sold by Killip & Co. next Tuesday, at Rogers' stable, 1606 Market street, this city. The catalogue contains 24 numbers. The sale of thoroughbred cattle, sheep and hogs will take place at Sacramento during the State Fair.

Consumption Cured.

An old physician, retired from practice, having had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all throat and lung affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints, after having tested its wonderful curative powers in thousands of cases, has felt it his duty to make it known to his suffering fellows. Actuated by this motive and a desire to relieve human suffering, I will send, free of charge, to all who desire it, this recipe, in German, French, or English, with full directions for preparing and using. Sent by mail by addressing with stamp, naming this paper, W. A. NOYES, 149 Powers' Block, Rochester, N. Y.

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GRAINLAND,

BUTTE CO., CAL., June 9, 1887.

Mr. M. L. Mery—DEAR SIR: We have used one No. 2 Roller Barley Crusher now for eight years and have used it steady during that time; have crushed 45 tons a day, and the crusher is as good to-day as when it came out of your shop. I am satisfied that it is the best mill made. You may reconstruct this testimonial to the best advantage for you and sign our names, for you cannot overrate the merits of your mill.

F. E. REAM,

JOHN P. SUTTON.

DURHAM, May 21, 1887.

Mr. M. L. Mery—DEAR SIR: In reply to yours of the 19th, would say that I crushed from two to two and a half tons per hour, but could crush three and a half tons per hour if my elevators were large enough to carry the barley from the machine. The No. 1 machine I used at Gridley was run on a sack a minute, but if we got behind we could run through five tons an hour, and do good work. The machine I use here is a No. 2.

Yours, WM. M. TAYLOR.

I thank the public for the kind patronage received thus far, and hope for a continuance of the same.

M. L. MERY,
CHICO IRON WORKS,
CHICO, CAL.

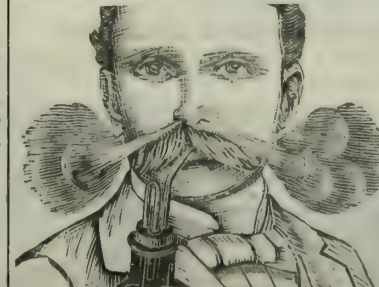
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MEDICATED INHALATIONS.

The Only Successful Home Treatment and a Positive Cure for

Catarrh, Asthma, Bronchitis, Deafness,

And all diseases of the head, throat and lungs. One test, one look will convince intelligent people that this is a rational and scientific treatment. It is the only advertised remedy endorsed by the medical profession. A hundred physicians and thousands of citizens are our references. Established in 1882. Children enjoy it. A household treasure. Lasts a lifetime. Cost, with medicine and prescriptions for duplicating same, only \$2.50; can be sent by express. Consultation and test free. Send for Circular. Office, 229 Kearny Street, San Francisco.



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In 10,000 Shares of \$100 each.

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CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up, and statements of accounts rendered every month.

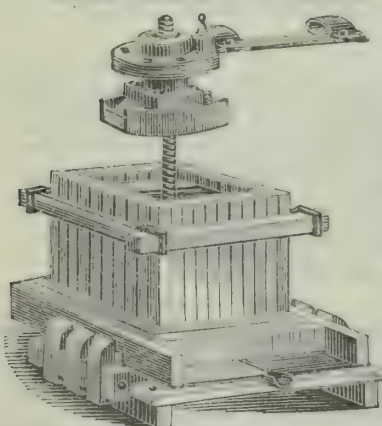
LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

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Farmers and Viticulturists, Attention!

FERTILIZE! FERTILIZE!

NITROGENOUS SUPERPHOSPHATE.

UNIVERSITY OF CALIFORNIA, Nov. 3, 1886.

Dr. J. KOEBE—Dear Sir: I have analyzed your sample of "Nitrogenous Superphosphate," with the following result:

Soluble Phosphoric Acid.....	12.90 per cent
Reverted Phosphoric Acid.....	.95 "
Insoluble Phosphoric Acid.....	2.83 "
Potash.....	2.23 "
Ammonia.....	1.87 "
Nitric Acid.....	2.95 "

The above amount of Nitric Acid is equal to 0.85 per cent Ammonia, therefore, total of Nitrogen calculated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vineyards, orchards, gardens, farms, and I recommend its use by the cultivators of the soil generally, in California. Yours truly,

DR. E. A. SCHNEIDER.

University of California, College of Agriculture.
BERKELEY, Nov. 20, 1886.

Dr. J. KOEBE, San Francisco—Dear Sir: I take pleasure in adding my testimony to that of Dr. Schneider as to the high quality of the "Nitrogenous Superphosphate" Fertilizer, analyzed by him at your request. It is a high-grade article, and as such returns the user a better money value than a low-grade

H. M. NEWHALL & CO., Agents, 309 and 311 Sansome St., San Francisco.

fertilizer. It is especially well adapted to use in California, on account of the predominance in it of Phosphoric Acid, which is generally in small supply in our soils. Yet it is desirable that "complete" fertilizers be used in our orchards and vineyards, and yours is of that character in furnishing Potash and Nitrogen as well. Very respectfully,

E. W. HILGARD.

The value of this Fertilizer consists in the large percentage it contains of Phosphoric Acid—the chief element of all plant food—in combination with the necessary quantities of Potash and Ammonia, and the ease and cheapness with which it can be applied.

In ordinary soils the following quantities will be found sufficient: For Wheat, Barley, Corn and Oats, 300 to 350 pounds per acre. For Grass, Sugar Beets and Vegetables, 250 to 300 pounds per acre. For Vines, Fruit Trees, from 1/2 pound to 1 pound each. For Flower Gardens, Lawns, House Plants, etc., a light top dressing, applied at any time, will be found very beneficial.

FOR SALE IN LOTS TO SUIT,

On board cars at Sbranto, Station of the C. P. R. R., 20 miles north of San Francisco, at \$30 per ton, by the MEXICAN PHOSPHATE & SULPHUR CO., H. DUTARD, President, room 7, Safe Deposit Building, or

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FOR THE SEASON OF 1888.

Having the exclusive Agency of the Pacific Coast for the extensive Nurseries of A. Wimberly and A. J. Bach & Son, of Palatka, Florida, we are prepared to furnish Orange, Lemon and Lime Trees of all the leading varieties (budded on seedling stocks) in any quantity desired, from one tree to ten thousand,

AT PRICES THAT ALL CAN AFFORD TO PLANT.

These Trees are all first-class, 3 feet and upward in height and three-fourths of an inch and over in diameter at base of bud.

It will be necessary to give your order early to secure prompt delivery. Special prices given for carload lots. Write for prices or any information desired. Address

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A very superior, unbleached Dried Fruit produced at less than half the expense and in less than half the time claimed by any other drier.

APPLICABLE EITHER TO THE SMALLEST FAMILY OR THE LARGEST FRUIT GROWER.

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A Sunny Primary Room and Gymnasium are to be added to the establishment this term.

Will Re-open July 25, 1887.

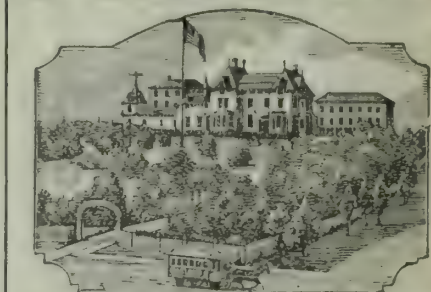
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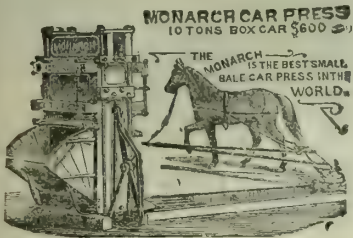


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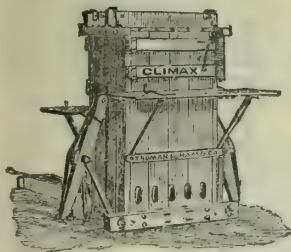
THE MONARCH, JR., HAY PRESS.



IMPROVED FOR 1887.

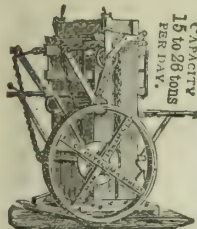
Any young man can earn more on an investment of \$500 in this press than can be earned in expending \$2000 for any other machine. We have a Monarch Press, which we sell for \$600, but has been used a very little and is just as good as new, which we will sell for \$450.

THE CLIMAX HAY PRESS, \$300.



Weight, 2200 lbs. A crew of three men—four can be used to advantage.

Five ropes are used on the bales. Capacity, 10 to 15 tons per day. The best press for the money in the world.



The Celebrated Petaluma
BALING PRESS.

Weight, 2600 lbs. Price, \$350, delivered at the factory. Size of bale, 22x22x48 inches. Capacity, 26 tons per day. Weight of bale from 225 to 400 lbs. This remarkable machine still stands at the head of all vertical baling presses, and probably bales three-quarters of all the hay west of the Rocky Mountains.

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GREATLY IMPROVED FOR 1887.

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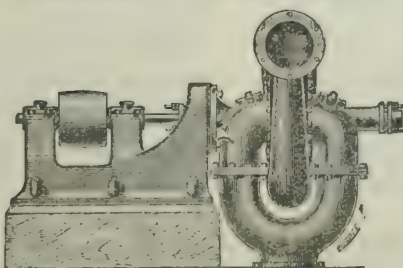
Freight paid, fire insurance and loans effected, and proceeds forwarded free of commissions. Money advanced at lowest rates on grain in warehouse, interest payable at end of loan. Storage season, ending June 1, 1887, at reduced rates. On all wheat shipped to Mission Rock by barges, freight rates guaranteed the same as to Port Costa. All applications for storage or other business addressed to CHAS. H. SINCLAIR, Superintendent.

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Send to us for circular, cuts, and prices of new hand-power Hop Press possessing the following advantages:

1. Perfect facilities for putting on the cloth, as the bale, after being pressed, is fully exposed at the sides and ends.
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3. A perfectly tight and solid box with no slots or sliding pieces at the ends.
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5. Powerful progressive leverage and the entire absence of cast iron racks (which are always liable to break and fail to give the required power at the pinch).
6. A balanced follower that goes up without assistance.
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The Best!
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FIVE SIZES made with capacity of from 3 to 50 bushels per day.

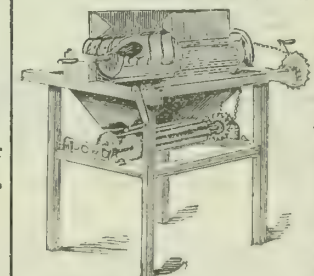
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W. H. Worth's Pat. Grape Stemmer And CRUSHER.



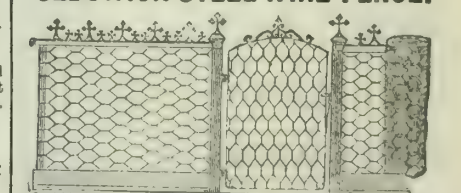
After experimenting for the past three years, I have perfected the

Best Stemmer

In the market. Those wishing Grape Machinery, please write for circular. See advertisement, in next week's issue, of my Patent Wine Press.

W. H. WORTH, Petaluma, Sonoma Co., Cal.

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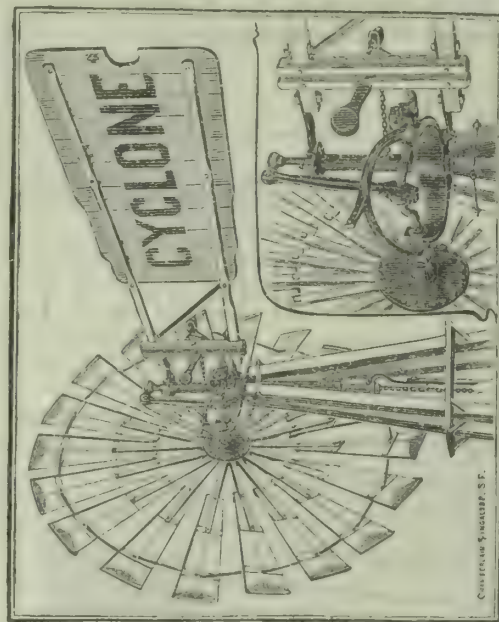


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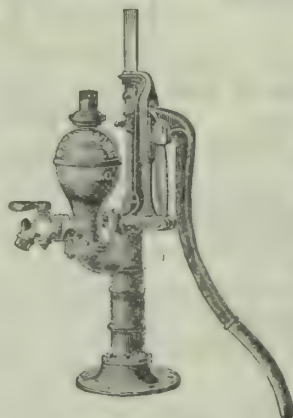
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WINDMILL.

\$35.00 CASH.

Has stood the severest tests of practical use for many years. It is STRONG, DURABLE, SELF REGULATING, STORM-DEFYING. Requires less wind than any other Mill, and embraces all the latest improvements. It has the shortest shaft and is the best balanced Mill ever made. The frame or rims, of the wheel are bent, material used in their construction being the best. There is no simpler or more perfect self-regulator made.

Runs in the Lightest Wind.
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You Will be Delighted.
It is low in Price—only \$35 Cash.
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Should a farmer be without a Windmill when he is able to procure one of our Golden State Mills for \$35 cash? You will save the cost of Mill in six months. Call and see our mill that costs but \$35 cash, or send for circular.

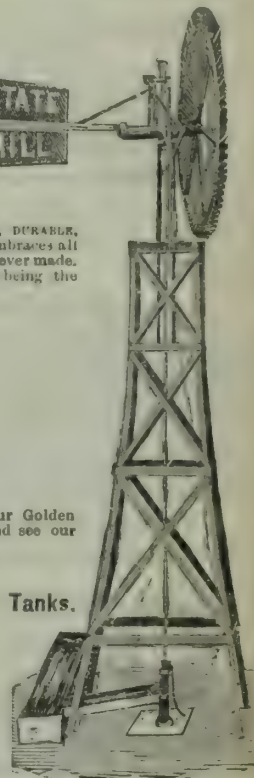
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Windmill Force Pumps and Pumps for Every Purpose, Tanks,
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WIND MILL



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FRUIT GROWERS, FRUIT SHIPPERS, CANNERIES, ETC.

The ALLEGRETTI GREEN FRUIT TREATMENT and STORAGE SYSTEM COMPANY announce that they are now ready to store and treat all kinds of Green Fruit, Vegetables, and other Perishable Articles, on Storage System, by the week, month, or for shipment East.

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For particulars, address

ALLEGRETTI STORAGE CO.,

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WEST BERKELEY, CAL.

PACIFIC RURAL PRESS

TWENTY-PAGE EDITION.

Vol. XXXIV.—No. 7.

SAN FRANCISCO, SATURDAY, AUGUST 13, 1887.

\$3 a Year, in Advance
SINGLE COPIES, 10 CTS.

Horticultural Scenes.

As the State goes to San Jose next week to attend the first fair of the fall of 1887, we deem it timely to insert a few glimpses at the scenes which are figuring so largely in the prosperity of the Santa Clara valley and are winning for it a world-wide reputation. Unfortunately, the artist cannot cope with nature, and to one who can see the symmetry and beauty of well-pruned orchards, the neatness of the clean culture and the grand vistas of distant hills and plains which can be seen between the rows of trees, the little sketches which we give must seem somewhat inadequate. Any one who attempts to portray natural scenes by the engraver's art must be conscious of his limitations, and yet the effort is made and intelligent people take an artist's sketches as but suggestive, and trust to the imaginative faculty to complete the picture.

The sketches show three of our chief kinds of fruit while in bloom. Whatever may be the charm of the mid-summer wealth of foliage or the later grandeur of ripening fruit, there is a delicate loveliness pertaining to blooming-time which charms by its grace and perfume and enriches by its profusion. The blooming coming, too, at a time when the orchard has been for months a dreary scene of bare swaying branches, and has known no activity save the clip of the pruning-shears or the hiss of the spray-nozzles charging hither and thither, filling the air with malodorous or caustic vapors, makes the sudden bursting into glorious bloom all the more marked and grateful.

One engraving shows the prune in bloom in the orchard of S. F. Leib. The artist has not chosen quite as good a tree as he might have found. One headed a little lower and with the branches shortened in a little would perhaps have better shown the prevailing style, but still the tree is the prune—the prune which is filling the valley with wealth and at the

same time retaining within our borders hundreds of thousands of dollars which would still be going abroad were it not for the skill and enterprise of California producers.

Another sketch shows the cherry orchard of J. H. Flickinger, in bloom, excellently shaped trees, branched almost to the ground, and still

which are items of industrial importance as well as pleasing to the eye, are perhaps more characteristic of California orchards than of those of any other fruit region.

Somewhat in contrast with the scenes in orchards on the level is the pretty view of the Buena Vista vineyard, with the low-pruned

Railway Notes.

The Pacific Railway Commission has continued its sittings in this city during the week, and will probably be at work a week or more longer. So far, we do not discover that very much has been drawn out, as those who are supposed to know either show wonderful lack of memory or refuse to answer questions which touch vital points in their armor. These seem to be mainly concerning the interior history of the construction of the Central Pacific and the use of money for "counsel fees" and the like. The Commission seems to have very thoroughly informed itself as to what corner of the fence there may possibly be dark things hidden in, while railway men seem quite as expert in not telling anything. It is quite likely that the Commission, from its understanding of the subject, may learn more from such testimony as they get than the reading public can. They seem to be somewhat inclined to appeal to the United States courts to see if witnesses can refuse to answer their questions. Their report which will be made at the next meeting of Congress, will be awaited with much interest.

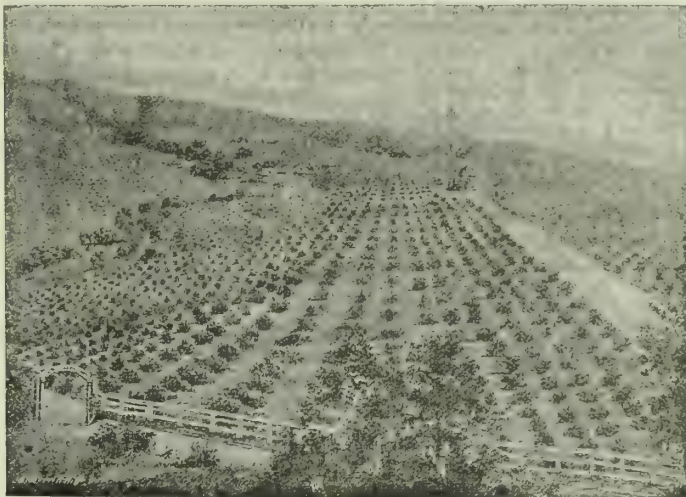
SONOMA IN BOSTON. — A leading

officer of the Santa Rosa Board of Trade has lately received a letter from the secretary of the Massachusetts Charitable Mechanics' Institute encouraging the former association to make a display of the products of Sonoma county at the triennial exhibition of the latter, which is to open at Boston September 27th. Accordingly arrangements are being made to send on such samples of the minerals, native woods, cereals, fruits and various farm and factory products as shall reflect credit upon "Old Sonoma" and prove an effective advertisement of its claims upon the notice of Eastern immigrants.

WHEAT has touched the lowest price in Vienna reached in 23 years.



THE CHERRY IN BLOOM.



BUENA VISTA VINEYARD.



GLIMPSE OF PRUNE ORCHARD IN BLOOM.



ALMOND ORCHARD IN BLOOM.

HORTICULTURAL GLIMPSES IN SAN JOSE AND VICINITY.

so shaped that the cultivator can approach quite near to the tree, leaving but a few strokes from our friend with the hoe to stir the dirt just at the base of the tree. These trees, when the leaves appear, will be models of symmetry, and not an inch of bark exposed for the sun to blister. The cherry is also a great fruit in the Santa Clara valley. We know no region in which larger areas of well-kept cherry orchards can be seen, although other districts have good culture and broad acres also.

The sketch of the almond orchard in bloom on the Bradley ranch has a wider range and gives a better idea of the general appearance of a good California orchard. The true lines of the trees, their uniformity of size and shape,

vines reaching in straight lines as far as the eye can reach, though the ground be uneven, and the vines creeping also well up the hillside on the left. Only where the slope is too abrupt are the native oaks allowed to retain possession of the scene, and they add to the beauty. Instead of being but slightly elevated above sea level on the floor of the Santa Clara valley, as are the great orchards, this vineyard is 1000 feet higher in the hills along the eastern rim of the valley. If one goes now to San Jose he will find trees not in bloom but in fruitage. There will be at the fair next week most beautiful displays of the ripe fruit in the pavilion, but a slight exponent of the amounts which a visitor can see in the orchards.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Notes of a Trip to Boomland.

EDITORS PRESS:—I have just returned from a 10 days' trip to Southern California, where I saw much that greatly interested me.

They are certainly turning things topsy-turvy down there with a recklessness that takes one's breath away. The very air is full of great undertakings, and each day sees the projection of enterprises enough to last a common slow-going community a month or more. New railroads fill the air with the sulphurous smoke of their blasts as they tear out the sides of mountains to make room for their tracks; great dredgers are making a salt-water lagoon into a commodious harbor; beautiful hotels are springing up on every hand in towns and projected towns; water companies are laying pipes by the mile; towns composed exclusively of fine dwellings of the latest and most improved architectural designs are springing up on every hand in the dry and forbidding deserts, on lofty heights or in sheltered nooks; street railroads, horse, cable and electric, are being built where it looks as if they would not get one passenger per day; electric lights glare down on sagebrush plains, and newly-plowed streets and artificial stone sidewalks and grassy lawns, where there is not a house nor the semblance of one within a mile, surprise the traveler as he rides over the uncultivated wastes.

Everything seems reversed. First the graded streets, then the fine sidewalks, then the lawns, then the dwelling and hotel, then the cultivated ranches. And the business to support all these—will it come? In some few places yes, perhaps. In three-quarters of them, no. I can compare the land and town lot craze down there to nothing but the mining stock craze that we experienced a few years ago. Hundreds and thousands are getting rich—that can't be denied—but the whole thing seems to me to be forced, feverish and unhealthy.

Grand Sights.

But there are some grand features in Southern California—I mean her ranches and vineyards and orange groves. I had occasion to visit Mr. D. Freeman (the owner of the Centinela ranch) to whom I had sold one of my big Hurricane haypresses. I found the ranch to be a little patch of ground seven miles wide by ten long, lying southwest of Los Angeles near the seashore. When I came in sight of it I was amazed. I was on a little eminence where I could overlook it to advantage, and such a display of hay and grain stacks I never saw before. The entire tract was covered as far as the eye could reach with stacks from 40 to 300 feet long, and so great was their number, to count them was an impossibility. They diminished in the distant perspective till they appeared like little yellow streaks on the horizon miles away. It was really a relief, after riding by the cities of Terrace Heights and New Westminster and Hyde Park, to come upon such a healthy looking, business-like section, where men were engaged in producing something of value instead of laying out town lots or grading streets that will not be used for years, if ever.

It was exceedingly warm while I was down there, and I did not see a comfortable hour or get a breath of satisfying lung-expanding air till I got back to Port Costa. Others may say what they will about the climate of San Francisco, I for one will never open my mouth against it again, and I here record my opinion that its climate is the best, all things considered, on the coast, excepting, perhaps, the eastern shore of San Francisco bay.

Perhaps invalids and people of leisure may find Santa Barbara or San Diego more satisfactory, but to men and women of active habits or laboring men, the cool, bracing, life-giving breezes of San Francisco and vicinity must be vastly preferable.

Berry's Steam Harvester.

On my return I stopped over a day or two at Tulare (a lively looking town), and drove out to see Geo. Stockton Berry's steam harvester, of which your readers have heard so much, at work. To say that it realized my expectations hardly expresses it. It was just grand to see that immense machine walk off through the almost illimitable grain-field that it was working in with never a horse or mule within half a mile of it. I make no attempt to describe it, but merely record my own sensations.

When ready to start at 1 o'clock, Mr. Berry asked me to take a seat by him on the toolbox, which I did. Over our heads was stretched a large canvas awning some 20 feet square that protected all the men from the sun and allowed the cool breeze to sweep under it. At the word the engineer (Mr. Berry's brother) turned on the steam, and away we went smoothly and steadily about as fast as a man ordinarily walks, cutting a swath twenty-two feet wide just as easy as winking. Just ahead of where I was, a lazy fellow sat in a comfortable spring seat twisting a wheel like a car brake to the right and left and guiding the ponderous machine where he wished to an inch. Just back of me was the fireman, another lazy fellow, leisurely poking straw into the furnace to keep up steam. His hat hung up near him, as if he was in a room, and his little black dog lay in

the straw behind him watching him affectionately.

In front of me was the engineer doing nothing at all, but alert and ready if required. On the other side of the boiler was a dusty-looking fellow with an oilcan in his hand, squirting in a little here and a little there, looking mighty wise and pretending to work.

On a separate platform on the outside of the separator was the sack-sewer comfortably seated in the shade sewing the sacks and dumping them off upon the ground at intervals. Altogether there were six or seven men who looked to me as if they had what is called a "soft thing," notwithstanding the fact that they were cutting and putting in the sack, ready for market, 30 or 40 acres of wheat per day. A similar machine of wider cut near by was cutting 60 acres per day with the same force. And the straw—

The Waste Straw.

Or rather a small fraction of it—was doing the work. The men I have spoken of pretended they were doing it, but I was not deceived; it was the straw. And the straw has, can and will plow the ground, as well as reap the harvest of the great valley 100 miles wide that extends from Bakersfield to Red Bluff—almost 400 miles. Not only will it do that, but it will haul the grain to the railroad station, when the roads are prepared for it by fuel and water stations—all, too, within the next few years, mark my words.

JACOB PRICE.

San Leandro, Aug. 2, 1887.

Southern Humboldt.

EDITORS PRESS:—Your favor inclosing Mr. R.'s letter, asking about Humboldt county, is at hand. I will answer his questions first, not only for his benefit, but for all seeking homes where water and wood are plenty and land for growing fruit is cheap.

What is the price of land in your county?

In the valleys, river bottom, per acre, \$100; in the foothills, suitable for fruit, unimproved, per acre, \$10.

Is there any Government land, or would there be a show to buy the abandonment of a quarter section?

There is some Government land here yet, and I know of one or two chances to buy claims.

Can a man, willing and able to work, make a living on 80 acres?

A man cannot make a living in the hills raising stock (which is the custom at present); but with ten acres planted with good fruit, 30 acres to farm in hay and grain, and the balance in pasture, I answer: He can.

What is the produce of the county?

In the valleys, hay, grain, potatoes, corn, butter and cheese, lumber and fruit. In the foothills, lumber, butter, wool and some good fruit.

Do you have to irrigate?

There is no need of irrigation for hay, grain or fruit in this county, as we have an average rainfall of 48 inches in the winter.

Is good well-water obtainable?

We do not dig wells in the foothills, as there is plenty of nice, cool spring-water for all purposes and to spare.

General Statement.

Now I believe I have answered all Mr. R.'s questions, and as I seldom see anything in your valuable paper about Humboldt county, I will state a few additional facts, which may be of use to those seeking homes. We have always been shut off from the rest of the State through lack of railroad communication, and people living at a distance know nothing of our county, except that redwood lumber is manufactured there. We are not behind any county in the State in productions. We have vast forests of redwood timber; we raise fine crops of hay, grain, potatoes, corn and dairy produce in the valleys; we have an abundance of rain, therefore no need of irrigation.

Ascending the foothills in Southern Humboldt, at an elevation of from 500 to 1000 feet, we leave the coast fog behind and have a bright sun and clear sky all through our long summer. When we get a railroad to unlock our prison doors and open a market for our fruit, Southern Humboldt will become one vast orchard. Here may be seen the grape, peach, plum, prune, apple, pear, quince and all kinds of berries, growing side by side in the same garden without irrigation. There are thousands of acres, now occupied by cattle and sheep, that would be cut up into 40, 60 and 80 acre lots to furnish homes for hundreds of families. Busy hands would soon cut down the worthless brush, and in its stead plant the apricot and all the various fruits just enumerated; and even the orange would not refuse to bless us with its golden fruit.

Many times through our long summer the thermometer reaches, and even exceeds, 100° in the shade; but the evenings are delightful and the nights cool enough to sleep under a pair of blankets.

I have no land to sell. I write this for those who are scorched with the burning sun of Arizona; who are tired and sick of the alkali water of the plains, who are kept poor with buying wood and water—in short, to all who have strong arms and willing hands, all such can find good homes in Humboldt county.

With 10 or 20 acres planted in good fruit, such as the market requires, and the PACIFIC RURAL PRESS as a companion to encourage and instruct you, there is no such word as failure—at least not in my dictionary.

D. L. MILLER.

Camp Grant, Humboldt Co., Cal., July 23, 87.

Sebastopol and Thereabout.

EDITORS PRESS:—Having sojourned for a few days in this neighborhood, a pleasant land of hills and valleys, a few notes may be acceptable.

Just now considerable interest is manifested in a contemplated railroad project, to connect by narrow gauge this place with Petaluma, and thence southerly to McNair's landing on San Pablo bay, near the two small islands called the "Sisters."

I was informed on good authority that McNair Bros. had guaranteed the funds to build the road as soon as the right of way was secured. A meeting to further the enterprise will be held here this afternoon (July 30th).

This locality appears to be especially adapted to fruit-raising, the variety principally cultivated being the peach. The trees now are loaded with the beautiful luscious spheres, affording food and drink, and freely offered with generous hospitality to the stranger within the gates.

The residents hereabout are all enthusiastic in praise of the delightful climate and other advantages they enjoy—beautiful scenery, fertile soil, proximity to market and social privileges, altogether rendering it a very desirable place of residence, the breezes from the Pacific, but a few miles distant, so cooling the atmosphere that the summer temperature is seldom uncomfortably warm.

Driving from Forestville toward Sebastopol, I took a by-road, avoiding the sandy road mainly traveled, passing the pleasantly located places of Baryilla Rey, G. N. Sanborn and Otis Allen, and made a call on an old acquaintance, Capt. C. M. Seammon, who, after many years of plowing the ocean, much of the time in the service of Uncle Sam, in the Revenue Department, has now cast anchor in a delightful haven, where he has found the prize he was in search of—restoration of health—having been advised by his physician, a decade ago, that only by change of residence from the vicinity of the bay could he expect a more than brief continuance of existence.

If piscatory diet and recreation is desired, a lagoon near his residence affords an abundant supply of catfish, which the commissioners stocked the pond with.

I was impressed with the evidences of prosperity exhibited on every hand as I passed along by the comfortable-looking farmhouses and well-cultivated orchards, and substantial spring wagons drawn by the fine horses for which this region is noted.

I enjoyed a brief interview with Mr. Canfield, an old gentleman resident a few miles south of Sebastopol, who informed me that when emigrating to Oregon, in '46 I think, his party was attacked by Indians, and of the 18 men but three escaped massacre. His own wife and five children, and several other women and children of the colony, were taken prisoners and held in captivity about a month, when they were ransomed by the Hudson Bay Company. During that time they were well treated, but required to perform such work as they were able to do, the women being kept employed principally in manufacturing clothing from cloth they had stolen from the party.

Mr. C. is now well advanced in years and living in a pleasant home with the wife of his youth, his companion in all the dangers and enjoyments that have fallen to his lot during an eventful life. But two of the children that accompanied him to this coast survive, and are living in other parts of the country. P.

Sebastopol, Sonoma Co., July 30th.

Tehama County Notes.

EDITORS PRESS:—I see in your last issue, July 30th, a very timely and pertinent article under the head of "The Subscriber's Duty and Privilege." The condition of things that called for the article exists in this Tehama county in a pre-eminent degree. Very frequently do I hear it said that there is very little of interest to the people of the northern part of the State in the PRESS. It is full of Los Angeles, San Diego, Riverside, Santa Barbara, etc., so that a stranger would suppose that these, and a few other places in Southern and the southern part of Central California, were all there is of the State worth mentioning. To this I answer that it is the man of self-assertion that comes to the front. No one can deny that the places mentioned have asserted themselves. Line upon line, line upon line, here a little and there a great deal, has issued for years from the self-assertive dwellers in the lower portion of the State. And what is the result? They have caused it to be known as the land of booms, and attracted and absorbed the seekers after the healthful homes and profitable industries which can be found in any portion of the State.

For our part, in this county, the majority of us are contented to "labor and to wait." Our boom is a silent one. "Speech is silver, silence is golden." The young orchards and vineyards that are just beginning to checker

our brown plains and hills with verdant beauty are speaking in tones that will cross the continent and the oceans, and if our growth be not rapid, it will be healthy, vigorous and lasting.

Traveling on business in the southwestern part of our county, I met with much to interest and encourage. In this section, grain-raising commenced very shortly after its advent on the river-banks, while cattle, hogs and sheep still continue to diversify the interests and occupations of the landholders. From 20 to 30 miles west of the Sacramento river (and west of land of a much lighter and weaker quality, much of which is yet innocent of the plow and pastured by sheep), is a strip of adobe hills with a house and orchard and vineyard in every valley large enough to contain it, with few exceptions, for even here the easy-going and improvident have made it possible for men of thrift and energy to add farm to farm. The orchards are nearly all young, and more thrifty and healthy trees can scarcely be found in the State, even where irrigation has been constantly practiced. The seven-year-old orchard of the Ruff Bros. of Paskenta is proof of the industry, care and intelligence of the owners, and of the capacity of the soil for successful horticulture. The trees, 24 feet apart, all but meet overhead, while the trunks are, many of them, 20 inches in circumference. The vines are equally vigorous, and neither have been assisted by other than celestial irrigation. At the farm of these enterprising brothers, I saw, too, one of the finest four-year-old Percheron stallions that ever received its first inspiration of the air of "La Belle France." Other orchards and vineyards in the same vicinity, notably that of Mr. H. Wakefield, are objects of just pride to the owners and will very soon be sources of great profit also.

RECTUS.

Red Bluff, August 1, 1887.

HORTICULTURE.

The Bamboo in Japan.

EDITORS PRESS:—Having just returned from Japan, where I traversed the length and breadth of Nippon or Japan proper, from Yokohama to Nagasaki, visiting all places where any fruit trees are raised, and making close and careful observations, I am now in a position to give you a full and accurate account of the different varieties of fruit and other trees growing there, as well as to correct some erroneous statements which have lately appeared in print. Allow me to say that in all Japan there does not exist anything like the large nurseries which we are accustomed to see in the United States. This may be owing to the general poverty of the lower classes or their lack of energy—the fact is that the raising and propagation of fruit trees, like all their other industries, is carried on on a small scale, the largest pieces of ground owned by one man not comprising more than a couple of acres, and that but rarely. Our nurseries in Yokohama and Anijo, supervised and controlled by Mr. Louis Boehmer of Yokohama, are the most extensive. Our stock, which is exported annually, is raised there most carefully, and we are thereby enabled to guarantee every tree and plant to be true to the name and description given.

I will endeavor to give you, in a series of articles, the main points of interest regarding Japanese horticulture and agriculture, beginning with

The Bamboo.

Which is one of the most largely cultivated products of Japanese soil. Seeing that it enters into the structure of the houses they live in, of almost all articles of domestic use, and of a great many of their ornamental fabrics, and that it serves to a great extent as food for man and beast, it is no wonder that great care is given to the culture of bamboo.

Of this useful plant, two main classes are to be distinguished—(1.) The Giant bamboo, so called on account of its height. (2.) The smaller or Dwarf varieties. "Ta-ke" or "Da-ke" designates Giant growths; "Chiku," the Dwarf species.

I have said it enters into construction of their houses. The common Japanese house is built of uprights filled in with split bamboo, which again is plastered over with damp clay, which, as soon as it has dried, forms the walls of the house. For this purpose the smaller variety of bamboo is often used.

The pipes leading rain-water along the roof and off into the ground are made of Giant bamboo, several inches in diameter. Their gardens and houses are replete with bamboo articles, trellises, fences, water-pipes, hen-coops, dippers, the inevitable receptacle for tobacco ashes, children's toys, screens for ornament, curtains to windows, shelves—everywhere is the bamboo.

The tender shoots, boiled and prepared like asparagus or artichokes, are not inferior in taste to those vegetables. The leaves are greedily devoured by cattle.

The Moso-dake or Moso-take is the variety which grows largest in girth. I have brought with me a stem which measures at the base 21½ inches in circumference, and, when cut down, was 42 feet in length.

The bamboo requires a deep, loose, mellow soil—old forest mold is very much to be recommended. The plant does not acquire its full size within a year or two after planting—like

most desirable things it is a matter of development. Thus the root of the thickest Giant bamboo planted the first year will produce a shoot only about one inch in diameter.

The second year the shoots will come forth somewhat stouter; and so on until in six to eight years they have attained their full size, from which they will not vary materially afterward. The full height will be attained the second or third year.

The bamboo forests are thinned out every year, and new shoots allowed to come up freely. In planting, whether pot-grown plants or roots are used, the main point is to keep the young plantation from drying out, until once well established, which may depend on the properties of the soil in which they are planted.

Once the bamboo has taken proper hold of the ground—which under favorable circumstances takes from one to two years—it sends its roots so deep in the earth that it does not require any more moisture than our fruit trees.

In the Southern States, where summer rains prevail, it might not need any artificial irrigation; the main point is simply never to allow a bamboo plant to get quite dry until it has a well-established root-system.

In Japan the time for young shoots to come forth is from April to June. Once the bamboo shoot has made up its mind to come forth, nothing will keep it back. In connection with this, let me relate an amusing incident. We were traveling in the southern part of Japan. Mr. Kobe, a friend at whose residence we were stopping, took me to his bamboo grove at 10 o'clock in the morning, and showing me a very strong shoot, which was about one and a half feet above the ground, asked me to mark it carefully with a private mark. With a knife I cut my initials on it. At 4 o'clock P. M. we visited the same spot, and the shoot had grown to a height of nearly six feet. You can imagine my astonishment. I was told that in China criminals used to be put to death by tying them to the ground in a place where a bamboo shoot started to grow, thus impaling the poor wretch.

The uses both of the Giant bamboo and of the smaller varieties, which rise all the way from 4 to 10 feet, are innumerable. It would assuredly be of the greatest service to introduce this plant largely in America. With it, as with all plants not as yet familiar to our horticulturists, a series of intelligently conducted experiments would be advisable. In Japan, bamboo is grown in regular forests. The sight of one of these is magnificent. The high, slender stems, with their rich, leafy crowns, form a spectacle never to be forgotten.

The Dwarf varieties are remarkable for their beauty of stem or foliage. As if to make up for their smallness of stature, the Creator has furnished them with square or curiously twisted stems—black stems, finely variegated stems—or lovely variegated foliage.

[A set of all the varieties of bamboo, both Giant and Dwarf, can be seen at the RURAL PRESS office.]

In my next I will try to give you my impressions and facts on oranges of Japan.

317 Washington St., S. F. H. BERGER.

Sulphuring Fruit.

EDITORS PRESS:—In the *Weekly Bulletin* of July 27th is an article taken from the *Haywards Journal*, written by Judge W. C. Blackwood, in condemnation of the practice of sulphuring apricots and other fruits, which is, I think, misleading, and from my experience in the business of fruit-drying not altogether correct. I have been drying apricots the past ten years; for three years in the sun, after that time in a Plummer dryer—until I discarded it, and made a drier more in accordance with what my experience in the business suggested. My process of sulphuring is this: The fruit is cut and placed on trays, each tray holding from 25 to 30 pounds. My sulphur-boxes hold ten trays each. I seldom put in more than six trays holding altogether, say 150 pounds of green apricots on the floor of the sulphur-box, and about 15 inches below the fruit I have a pan. In the pan is about an inch of earth (for safety); on the dirt is a piece of gunny sack charred. On this I put not over four table-spoonfuls of sulphur, wet it with a little alcohol, so that it will ignite quickly, then close up tight. Twenty minutes or half an hour is long enough to do the work. The trays are then placed in the drier. Now the question is: How much harm, if any, does the four table-spoonfuls of sulphur do the 150 pounds of green fruit? Mr. Blackwood says: "The fumes of the burning sulphur totally destroy the fragrance of the freshly opened fruit, and that the poisonous gas has penetrated its freshly opened pores, and has forever destroyed its flavor." If this is so, the apricots grown in Alameda county are not like those grown in Ventura county, which, by the way, a great many orchardists in these parts claim to be the best grown in the State. As to the gas or fumes of the sulphur penetrating the freshly opened ripe fruit without some force to drive it into the fruit, I don't believe. If it takes from five to six pounds of the green fruit to make one of dried, how much of this injurious gas is driven off in the process of evaporation? Tell me this. And as to fragrance and flavor, I have several tons of dried apricots packed and ready for shipment. If Judge Blackwood's nose is good on a scent, he can readily perceive the fragrance from my apricots 200 feet away.

I have had apricots growing on my place 12

years, and ought to know something about fragrance and flavor, and have yet to learn that sulphuring detracts one iota from original flavor.

The question, how much sulphurous acid remains with the fruit, can easily be ascertained, I presume, by an analysis of the fruit. I think the RURAL PRESS would be doing a good thing by exposing the sulphur-bleaching process, if there is, as some claim, death in it.

I would have it understood that it costs money to put up a fruit-drier. There has been this season an immense quantity of apricots dried in the sun, and if you, Mr. Editor, have ever watched that operation (as done by the average man), fruit spread out here, there, and everywhere, in places clean and unclean, covered with insects day and night, seeking "fragrance and flavor," depositing eggs to be hatched out in the near future—do you wonder at the cry raised against evaporated bleached fruit, when so much of the unclean stuff has to be worked off? I do not mean to say that all the sun-dried fruit is of this character, but I will wager my last cent that 90 per cent of it is doubtful. I do not think Judge Blackwood's article is written to help the sale of sun-dried apricots, but I do think it will be used as a lever to boost the open-air fruit.

J. HOBART.

Ojai, Ventura Co.

[Mr. Hobart sends a sample of his fruit, and it is very handsome, and has fruity fragrance and flavor. We should say it was sulphured very skillfully. As for Judge Blackwood's motive in writing against sulphuring, the writer is correct, that his position is not dictated by private interest, but from his conception of the widest public interest. Judge Blackwood sulphurs his fruit because the market requires it; at the same time he thinks public taste should be taught not to require it.—EDS. PRESS.]

GRAPE-GROWERS' MEETING.—A regular meeting of the Grape-growers' and Wine-makers' Association of California will be held at the Grand hotel, San Francisco, on Tuesday, the 16th day of August, 1887, at 11 o'clock A. M. —E. H. RIXFORD, Secretary.

FLORICULTURE.

Window Gardening.

EDITORS PRESS:—There are a plenty of Marthas in this world burdened with many cares, to whom the luxury of an out-of-door garden is impossible because of lack of time, maybe, or worse still, because they are cooped up in a few little rooms, where their front yard is the street and their back yard a miserable little boarded square dark and damp.

To such, and to the helpless invalid who sits day after day pining for sunshine and greenery, the miniature garden in the window is an untold luxury.

Of course it is like anything else, and can be made, like an out-of-door garden, a source of much work, trouble and expense, or, on the other hand, by judicious selection and the exercise of intelligence, the constant source of pleasure, and with comparatively a small amount of work or money.

Causes of Failure.

There are many who, being wealthy and able to indulge their whims, buy costly flower-stands as they buy pictures and furniture, because they think them necessary to general effect. Having procured the stand, they proceed to a florist's establishment and buy delicate ferns and begonias, never stopping to think as to whether they know anything about the care necessary to make such plants flourish. As a consequence, the plants, always tender, being changed from a hot-house to the ordinary temperature of a living-room, and, in all probability, left after a few days to the tender mercies of a Chinaman or hired girl who soaks and dries them alternately as she remembers or forgets them, drop their leaves, refuse to bloom, and instead of being a thing of beauty turn to sprigging, sickly stalks, and are thrown out in disgust by the owner, who wonders that her plants never do well.

Care.

Any one who truly loves plants will make them grow, just as any one who loves children will make them happy and do just the right thing for them, and there are many who grow tender and delicate plants in their window gardens and grow them to perfection, but it takes time and attention. One lady, whose window was a glory of ferns, begonias, gloxinias and calceolarias, told me it took her an hour or two every morning watering, training, picking off dead leaves and doing the manifold little things one finds to do where one's heart is in it.

The main thing any of these plants need is judicious watering, occasional pinching or trimming back and repotting once in awhile (say every six months, if they are vigorous), giving them each time pots just a trifle larger than the previous ones, not crowding the roots and yet not giving them too much room, as they bloom better when very slightly cramped.

Soil.

A good soil for house plants is made by taking one-third old, well-rotted manure, one-

third sand and one-third rich black loam or leaf mold, rather coarse and light in texture, from the woods. This last it is not always possible to obtain, especially for those living in cities, in which case common soil has to do, and does do very well in conjunction with the manure and sand. This mixture, especially where leaf mold is to be had, never packs, but is always soft and easily stirred—a very desirable quality where house plants are concerned, for any one who has kept them knows how tightly the soil will sometimes pack around their stems, rendering the task of loosening it almost impossible without disturbing the roots.

Watering.

The main trouble in their care, however, is generally in the method of watering. Either so little water is given that the earth cakes and the plant fairly dries out or else it is kept in a dripping state continually, rotting the roots and killing it. Sometimes, too, the water is administered in a sort of ague, so to speak; something on the principle by which the man fattened his pigs with a streak of fat and a streak of lean alternately, giving them all they could eat one week and nothing at all the next. One who is used to the feeling of the pots can tell by their weight whether they are moist enough. Err on the side of dryness rather than wet, and try never to have the soil soggy. Of course, where plants sit in the hot sun they take much more water than those in the shade; but even then one is very apt to be deceived by the dry surface into putting on more water when the bottom of the pot is filled with ooze.

Do not be deceived, either, by the water running from the bottom of a dry pot. If the soil is hard, when it gets very dry instead of soaking in, the water runs down, around the dry earth, and out at the bottom, never wetting the plant at all. If you have been so unfortunate as to dry them badly you had best immerse the pots in water for a half hour and allow them to soak, after that watering sparingly for a few days.

All pots should have a good drainage. Some who ought to know fill the pot a third full with broken bits of pottery and coarse pebbles; I prefer bits of charcoal, however.

Signs of Disease.

If your plants drop their leaves and turn yellow, look closely for the cause. See if they are too wet or too dry; if not, examine for insects. The mealy bug may be exterminated by a drop of alcohol, the red spider generally by a good wetting down, and where plants are in pots this can easily be done by putting them bodily into water and fairly drowning the pests out, while it will not hurt the plants. Blight may generally be corrected by dusting with sulphur, stirring the soil or repotting, and giving more sun. I have never seen the little white worms which sometimes infest the earth around potted plants except in soggy soil. I find that where the soil is reasonably dry I do not have them.

If the trouble seems to be weakness of root and "general debility," so to speak, try soot tea, made from wood soot, the cold tea from the table, or very weak ammonia water. These act as fertilizers and are delicate and strengthening.

Do not allow your plants to grow up tall and stinky. Clip the ends to encourage new shoots, even if it does go to your heart to destroy a month's growth. You will be repaid for it by the amount of new leaves and blossoms you will receive, for, giving a new impetus to the plant by forcing back the sap, it brings blossoms in abundance, as they come on the new shoots.

Hanging Baskets

Are the hardest to make grow, as well as one of the most beautiful attributes to the window garden. They need plenty of water, and when it is put on in the regular way, in order to prevent a dripping overflow on the carpet, they are stinted in quantity. Once in two or three days take them off their hook and immerse them completely in water; let them soak there a few minutes and hang them to drain. When their dripping stops, they may be hung up in their places bright and fresh, their dusty foliage clean—truly a thing of beauty. I have kept, in this way, large baskets continually fresh for months.

Choice of Plants.

Smilax will generally do well with good soil and a little sun. It will, however, need a rest once in awhile, and you must not be disappointed if, after a time, your vigorous potful which came but a few weeks before from the florist's, lovely and green, turns yellow and drops its leaves. It is merely getting tired and needs a rest; take your scissors and clip it close and rest it, without much water or sun for a week or two; then give it care and water and it will shoot up fresh and new.

So much for the general care of plants for the window. As to the varieties of suitable house plants for a handsome stand, I shall not attempt to take up the subject, for any one who has time to devote to them and a little money to spend can go to a florist's and in 20 minutes select any amount of lovely plants for such uses, and far more to her taste than any I could suggest.

There are many, however, who cannot, as I said in the beginning, do this, and to them I would make a few suggestions. If then you want these little pleasure-bringers with the least possible work attached, select common flowering plants, such as we have in our gardens, and be content with them. If you can-

not afford to buy them, get slips of what you can, and root them. If you can spend a dollar or so, select sturdy, growing, constantly blooming plants, which require small care and pay well for all that is given them in lovely blossoms. Fuchsias and heliotropes kept well clipped, furnish a constant series of bright blooms, as do pelargoniums, whose variety and range of color is legion. Verbenas, too, are flowers which are loaded with blossoms the year round, and need little water or care.

English ivy grows well in water, and a well-grown plant in a vase looks beautifully with its dark sprays against a white wall.

Hyacinths, too, grow readily in the same way if the bulb is kept in a bulb-glass, and by a little care in keeping a stock in reserve, putting them into the water a week apart, one may have a constant array of these fragrant and delicious blooms for weeks.

Shell Baskets.

Novel and pretty hanging baskets may be easily made from coconut shells by sawing off the top and rubbing and smoothing down the shell. Bore three holes at equal distances near the rim and insert common wire to hang it by, or what is better still, gilt picture wire, leaving the hangers about two feet long.

The only difficulty about using these baskets is their non-porous character, and the fact that they have no outlet for surplus water. I presume they would be benefited by a small hole in the bottom for drainage, but I have kept three or four of them perfect balls of green for months by careful watering.

Use for such baskets verbenas, iceplants, blue lobelia, the small flowering blue and white periwinkle. Any of these look pretty and need little care. Do not attempt to grow the regulation house plants unless you can give them care. Almost any common plants well grown and healthy make a lovely showing and give constant pleasure, and 'tis far wiser to have these in good condition than a sickly lot of ferns and begonias.

FRANCES M. PAYSON.

N. Temescal.

THE STOCK YARD.

Facts Connected With Breeding.

EDITORS PRESS:—All men who have had much practical experience in the breeding of cattle will admit that it is a most intricate subject. "Like does not always produce like." The Suffolk cattle for many years have existed as a breed *without horns*, and yet occasionally one is born with a horn. A thoroughbred mare was taken to India and there was covered by quagga, conception took place, and for several years subsequently she was put to thoroughbred stallions, and each colt was marked with quagga stripes. Surely there are few things that show man's supremacy more than his ability to mold animal forms, adapting them to his special use, the speed of the race-horse, the intelligence of the dog and the size and function of the udder of the cow being evidences. To my mind it is very interesting to notice how, in heredity, habits are transmitted. The shepherd dog, in his first lesson at herding sheep, shows a tendency to run round rather than at them. Pointers and setters early indicate that these characteristic traits are hereditary.

It is thought by some naturalists that mules might be bred from if proper means were adopted. When Nature herself unites two dissimilar animals, by gradual steps, procreation is possible. Monstrosities are produced by some injury to the fetus in the womb. Natural laws are by this fact shown to go on by purely mechanical and definite forces. Cows occasionally twist the uterus, when impregnated, by falling into a ditch or dyke. It has happened that the fetus has been found in the abdomen, accompanied with uterine pains, although, of course, there was nothing to expel. All malformations, such as spavins, ring-bones, curbs, splints, etc., are transmitted. Vice and bad temper also go from sire to offspring.

This is the best point to grapple with disease, particularly lameness. Unite only hardy and healthy animals and you will get less crippled horses. Very frequently I see, and have seen, colts at grass, before their heads have ever been through a collar, with curbs, splints, ring-bones, etc. Horses are worked too young—before their bones have "set;" in reality they are put to hard work before the bones have united; they are little more than gristle or cartilage. Mares in foal and with foal by side should be well nourished, and not overworked. Care should be taken not to keep the young animal too long away from its mother, because when they meet the foal is very liable to take milk into his stomach in such a quantity as to overload that organ, thereby producing diarrhea and emaciation. Wean at fifth or sixth month. If through mal-nutrition a colt once "stunts" or stops in growth, he never thoroughly recovers. Castration at two years of age, he has then nicely developed at neck and fore quarters, and the risk at that time is very little, if any, more than at one year.

ROBERT J. DAWSON,

225 Geary St., S. F. Veterinary Surgeon.

WOODEN SPOONS.—Russia makes annually 126,000,000 wooden spoons for the Central Asia market. The common grades are made from birch and poplar and the best qualities from boxwood.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Titles and Taxes—No. 2.

[Written for the RURAL PRESS by J. W. M.]

Please let me take it for granted that the land is by nature the entailed inheritance of every one born on the earth, and that this birthright can neither be sold, bartered, taken nor given away. Granting the premises, will it not be clear that the great mass of mankind have been disinherited? Will it be right for them to remain so? For it will be equally clear that the greater part of the habitable surface of the earth is held unjustly. But it will be as clear that the disinherited cannot be restored to their rights without revolutionizing society in every department, including government itself, and violently disturbing legally acquired rights and titles, sanctioned by custom and consent of society.

But because evil has so interwoven itself with the woof and warp of society that society's integral form would be almost destroyed if evil were removed, does that deter us from trying to get rid of it? Because of the suffering and loss of some, shall we perpetuate a system of injustice whose outcome is the daily increase of poverty and crime? Shall vested interests prevent us from laboring against intemperance, war, and every other form of evil? Shall we cancel "Thy Kingdom Come" from the Lord's prayer because the millennium would seriously affect all kinds of vested interests?

If justice be right, it will be right for every one to possess all his natural rights, let the consequences be what they may. Are the vested interests in land more sacred than were the vested interests in human chattels before 1861? Yet a few strokes of a pen destroyed at once at least \$1,000,000,000 of property. That loss now in 1887 is not felt. It is asserted that the South, individually and collectively, has been enriched by it. No doubt many cases of suffering and loss may be recalled, incurred by the slave as well as by the slaveholder, and no doubt if all private property in land was declared invalid, much suffering and loss might ensue in peculiar cases. Nevertheless let justice be done.

Even now we do not hesitate to evict those who are holding land without sufficient legal title when the legal owner calls for it. The history of land tillers in California, with especial reference to Mexican grants, reveals many sad instances in which innocent and honest purchasers of land, which they converted from sterile wastes into beautiful homes and productive farms, have been evicted by an adverse legal decision without any compensation—not even when suffering, poverty, disease and death have been the consequences. For if the Government stepped beyond its functions of making and executing laws to assist the unfortunate victim of ignorance or fraud, that would make it a paternal government, which is said to be a very bad thing indeed, to be avoided at all hazards.

To return the lands to their rightful owners, the people, would be only a simple act of justice. To compensate those who had invested in those lands would be a generous, perhaps a commendable, act on the part of the people, but one not incumbent upon them by the principles of either equity or precedent.

There would not follow one solitary eviction—no reduction to starvation and extreme poverty—only those occupying more land than they could use, or holding without occupying, would know that any change had taken place. Whereas, thousands, possibly millions, would be relieved from the presence of that gaunt specter, want, which prospectively haunts the workingman from the moment he has commenced to make a home for himself, if no nearer acquaintance is actually made. A home would then be open for all. But all neither could nor would seek a home in the country. Professional men would still be needed; all the crafts, arts and trades would remain in demand. Possibly there might not be so much need of breweries and distilleries and other questionable pursuits, for intemperance and crime belong mostly to the extremely poor and the extremely rich, the dangerous classes of society, which we desire to eliminate. Cities, towns and villages would remain, and their inhabitants would retain their inalienable right to the land and their share of the rents, or by whatever name the income from the land might be called. But this would not place the burden of the expense of the State on the farmer, for cities are usually built on land where a front foot is often worth more than a farm. Nor need the only income be from the land, for the income from the land should not be determined by the needs of the Government, but by value to the occupier of the land. If this be not sufficient, then the people should be taxed as determined by the people themselves.

This condition of affairs is objected to as placing too much power in a Government already too strong and corrupt. The Government is already too strong and too corrupt, which strength and corruption looks likely to be perpetuated, being the shuttlecock between the battledores of parties without principles till the party in power is really the Govern-

ment. The success of the land movement will necessitate radical changes in the Government, where checks upon central power, as well as upon individual lawlessness, will preserve order and honesty everywhere—a balancing of the centripetal and centrifugal forces.

The land question is only one of the stalls of the Augean stable, but I think it is the first and most important, and necessitates the cleaning of all the rest. Finance, labor, the liquor conundrum, and scores of questions are shouting in our ears every day and all day. The end, in my opinion, will be the State resolving itself into a co-operative industry, the laws being as dogmatic and arbitrary as the decalogue, and as just and simple as the Golden Rule.

Tulare, Aug. 8, 1887.

Temescal Grange.

At the meeting on Saturday last, a circular from Commissioner of Agriculture Colman was read, asking an expression of the Grange with respect to forestry matters, and an interesting discussion followed.

In regard to planting forest trees around colleges, Brother Kelsey cited the fact that at the opening of the University at Berkeley, trees in almost endless variety were planted over nearly the whole tract. As they grew up, it became evident that the planting had been done with little discrimination, and after all the outlay for growing the trees, the authorities are now going to great expense in having many of them cut down and the roots grubbed out, in order to have more cleared grounds about the buildings. Considerable expense is also being incurred in leveling the surface of the ground in portions of the tract. Brother Kelsey expressed his belief that a more level situation, where less grading was necessary, would be desirable for such institutions generally.

Brother Renwick thought the planting of trees around schools and colleges was a good idea, where their growth could be observed and practical observations made by students and instructors; but there should be plenty of space around the buildings to admit an abundance of sunshine, especially in the Alameda county climate.

It was remarked that considerable attention would have to be paid to keeping the ground beneath the trees clean, and pains taken to avoid more moisture than would be healthful.

As to forest culture in Alameda county, it was conceded that a mistake had been made in planting eucalyptus trees, which have proved to be worthless for railroad ties, telegraph poles and other manufacturing purposes. Had the right kind of trees been planted, no doubt the undertaking would have proved profitable.

Sister Babcock called attention to the fact that eucalyptus trees cut late in the fall and reduced to fine stove-wood, burned too freely and were not at all satisfactory nor economical, while the same variety, cut early in the spring in large pieces, was considered exceedingly good fuel. Brother Renwick had also found it very good fuel and had only one fault to find with it—that of gumming and glazing the stovepipe.

The proposed amendment to the State Grange Constitution, giving Pomona Granges the same rights of representation as Subordinate Granges, was discussed, together with the propriety of adopting the same, but no action was taken on the subject.

Miss Nellie Webster has been requested to entertain the Grange with a recitation at a future meeting.

An interesting article was read by the Worthy Lecturer. It is hoped that there will be a full attendance at the next meeting, Aug. 20th, when work is expected in the First and Second Degrees.

The Debris Evil.

A dispatch to the California Associated Press states that a party consisting of Hon. Marion Biggs, Hon. C. P. Berry, Hon. George Ohleyer, Judge J. H. Craddock and Mayor Greely of Marysville, arrived at Nicolaus by steamer on Tuesday evening, having come to inspect the Feather. They expressed themselves as astonished at the condition of the river, which is full of sand-bars, with places containing only 22 inches of water.

Mayor Greely, at whose instance the trip was made, said that no affidavits could have given him the knowledge he has gained by a personal inspection of the damage done by the mining debris.

Congressman Biggs, upon his return from a visit to the confluence of the Feather and Sacramento rivers with a number of prominent citizens, said that he had found the condition of the Feather river worse than he had supposed. At the mouth of the Feather, the depth of water, as ascertained by sounding on the trip, was only two to three feet, while a little further up the Sacramento there was clear water and a depth of 21 feet.

He believes that the navigation of the Feather is seriously endangered by the continuance of the flow of the debris. He wishes it distinctly understood that, while disposed to help mining all he possibly can, he can never consent to any injury to the streams of the State. His object has been to ascertain if the debris evil can be remedied in any manner satisfactory to hydraulic miners and the State and nation, but says that he has been unable to find any solution.

The Worthy Master Away from Home.

[NUMBER 5.]

[Written for the RURAL PRESS by Mrs. W. JOHNSTON.]

Our party received an invitation to breakfast with the King at his home, the Iolani palace, on June 13th, which we accepted and thoroughly appreciated. The hour set was 9 o'clock, and the guests were very prompt in their arrival.

This royal breakfast was indeed royal in every sense of the word. The moment the massive sliding doors were thrown open and breakfast announced by the King's chamberlain, the band, which was stationed within the palace grounds, struck up a brilliant march, and thus we were ushered into the dining-room.

The table was a marvel of beauty with its fruits and flowers. At each plate was laid a bill of fare and a beautifully decorated card bearing a golden crown and the name of the party to occupy the chair placed immediately in front. This card, together with the bill of fare, the guests were expected to carry away with them as a souvenir of the grand occasion. In disposing us at the table, husbands and wives were in no instance seated together. The stiff, strange feeling that had manifested itself now made a hasty retreat, and conversation flowed as freely and easily as if all were in the habit of dining with royalty.

The courses, 12 in number, were served in a dainty and most appetizing manner. The band entertained us all through the meal by rendering American and Hawaiian airs in their usual charming style.

After spending three good hours in talking and eating, especially the latter, we strolled out for a few moments upon the veranda, where we found comfortable seats provided. Presently the King rose to his feet and the guests were requested to do likewise and remain standing in silence while the band played one of Hawaii's favorite airs, after which the King bade each a cordial "good-morning" and retired, and we wended our way to our respective rooms.

That afternoon some of the party set out for Kilauea, the active volcano, after which they were to visit Haleakala, the greatest extinct volcano on the islands. The next day the remainder of the company, with the exception of a few feeble women and children, also, started to visit the volcanoes, going to Haleakala first, so that they would not meet the first division at any point, as the hotel accommodations were quite limited.

I was not strong enough to undertake this wearisome journey, so remained at the hotel in Honolulu with others in a similar condition. During the two weeks that the sight-seers were absent, we improved the time in riding and walking over Honolulu, and learning the ways of the strange people among whom we were visiting. Meanwhile an American man-of-war sailed into port and we hailed it with true delight, as the mutterings of the gathering political storm were fast sounding in our ears. Shut off from the rest of the world on this lonely island, with no telegraph to tell of what is going on, you feel very much as if you were in prison or buried alive. It is not strange that people love to gossip, it is perfectly natural.

After the return of the wanderers we were invited to visit the U. S. man-of-war. To some of us this was a great curiosity, as it was our first sight of such a thing. Aboard of the ship were 160 men. Capt. Kempff and the other officers took great pains to show us over the vessel, which was scrupulously neat and clean throughout. The men do their own work in the way of making their clothing, etc. They have half a dozen sewing machines on board. We were conducted through the culinary department and shown the many conveniences for cooking for the men as well as for the higher officers.

The large guns were monsters—death-dealing giants they must be in time of war. The smallest of them weighed 9167 pounds. The wonderful Gatling gun occupied a prominent place, and the ladies were invited to try their skill in firing it. It looked like child's play to turn the crank of this seeming toy, which has the ability to fire 500 shots a minute. We lingered and gazed at these wonderful sights until the old, old saying came into my mind—"Visitors should not make their visits too long." At last we took our departure, feeling as if we were leaving home and its protecting arms.

(To be Continued.)

Resolutions of Respect.

EDITORS PRESS:—The following resolutions of respect and sympathy were unanimously adopted at the last regular meeting, August 6, 1887, of Danville Grange, P. of H., No. 85.

M. S. HOWARD, Secretary.

Danville, Aug. 8, 1887.

In Memoriam.

To the Danville Grange:

Your committee, to whom was assigned the preparation of a tribute to the memory of a departed sister of the Order, beg leave to report as follows:

WHEREAS, Death has removed forever from our social Grange gathering, Sister Ada E. Flournoy; therefore be it

Resolved, That this Grange recognized in Miss Flournoy a sister of fine attainments, a sincere and true type of womanhood in every relation of life, and deploring the absence, henceforth, of her cheerful and elevating presence at our meetings.

Resolved, That the sympathies of the members of this Grange are hereby tendered the bereaved fam-

ily, which, a second time within less than a year, has been called upon by the inexorable destroyer to part with a beloved member of its home circle.

Resolved, That this memorial of Sister Flournoy be spread upon the minutes of this Grange, and that a copy thereof be sent to her family, and to the California Patron, RURAL PRESS, and Contra Costa Gazette, for publication.

D. N. SHERBURNE,
MRS. C. E. HOWARD,
CHAS. WOOD,
Committee.

Grange Work and Progress.

[Prepared Weekly by M. WHITEHEAD, National Lecturer.]

The Grange was organized for the intellectual, social and financial improvement of the farmer and his family, to place his occupation where God Himself placed it in the beginning—the first and most honored of all callings. It seeks not to build up agriculture at the expense of any other class, but it would give the farmer an equal chance in all things. "A fair field and no favor." "Justly distributed burdens and justly distributed power." Equal laws, equal taxes, no discriminations of any kind. As educated by the Grange, the coming farmer will be a recognized power in every sphere of usefulness. Commerce will give him the credit which is due him. Politics will take shape from his judgment and will. Society will confess his worth and acknowledge his title to nobility—at least the only nobility that can exist in a republic. Then will our farm-homes become, what under our free institutions they should be, the very strongholds of the land. Then the boys and girls of the farms will not hasten to turn from the hills and dales and streams of their country homes and seek the great cities, where too often they fall into vice and are lost forever to earth and heaven. For the good of our country and the good of humanity, may the time be not far distant that shall greet the coming farmer such as the Grange would make him.

"THE secretary of the Cayuga County (N. Y.) Farmers' Club suggests the formation of an association for farmers' wives. Why not? Surely the labor of the farmer's wife is as important as that of her husband. If the work of the farmer can be improved and dignified by association and combination, surely that of the wife can be dignified and improved by the same methods." We would ask: Why not carry the idea a little farther, and say that the best association would be that which would place the farmer and his wife on equal terms? Their interests are mutual, identical, one with the other. What benefits one benefits both. The knowledge gained is, or should be, reciprocal. Any one who has attended a good Grange meeting will not ask that a special association be formed for farmers' wives. It will readily be seen that the Grange is an association for farmers and their wives—yes, and for all the family over 14 years of age. We say, build up the Grange; don't form separate associations for farmers' wives and farmers' children. Nothing is more unnatural than to separate the family in this way. Bring them together; teach them to "pool their issues," and reap the full benefits of combination.—Rural Vermont.

THROUGH a close, compact, intelligent organization, a revolution has commenced—slow it may be, yet it will be sure, healthy and just. The American farmer realizes now that agriculture must be lifted up to the place where it properly belongs; that he has interests to be promoted and rights to be protected; that his calling must be raised to the rank of recognized power. Let us be patriots and philanthropists, and spurn all sectional tendencies. Let us strive in our Order, as of one mind, to hand down to future generations this republican form of government united and unimpaired. And so long as we shall live, may we never falter in the conflict for the prosperity of our organization and for the good of toiling humanity.—S. E. Adams, Minn., P. M. National Grange.

SPEAKING of speculating wretches, in the year 1788, George Washington said: "I would to God that some one of the more atrocious in each State was hung upon a gallows five times as high as the one prepared for Haman. No punishment, in my opinion, is too severe for the man who can build his greatness upon his country's ruin."

THE existence of the Grange is not ephemeral. It has elements of permanency, and if the members were all fully aware of its benefits, they would not hesitate to advocate and sustain its claims over and above any other earthly organization.

EDUCATION and co-operation, the twins that must go hand in hand in advancing the cause of the Grange and human progress, are one and inseparable. Either alone, without the other, will never help to attain the highest rank in our calling.

PROGRESS.—A new Grange in Alabama.

DURING the last year Missouri has reorganized 40 Granges. Maine has reorganized and organized about the same number. Nearly all States show a revival of the Order. The principles are better understood and practiced to a great extent. Farmers can accomplish the same for themselves that other callings accomplish if they co-operate. If they fail it is their own fault.—Nickerson Kansas Argosy.

MCLARY GRANGE of Epsom, N. H., has just purchased a library and opened it to its members.

AT the last meeting of the Newton and Jasper District Pomona Grange, Texas, a committee was appointed to report a plan upon which to establish a high school in the bounds of the District Grange upon the co-operative plan.

LECTURER HAYES of Oregon gives cheering news of the progress of the Order since the meeting of the State Grange. He is almost constantly in the field. Franklin Grange was reorganized lately with 21 members.

"Words are the daughters of earth, But deeds are the sons of heaven."

SAN JOSE GRANGE, at a well-attended meeting July 30th, discussed horse-training and listened to remarks by Fruit-Pest Inspector Klee.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

DRYING FRUIT BY COLD-AIR BLAST.—Haywards Journal: In H. Smyth's shop, at San Lorenzo, directly back of the blacksmith department, is a room that Henry Dopman has been utilizing for drying fruit on the cold-air blast principle. The cold blast comes from the blower that supplies the "wind" for the blacksmith department, a connection being made with the pipe. In this shed is an iron frame formerly used for heating mold-bands. The cold air is conducted into this apparatus, and can be easily regulated. Inside of this frame Henry places the fruit, on the bottom being a sort of screen. The action of the cold air on the fruit is soon noticed, and on inspecting it in the course of four or five hours one is astonished, as the fruit is dried. Henry has samples of prunes, apricots and apples dried by this process nine years ago, and still in good condition. This process was originated in Delaware and has proven a success in every particular. Henry informs us that hot air is as good in drying as cold air.

Butte.

WILL GO DEEP FOR WATER.—Marysville Appeal, Aug. 5: A great undertaking in the way of boring an artesian well will be commenced by N. D. Coombs on his ranch south-east of Moore's Station at the completion of the harvest. He has made preparations to go down 1500 feet, if necessary. The land in the section mentioned is good for sheep-grazing during a considerable portion of the summer, but with a supply of water the year round the farmers say that they can make the land produce anything. Mr. Coombs thinks that the water can be obtained between 800 and 1200 feet, but he calculates to go 1500 feet before becoming in any way discouraged. This will be the first artesian well in that section of the country, but should it prove successful others will at once bore for a flow. Excepting the wells of the city water works there have been but two artesian wells bored in this county; one by W. F. Lavy, four years ago, when he struck water at a depth of 30 feet that flows the greater portion of the year, and another on Mr. Ebbett's ranch, in Plumas district, which was bored to a depth of over 200 feet in 1864.

CASTOR BEANS.—Gridley Herald: Henry Robbins recently planted 20 acres of his land in castor beans. The season has been very unfavorable, not a drop of moisture having fallen since the plants came up. July 15th he made his first picking, getting 270 pounds of beans; the second picking, July 25th, 296 pounds was the yield; the third time he got 330 pounds. From present indications, he will be obliged to pick the crop every seven days until frost comes. It will be seen that the yield for July was 896 pounds. No trouble is experienced selling the beans at four cents per pound, and there is always a demand for them. Taking the July yield as a basis—with only three pickings made—it is safe to estimate that the yield will aggregate closely to 1200 pounds per month. As the season for picking will not expire until December, the total yield for the year is likely to aggregate 5500 pounds—equivalent to \$220, or \$11 per acre. This beats wheat-raising, so far as profit is concerned, as the crop pays out well the first year, better the second, but should be replanted the third. Mr. Robbins is so well satisfied with the result obtained that he intends planting a tract of 60 acres next season on a better quality of land.

Colusa.

GRAIN BEYOND MEASURE.—Colusa Herald, Aug. 5: The wheat crop of Grand Island is the largest known for years. Heading is yet unfinished, and hundreds of stacks of grain are yet to be thrashed. There are seven thrashing crews in that vicinity. Thousands of acres which produced not a spear of grain last season were covered thick with waving grain this year. The warehouses are jammed and the yards also. One yard just north of Grimes was enlarged twice to accommodate the immense quantities of wheat, and lumber is on the ground for another large yard, the crop being only about half hauled in.

Fresno.

EDITORS PRESS:—The fruit industry at present commands obedience from all its followers. The 'cots have been gathered, cured and stored, and now the luscious peaches are claiming attention. An under-estimate is in store for the orchardist, and the lye-process of peeling enables the grower to care for and cure more of his own fruit, and secure the highest prices for himself. The fruit-pack within a radius of six miles from Fresno will be simply immense, considering the age of the trees. On W. M. Williams' ranch of four years' growth, three miles east of Fresno, they have a force of 60 men, employed picking, lyeing, sulphuring, and placing out on trays to sun-dry. The peaches are Early Crawford. Many smaller orchards are being cared for, with the aid of all the family, and tons of dried fruits will repay them for their season of labor. Those who successfully battled against the scale, with the less expensive and more effectual remedy of sulphur, lime and salt, have triumphed over the enemy and saved their fruit; while some others, before knowing of this remedy, dug out their scale-infested trees, but will replant the

coming winter. We note, with pleasure, the different experiments made by experts in attempting to conquer the destructive orchard pests. We hope they will persevere and finally succeed with their tented scale vapor bath, and rub them down with Turkish-towel treatment. If they certainly get the "fluting" and ruffling all done, and keep the cost within the reach of those of limited means, they will receive the benediction of the less favored. Active preparation for handling the surplus grape crop, in making extra trays, sweat-boxes, etc., is consuming all spare time. Already agents are busy securing the coming crop at an advance over last year's prices, and altogether the outlook this year is favorable for the vineyardist and orchardist, as well as the grain-grower.—A. L. A., *Temperance*, Aug. 2d.

AN ITEM FOR HENRY GEORGE.—*Republican*, Aug. 5: The other day a Mr. Gower of Stockton came to Fresno to see about the crop on a half section of land near Fowler, of which he is the owner. The land was planted to wheat by a tenant, and when the thrashing was done and the grain sold to Messrs. Noble & Thompson, the Stockton man found that his share of the crop, for the rental, amounted to over \$1250. As he pocketed the coin he remarked to the buyers: "That's more money than I paid for the land."

RAISIN TRAYS IN DEMAND.—There is a strong probability of there being a shortage in tray material, packing-boxes, etc., to handle the immense raisin crop this season. The Toll house box factory has taken contracts for its full capacity. The Madera Flume and Trading Co. is compelled to shut off on the manufacture of trays on account of the large contracts. The Truckee Lumber Company is not manufacturing trays this season, and as matters now stand it seems impossible to get orders filled. However, our vineyardists can utilize the large supply of "shakes" which are manufactured in this county every season, and make a very fair substitute for the sawed lumber for trays.

Humboldt.

A SAMPLE OF OATS.—The *Standard* has invited farmers, fruit-growers, gardeners and other producers to send for exhibition and mention samples of what can be done in Humboldt county. The first response comes from J. F. Quill of Table Bluff. The specimen sent is a bunch of oats, seven feet nine inches high, grown on Mr. Quill's farm. The stalks are not unusually large, considering their length, and show a luxuriant growth of grain.

Lassen.

GOOD CROPS.—*Susanville Mail*, Aug. 3: Harvesting is progressing rapidly in this county. The hay crop is large, but not up to an average. There is a large acreage sown to grain. The crop will be of good quality. Samples of wheat shown us would rank as No. 1 milling in the San Francisco market. Ike Stewart has just put up 200 tons of hay. He has 75 or 80 acres in oats and barley. Thirty bushels of wheat to the acre will be cut in this neighborhood. Dave Johnston will cut 100 tons of hay and about 800 bushels barley and oats.

Los Angeles.

LOADS OF WALNUTS.—*Anaheim Gazette*, Aug. 4: In every direction the walnut groves are doing grandly. Careful observation now enables us to venture the opinion that the nut crop will be greater this season than it has been in any previous year. Trees everywhere, even the less thrifty, are loaded with nuts. On Mr. Langenberger's place a tree may be seen with one of its branches torn from the trunk and drooping to the ground, its load being too great for its strength to sustain. The people hereabout are now commencing to prop up the overloaded branches. This year larger clusters appear than we ever before noticed.

Merced.

HARES AS HOG-FEED.—*Merced Express*: The rabbit pest has got so bad on the Miller & Lux farm, on the west side, that the firm employ hunters to do nothing else but hunt them down. Over 7000 have been killed this season, and "the good work still goes on." Hunters are refurnished horses, wagons and ammunition, and are paid five cents for every one they bring in dead. After being counted, the rabbits are thrown into an immense vat, a certain amount of grain is added, and then the entire mess is boiled, after which it is fed to the hogs.

Monterey.

ARTESIAN WATER.—*San Miguel Messenger*: Pinkerton & Jackson, who lately commenced drilling for artesian water on their ranch at Pleyto, struck the object of their search last Monday, at the depth of only 130 feet. The flow is strong and rises four feet above the surface of the ground. They have started a second well about two miles north of the first, and will probably drill others. This is the first effort, to our knowledge, that has been made to obtain artesian water in the upper Salinas valley, and the importance of the result can hardly be overestimated.

Nevada.

FOOTHILL ORANGES.—*Grass Valley Tidings*: The orange trees at French Corral are bearing heavily this year, we are informed by Mrs. W. W. Nelson, who has lately been on a visit to that place. French Corral is 1300 feet above the sea level, and its latitude is about 39 degrees north. It will be recollected that last spring the frosts were unusually heavy and very late, but French Corral's orange crop does not fail.

Plumas.

A MOUNTAIN RANCH.—*Oroville Register*: A. Robinson, two miles from Meadow Valley, has his home on the slope of Spanish peak, at an elevation of 4500 feet. The heavy fir timber has been cut down and the finest timothy, clover and alfalfa is grown—nine feet of snow not harming the latter. Corn, potatoes, cabbage, beets, onions, lettuce, beans, cucumbers, squash, and even watermelons are growing on his place. We never saw finer strawberries, currants, raspberries and blackberries than he had this year, while the apple, pear, cherry and plum all do splendidly, except during an occasional year there is some damage by frost. The cold is less by 20° than in the valleys 1500 feet lower down.

INDIAN VALLEY is one of the richest little valleys in the State. It comprises but 15,000 acres of land, yet it supports nearly 60 farmers and their families, produces not less than 6000 tons of hay; affords feed for 1000 dairy cows, a large number of horses, hogs and sheep; turns out tremendous crops of wheat and oats, the latter running as high in some instances as 80 bushels to the acre and weighing 43 pounds to the bushel. There are many fruit trees and vines, while it grows an immense amount of vegetables. Thorough cultivation and the liberal use of water enable the land to produce heavy crops year after year.

Sacramento.

FIRST NEW HOPS.—*Record-Union*, Aug. 8: R. J. Merkley has for many years been the first among hop-culturists in the State each year to put up a bale of new hops. On Saturday, Mr. Merkley picked and cured a bale of hops from his yards, and now has them ready for market. He is thus again first to put the new hops into bale.

San Benito.

CURING 'COTS UNDER COVER.—*Free Lance*, Aug. 4: Joseph Swan brought into this office last Wednesday morning a sample of his sun-dried apricots, a most beautiful and salable article. The color is almost perfect and the flavor excellent. Mr. Swan spreads his fruit on boards and covers them with ordinary house-lining raised about a foot above the boards. This keeps the fruit from turning black by the action of the direct rays of the sun and fog, and leaves it sweet, soft and thoroughly cured.

AGRICULTURAL SOCIETY.—Articles of incorporation have been filed by the San Benito County Agricultural Society, the purpose of which is "to purchase, hold, sell, rent, lease or otherwise control or sell such real property as said society may deal with according to law, and to promote and encourage agriculture, horticulture, mechanics, manufactures, stock-raising and general domestic industry in San Benito county." The trustees are M. Wilson, J. G. Hamilton, S. E. Kent, John Parker, W. T. McCarthy, W. S. Frost, E. G. Camplin.

San Bernardino.

PRIME PEACHES.—The *Semi-Tropic* is under obligations to Hon. J. S. Ward for a basket of luscious peaches from his orchard near the Santa Ana river. Some of the peaches measured between 13 and 14 inches in circumference, and three of them weighed 1½ pounds. They were of the Foster variety.

San Diego.

COTTON.—*National City Record*: Mrs. Flora Kimball has a cotton plant growing in her garden that is seven years old and is never out of bloom or without bolls. The seed from which it grew was sent from Memphis from the common annual plant.

San Luis Obispo.

RED ASTRACHAN.—*Tribune*: At the Board of Trade rooms, Monday night, some apples of the Red Astrachan variety, from the orchard of Mr. E. Leedham, of Arroyo Grande, attracted great attention and keen appreciation. The fruit was beautiful in appearance, very large, uniform in size and shape, rich in color, and of fine flavor.

Santa Cruz.

RAMIE.—*Pajaronian*, Aug. 4: J. A. Hall, who is about to experiment with the ramie plant on his San Miguel canyon ranch, showed us yesterday samples of the ramie as grown, ready for manufacture, and manufactured into cloth. The latter is of fine texture, and fully warrants the praise it has received. We have a handkerchief made from ramie that is finer in texture than the ordinary linen article. Mr. Hall's experiments will be watched with interest.

ASPARAGUS.—Hy Jackson has, we believe, one of the oldest asparagus beds in the State. He planted it about 30 years ago, and it has continued to yield abundantly each year. Asparagus is a prolific and profitable vegetable when carefully cultivated. Wherever its cultivation has been attempted in this valley, it has been successful.

Solano.

EDITORS PRESS:—The weather is cool and pleasant, with damp nights, which are not good for drying fruit. A fire in the mountains west of Pleasant valley makes it very smoky. Three cars are waiting at Vacaville to start East tomorrow morning. They are loaded with peaches and grapes, mostly the latter. Not many peaches are going East from Vacaville nor to S. F., except to the canners. There will be quite a lot of white nectarines dried in Vacaville this year, for which 12 cents is offered. There have been so few nectarines dried before this year in the State, that there seems to be

no established price for them as there is for other dried fruit. There is much more acid in nectarines than in peaches or apricots. There will be a great many more peaches dried here than there were apricots. One man has contracted to dry 40 tons. Those who have large lots to dry are dipping them in lye. This process is much cheaper than paring. The lye costs about seven cents per pound by the case, and one pound of it is put in from two to five gallons of water. When boiling, the peaches are dipped in it and shaken in wire baskets until the skin comes off; then they are run through three different waters until as much of the lye is rinsed off as can well be. Next they are sulphured 15 minutes in the baskets; after cutting they are sulphured one hour and then dried. If dried in a drier they look very well, but if in the sun they turn pretty dark and all taste more or less of the lye, unless it is to a person's interest not to taste it.—G., *Vacaville*, Aug. 7th.

Sonoma.

CROPS CROWDING THE CANNERS.—*Petaluma Courier*, Aug. 3: The proprietors of the cannery want 150 extra hands. Tons and tons of ripe fruit are coming in daily, and without the people come to their assistance, much of it must go to waste. If your children are attending school, take them out for a few days until the rush is over. Two weeks will probably be sufficient. The same state of affairs seems to exist all over the coast wherever there is a cannery. They are a blessing to any community, and should not be allowed to suffer for want of help.

THE HOP-GROWERS.—*Santa Rosa Democrat*, Aug. 6: The most enthusiastic meeting of the Sonoma County Hop-growers' Association ever held, took place in this city Saturday afternoon. The members from the several districts reported promising indications [without exception. A number of new names were added to the membership roll. The rate for picking was fixed at one cent per pound. The average yield this year, it was generally conceded, would be between 1200 and 1400 pounds to the acre, owing to the large acreage of new vines coming into bearing. One-third of the total acreage of hops in the county, and that represented by the association, it was thought, were new vines; consequently a decrease in the average yield of 1800 pounds to the acre. The following officers for the ensuing year were elected: Guy E. Grosse, president; seven vice-presidents, as follows: A. Hanzel, Fulton district; J. P. Graham, Mark West; T. L. Ross, Green Valley; T. B. Miller, Olts Alley, and J. E. Hall, Santa Rosa; Lee Watson, Freestone; N. Winants, secretary; C. P. Farmer, treasurer. The acreage in hops represented by the association is 888.

Yolo.

BIG WHEAT SHIPMENT.—*Woodland Mail*, Aug. 4: One of the largest shipments of wheat that ever occurred in Yolo county took place yesterday, when E. T. Clowe shipped 1000 tons. He has been accumulating this enormous quantity of grain for many weeks, but owing to lack of cars has been unable to ship what he had purchased. Saturday evening a special train of 50 cars came up to Woodland with a large force of "sack-buckers," was run around to the warehouses, and the crew of 40 men set to work. Each car was loaded unusually heavily, 440 sacks of wheat being placed on each. About 6:30 last evening the last sack was placed aboard, the whistle blew, and the wheat left for Port Costa, whence in a few days it will doubtless be shipped to Europe.

HOG CHOLERA.—This dread disease is still prevalent in Gordon valley, and Chas. Hall has lost a large number of fine swine during the past week. The cholera appears to be spreading. Remedies innumerable are being published and forced upon the ranchers, but not one of them seems to be of material benefit to the hog, who dies in just as much agony after \$10 worth of cure is down his neck as if he had been left to himself.

A BATTUE OF GOPHERS.—*Woodland Mail*: Ex-Sheriff Beamer is nearly bankrupt over a little thoughtless speculation in gopher scalps. He is the happy possessor of five acres of fine alfalfa meadow. Last week he conceived the idea of flooding this pasture for the double purpose of benefiting the clover and exterminating gophers. To make the matter interesting, he placed a bounty of a nickel on scalps of the rodents, and told a neighbor's boy to do his best. The offer leaked out, and to his surprise a hundred boys were on hand for 24 hours, and when the slaughter ceased the ex-official's hair was several shades lighter, and his scalp-girdle contained 1307 souvenirs of the chase. He says the boys of Woodland have a corner on nickels now.

NEVADA.

AN IDEAL RANCH.—*Reno Gazette*, Aug. 6: On Hon. T. B. Rickey's ranch, in Antelope valley, there are employed 160 farm hands; there are in operation 12 mowing machines, which will have cut at the end of this season from 12,000 to 15,000 tons of alfalfa; there are 20 acres of garden stuff, from which a wagon-load is taken every morning to supply the tables—in fact everything done there is on a big scale. The ranch is 28 miles long, and along the road is ornamented with beautiful shade trees, while around the home are not only numerous shade trees, but fruit trees, lawns and beds of flowers. Our informant says that the Rickey ranch is about his ideal of Paradise.



The Dog and the Tramp.

A tramp went up to a cottage door
To beg for a couple o' dimes or more.

The cottage door was opened wide,
So he took a cautious look inside.

Then over his features there spread a grin
As he saw a lonely maid within—

A lonely maid within the gloom
Of the shadiest part of a shady room.

Into the room the tramping went;
Over a dog the maiden bent.

His eyes were set and full of fire,
And he viewed the tramp with evident ire.

"Run for your life!" the maiden cried;
"I clean forgot to have him tied!"

"Run for your life through yonder door—
I cannot hold him a minute more!"

Without a word he turned his face
And leaped the fence with careless grace;

Then lightly along the road he ran—
A very much-put-out young man.

The maiden loosed her bulldog's neck,
And gazed at the tramp—a vanishing speck.

And peal after peal of laughter rent
The air with the maiden's merriment.

The dog was of terra-cotta ware—
She won him that week at a lottery fair.

—Eva Best, in *Detroit Free Press*.

Notes From Hillside Haven.

[Written for the *RURAL PRESS* by M. E. O. W.]

Please may I take up my rag where I laid it down? But first, I have the happiness to relate that my precious old Mun Tung and Tang Eye are still with us, carrying their queues behind them, never once drunk; always faithful and true, plodding on with the never-ending jobs of ranch life, not shirking or stealing, or lying, just quietly delving. What a comfort it is to know that every animal has been fed; stable, sty and chicken-house cleaned; cows milked; everything done just as we taught them to do it, and no back talk either; and a nice hot breakfast served for ourselves, just on time to the very minute. Very many thanks for the pros and cons that my innocent paper in the long ago brought out on the "Heathen Chinese." I did not intend to stir anybody up, but was somewhat anxious lest a rabble of foreigners, called a committee, might visit our place at home and frighten off our help, when I could not stand up to help myself.

To the dear little woman who thinks she has found a hole in my soul! I would like to give some of our beautiful heartsease, pinks or sweet peas, and to say that in a big book that stands within reach, I have read, "Judge not that," etc., etc. I know it to be pretty good advice sometimes.

Home-Made Carpeting.

Now for the despised rags. We became the fortunate possessor of several pieces of bright, pretty Brussels carpeting, but not nice without a border or finish of some kind, so we thought and thought how it could be done. In days that are passed, when to travel more than to stay at home was our fate, the moths ruined a new "listing" domestic carpet, eating it all up under the large pieces of furniture. When carpet was again needed, we raveled out the listing, had it woven with more rags into a good new carpet. From the old raveled-out carpet were pounds of new-colored warp, cut in three pieces. Did not know what to do with it when it was put away. Concluded it must make a border—how, was the mystery. Necessity, that mother of invention, came to the rescue. Here is how it was done: The card that comes around packages from stores had been tied together and wound into balls; there were many of them, the savings of years. Two coarse knitting-needles were the implements. There were three colors of the warp, so we thought to stripe and scallop the border. Cast on 19 stitches; take two threads of the warp and knit into each stitch, leaving the loose ends all on one side of the piece, knitting back plain. The knitting back and forth is the same stitch. The scallops were made by casting on one stitch at the same end until 33 stitches were knit, making the width of the border; only every other row is widened; then slip and bind one stitch till there are the original 19 left. After a long time it was finished and put in place. Every one says it is not only useful but very pretty, too. It was not made in whole time—none of the housework time or practice or reading was given up; only just the moments when some one came in to chat a little or read aloud, or when we were

wholly incapacitated for anything else. The basket of strings was ready. There were four other much-needed rugs to make. It had taken so long to make the wide border that anything so elaborate could not be thought of. There was a bundle of worn-out red flannel underwear, positively worn out so that it was not good for carpet rags, yet there were little bits that were good. These were selected, cut into strips six inches long and half an inch wide. Three stitches were cast on the needle; knit first stitch plain, in the next a red rag, the last one plain, then turn knit back without a rag. I was so pleased with the rapidity with which I could manufacture border, that all the time that could be spared from the actual duties of the house were devoted to border. Within the week they were all finished and in use. If you doubt that they are nice and durable, come and I will show them. Five rugs so large and as good could not be purchased in San Francisco for \$20, so one round \$20 was credited to help pay for Bancroft's works. They are splendid. We have read 11 of the volumes and think we have our money's worth.

After the carpets and rugs were finished and all the good bits taken out to stuff hassocks and cushions with, there were seven sacks packed tight of rags that could not be used. A friend suggested a bonfire, but we sent them to the city as paper rags and received all they were worth in cash. We consider that the master stroke of the economy. If any woman reading this paper can make more things out of nothing than I can, I really hope she will write. I'd like to learn how to keep things nice and comfortable and not be too tired myself, and to have more time to study.

In the Garden.

The extreme hot spell of last month cut all the buds and flowers off the roses and made things look forlorn enough. We left the water running through the hose every night till thoroughly wet, and to-day, July 19th, there are 14 varieties with open roses and lots of buds of promise. Plenty of water gives many flowers, the flowers make one of the striking differences between my home and that of the aboriginal digger. We have to dig a good deal as well as water, but no words can express the comfort their bright faces and sweet fragrance bring, and such glorious evenings as we spend with the microscope looking at the wonders of pollen, spores and seeds, must be seen to be understood and appreciated.

Rutherford, Napa Co.

STUDY THE CHILDREN'S TASTES.—Each child has some one talent or gift. No matter how stupid he may appear, there is always one thing he can do better than others. It is for the parents to find out what this one gift is, and aid the child in bringing it out. If they observe carefully the tastes of the little ones they can easily determine for what each one is adapted. One is never so happy or contented as when drawing with pencil, on paper or slate, figures or landscapes, sometimes copied, but generally from the imagination. He does not weary of this work, as a child who only takes it up to simply pass away the time would, but spends hours at it, adding here and erasing there until the picture is done to his entire satisfaction. Some cardboard and a box of crayons would be a suitable birthday gift for this child. He will want very little amusement outside of his play beyond this. Another child is of a mechanical turn of mind. His pleasure seems to consist in repairing and making useful articles. He is continually working with hammer, chisel, etc. A box of carpenter's tools is what this child should have to make him perfectly contented with his home. Let them occasionally invite their friends to spend an evening with them, and you will be better able to judge and advise as to their company, as a well-mannered boy or girl guest is usually a safe companion for any child. They should be provided with books and games with which to entertain their visitors. It is wonderful how little will make children satisfied with their homes—simply a recognition of each individual taste.

THERE is nothing more injurious to children who are growing than to be hurried. Let them develop slowly and steadily, and they will be stronger in nerve and mind. The most enduring trees are those of slow growth. It is better to keep a child back in school rather than push him forward. Nervous diseases of the most obstinate and subtle type, which affect the whole life of the individual, are sometimes brought on by the injudicious forcing of the child. If the child seems given to day-dreams, let him be. His day-dreams may be only the means by which he will gain a higher life which no man or woman can gain until he has become conscious "of a certain stillness that pervades the universe like a law, ever being broken by the cries of eager men, yet ever closing and returning with a gentleness not to be repelled, seeking to unfold and penetrate with its own healing the minds of the noisy children of earth."

LOVE'S LABOR LOST.—He had taken her to hear Patti at \$7 a seat and afterward to Delmonico's, where the two together ate up \$9.75 worth. As he reached for his hat later that same night she said: "I am sorry, Mr. Simpson, if my refusal will cause you pain. I esteem you highly as an escort, and in that capacity I will always be a sister to you; but your wife I cannot be. You are too extravagant."—*New York Sun*.

Fly-Time.

[Written for the *RURAL PRESS* by DAGMAR MARIAGER.]

The spring poetry season has given place to that of fly-time, and many wives are on the verge of despair. Indeed, the common house-fly is responsible for many harsh words spoken to husband and children, many accidents, such as the spilling of hot soups, breaking of dishes, etc.; and it has harassed many poor women into nervous derangements or fevers, when none but the doctor and druggist were blown any good by the ill wind. The neat house-keeper and squeamish cook imagines she is the one lone victim of this winged and buzzing necessary evil; but, though she is the greatest one, there are others whose miseries may keep her company. A gentleman writes to me from the parched pastures of Arizona, where it seems the fly is proof against either drouth or sunstroke, and preserves his usual penchant for getting into things. My friend says:

"I'll tell you something of my experience in our restaurants the past three days; but if near your mealtime put my letter away, please, until you have eaten and digested your repast. I was having dinner at the Cobweb House. Among the different vegetable dishes was one with potatoes stewed in cream, out of which I picked seven able-bodied flies, well done. This naturally put me on the qui vive. I began to dissect everything on my plate critically. In my plum pie were three whole flies, and in the dressing of the roast beef were several, dismembered and mutilated in a shocking manner. The ice-cream, too, was peppered and salted with their legs and wings, while I found one body guillotined. Maybe the head had, like Cicero's, been sent to some dictator's wife, who, in her wanton cruelty, as did Antony's, ran a bodkin through its tongue and had it elevated upon a post to speak in death as eloquently, as it had buzzed in life, of the wrongs suffered at the hands of the stronger and the victors. Indeed, these flies speak to me more forcibly in death than in life; and I unshaken all these dead heroes in the most fashionable restaurant of T. I concluded to change, so the next day (yesterday) I had dinner at the next best place. As a prelude to my soup, I asked the waiter in case he had flies for dinner to bring them in on a separate plate, none of them to be soured, dismembered or disemboweled, or very well done. As I finished my soup, I congratulated myself upon the prospect of being able to make out a meal, when I broke open a biscuit and found in it a portion of a rat. To-day I have had dinner elsewhere again, and provided myself with a bottle of claret as a temporary help to my weak stomach, as I had nervous apprehensions as to what new species of horror I was doomed to suffer. My misgivings were not a fantasy of the brain. I felt more or less assurance against flies and rats, mostly because their presence had ceased to be a novelty. I felt that some new force was necessary to rout me from the dinner-table. I was armored against the two foes of the recent past. My nasal organ is not oversensitive, but it suffered a disturbance from some cause as the dinner was set before me. I smelled the butter, and, though far from sweet, it was unequal in strength to the task of emitting the odor, the fountain of which I was in search. I smelled the wine, the sugar, the salt, in vain. Then I discovered my neighbors to right, left, in front and behind me, similarly engaged. I began to doubt our sanity. Were we, stout and sturdy specimens of nature's noblemen, actually mimicking each other, like monkeys, without knowing for what? This was a new phase of evolution as deplorable as unheralded by our alert scientists. My neighbor in front suddenly turned pale. 'My God! smell that meat!' he exclaimed, as he struggled to his feet, fumbling in his pocket for the necessary 50 cents fine, with a view to a hasty departure. I followed him, and have two more restaurants to try in fear and trembling."

A MOTHERS' MEETING.—A leading worker says: "I had a surprise party yesterday, a surprise mothers' meeting, rather. A lady called on me day before yesterday asking me to address a few of the mothers of this city who were interested in social purity. I consented if they could come to my rooms, as I was so busy I felt as if I had not the time to go away far. This they were willing to do, and yesterday afternoon 93 mothers came upon me in a body to study the subject of social purity. I was surprised beyond measure, for these women represented a class not at all connected with the W. C. T. U., and I had no idea there were so many outside our own ranks interested in our work. Most of these will join with us in our W. C. T. U. mothers' meetings, I think, and eventually I hope we shall reach an attendance of several hundred at our monthly meetings."

DISCRIMINATION IN WORDS.—Pretty refers to external beauty on a small scale. Grace of manner is a natural gift; elegance implies cultivation. Well-bred is referable to general conduct rather than individual actions. Beautiful is the strongest word of its class, implying softness and delicacy in addition to everything that is in similar words. Courtesy has reference to others, politeness to ourselves. The former is a duty or privilege to others, the latter is behavior assumed from proper self-respect. Benevolent refers to the character of the agent

acting, beneficent to the act performed. Charitable is restricted to almsgiving, except when used in reference to judgment of others. Love is used only where there is something more than external beauty, where there is a combination of personal beauty and pleasing manner. Faultless features do not make a lady lovely who is disagreeable in disposition.—*Journal of Education*.

Raining Upside Down.

As all Anaheimers well know, from time to time water from the general reservoir is turned out of one distributing ditch into another. When the water is on, "the ditch" is a purling brook from two to three feet in depth and from four to five feet in width. When the water is off, it is simply a nice, clean, dry depression lined with fine warm sand.

A few evenings since, a big, unsophisticated traveling Irishman came upon one of those dry ditches. It was sundown, and thinking he had struck a capital camping place, the Emerald Islander spread his blankets in the sandy depression and composed himself for a good night's rest.

It happened to be the date when water was due in that particular ditch. It was turned on during the night, and toward morning, chilled and saturated, the tired traveler was awakened and astonished to find himself floundering in three feet of cold, swift-running water. His first thought was that a terrific rainstorm had occurred. But investigation dispelled the rain-storm idea. He had heard of waterspouts and opined that, perhaps, one of them had burst in the vicinity of his lodging place.

It was now daylight, and while the mystified Milesian stood on the bank of the swift-running ditch, shivering in his wet breeches, and pondering over the unaccountable problem, Hans Wengelsneller happened along, bound for Anaheim and daily toil. Hans is totally oblivious of the English language, and the Irishman was as totally oblivious of all others, so the following dialogue ensued:

Irishman—"Mornin to yer haner!"

Hans—"Yaw!"

Irishman—"Where the blazes did all this water cum from? Oim kilt an' drowned an' murder'd wid it!"

The man pointed to the flowing ditch as he spoke. Hans slowly comprehended what was requested and in answer undertook to explain the artesian system.

By a plentiful use of the German word "wasser," and by an apt manipulation of signs, reference to the ground and its depths, he succeeded in making the Hibernian understand that the water which had drowned him out came up from below—not down from above.

"Arrah g'wan now, d'ye think oim an omad-haun?" exclaimed the man with the wet breeches, and scornfully turning toward Anaheim he strode away, muttering as he did so: "Tear an ages, d'ye moind that. By the tail o' Moll Kelly's cat that devil av a Dutchman wud have me believe that it rains upside down in this country."—*Anaheim Gazette*.

NOVELTIES IN WOMEN'S WEAR.—The delicate gauze fancy pocket handkerchiefs worked in floss silk are the latest novelty in that line; they are tucked into the fronts of bodices, and also arranged in front of high-crowned hats, drawn upward and flanked on one side with tall loops of velvet. Small colored handkerchiefs in thin Indian silk, averaging about sixpence or eightpence each, are much used for display. Boxes containing six kinds are now given as presents, and useful and acceptable they are. Gauze or fine muslin parasols in black, white embroidered in black, gray and heliotrope, are novel, but cannot be said to be serviceable. Also net parasols, especially black over pink or heliotrope and others over gilded framework, semi-transparent. Black net hats over red crepe or gilded shapes are novelties; also muslin hats trimmed with ribbon, copied from the old Chinese kind worn by one's grandmother or her mother before her. The colors most in vogue in millinery are a rich red entitled "Ruddygore," Gobel in blue, commonly called goblin, and in reality electric blue of light shade, and "veille rose," which is crushed strawberry with a new name. The Gobel in blue is the most fashionable, and red is close on its heels.—*Court Journal*.

A COW AND A DOG-CART.—A farmer near Fresno has in his employ a German fresh from Vaterland, a very good fellow, but in matters pertaining to the ranch "too green for the cows to bite." The *Expositor* tells how he was lately commissioned to drive a dog-cart out to a neighboring ranch and lead a cow to pasture. He put a rope on the cow's horns, tied her to the dog cart, and then started for the horse, which was hitched about 50 yards off. By the time he got to the horse, the cow concluded to go back to the corral, and pulled on the rope as she turned around. This tipped the cart over and threw the cow between the thills, and a spectator says it was the prettiest steeple chase he ever saw, and the best cow time on record. The cow went through the corral fence and dispensed with the wheels of the dog-cart at that point, while the German was in full pursuit, and yelling in his native tongue, "Catch her by the horns!" No one seemed to be hunting for horns just then, and it was not until the cow had distributed the wreck of that cart around the premises that she quieted down.

Where?

Flooding with glory the sky in the west,
Then sinking behind the low hills' crest,
Where does the sun go for the night?
Does it drop in some ocean deep and dark,
That quenches its radiance spark by spark,
Leaving no shimmer of glory to mark
The track of the monarch of light?

Ah! well do we know that its reddened blaze
Lights the beautiful pearly morning rays
Of a day on the other side;
And that when the night shadows darkest lay,
Through the cool twilight of that other day,
It will come again to brighten our way
Till another eventide.

O souls beloved! after life's fitful day,
Passing out through the twilight gray,
Where dost thou go for the night?
Dost thou hasten away from a world like this
To a region of souls entranced in bliss,
Or art thou lost in some dark abyss—
Forever from mortal sight?

Ah! our hearts do know that thy passage from earth
Marks the early morning, the hour of birth,
Of a soul on the other side,
And that when our night shadows darkest seem,
Thou wilt come again with a softened beam,
And light in our stricken hearts, the gleam
Of a hope that will ever abide.

San Jose. MRS. E. O. S.

COMMON SENSE IN EMERGENCIES.—The story is told of Brunel, the eminent engineer, and builder of the Thames tunnel, that one day, while amusing a child with tricks of sleight of hand, he attempted one which resulted in a serious accident to himself, and at the same time illustrated the danger of playing pranks with the mouth. The trick consisted in adroitly concealing a half-sovereign in his mouth and pretending to bring it out at his ear. All at once to his dismay the coin slipped down into his gullet, and there stuck in spite of every effort, surgical or otherwise, to dislodge it. In this dilemma common sense came to the rescue. Brunel himself devised an apparatus to which he was strapped head downward, keeping his mouth open, when, to his inexpressible relief, the coin dropped from its dangerous position and rolled out upon the floor. A sword-swallower, who once lost a bayonet in his throat during one of his public performances, resorted to similar means for recovering it, and was equally successful.

FUSSY WIFE.—Now, Henry, will you see about those tickets? I know we'll get left! That train's going now, I'm sure! Look at the clock, will I? Nonsense, it's half an hour slow, likely as not. And, oh, where is my bag—have you seen it, Henry? In my hand, is it? Well, hurry, Henry, and attend to the baggage. No, I won't sit down—I'm too anxious. Come, make haste—go, for goodness sake! Henry! Henry! What is it? Why, you were leaving me here all alone, and I know we'd never find each other again. No, no, no! I won't go into the waiting-room! Just suppose we should hear the gong! Oh, why don't you get me a chair, Henry? I can't stand on my feet another minute. What are you staying here for? Those tickets! The trunks! And you haven't—there, you haven't—bought our Pullman seats. Run, Henry! Oh, come back a moment—come back! Henry! He's actually gone! Henry! Henry! Henry!—Puck.

A FARMER in Greenboro, Md., thinking to change his grade of potatoes, barreled all that he had, shipped them to Baltimore, and ordered a few barrels of extra fine Northern potatoes for seed. While barreling his own tubers he lost his spectacles. When he received his Northern seed potatoes he found his missing spectacles in one of the barrels. Such things destroy confidence.—*New York Sun.*

DAVID L. WIGHTMAN of Cleveland, a brave and tender soul, for whom the flags were at half-mast a few days ago, was wont to say: "In all my experience I have never met a man or woman, however degraded, in whom the spark of pure manhood or womanhood was entirely dead, and who would not in time respond, at least a little, to kindness."

To try to make others comfortable is the only way to get right comfortable ourselves, and that comes partly of not being able to think so much about ourselves when we are helping other people. For ourselves we always do pretty well, if we don't pay them too much attention.

A NAME.—Talk about the outlandish combination of letters in Western names, we do not see that New England has much reason to claim simplicity. In a Massachusetts paper we read: "The Katevauchenaug society circle held a lawn party recently, a large number being present."

HAPPY is the grown man or woman that can be a child again, and doubly happy the two people that can be children together. There is nothing in the world so refreshing or so apt to give patience to bear with grown-up trials later in the week as one day, or part of a day, given to being a youngster.

An authority on politeness affirms that the most distinguished manner of acknowledging thanks is by a "grateful and worshipful beaming of the eye."

YOUNG FOLKS' COLUMN.

A Stray Chicken.

(Written for the RURAL PRESS by AUNT SUSIE.)

Three little boys from the city who are spending their vacation on a ranch are just about as happy as boys can be. First one thing, then another, comes up to amuse them. One day I heard a great calling of "Aunt Susie, Aunt Susie, there is a hen in the straw on a nest."

So I went down to the corral, and to please the boys climbed the ladder to the loft of the wagon-shed, where the crisp, clean straw is kept, and sure enough there was a big Langshan hen sitting most contentedly on the straw. The boys, Stuart, Herbert and Romney, stood by while I crept up on the straw behind the hen. When I put my hand on her she did not appear to move, so I lifted her up and found—what do you think? One little chick as black as ink, all but a touch of white on the wings. I gave it to Romney, who is very fond of anything that creeps, crawls, flies or walks, even to little baby mice treasured carefully in his pockets! He carried the little chick and Herbert the hen, while Stuart and I brought up the rear of the procession.

And now I am afraid I shall be called very heartless, but it really didn't seem worth while to trouble to feed one little chick with its mother when I had two broods in coops, so I went to Mrs. Yellow-wing, who has a family of ten yellow chicks in a big coop inside a yard with a wire fence so we can watch them. I presented the lone, lorn black chick to her; but dear me! she was so cross, all her feathers stood out, and she scolded away with all her might, saying:

"What is that? surely not a chicken! Mine are all yellow with brown stripes down their backs. I stole my nest under the pigpen and laid all the eggs myself, so I could have a family to suit me, and that black thing with down on it can't come near my pretty yellow chickens; so there now, and if you don't take it away I'll peck its eyes out."

I saw it was no use to try to win any love for it from her, so I took it up, just in time to save it from being pecked as she threatened. Then I went over to Mrs. Black-wing and said to her: "Is this one of your chicks? It looks just like them, anyway," and put it down by her coop. She looked at it a moment, then said:

"I had 15 chicks and now have only 13. I thought two of them died, but one must have run away and has just come back. I stole my nest by the big hay-stack and all my chicks are black, as chickens should be, and glad enough I am they are not the pale-looking things I sometimes see. Chick-a-chick! chick-a-chick! come right here and eat your supper, and don't you run away again."

So the little chick ate its supper and cuddled under the hen's wings, and so was nice and warm, and never knew she was not her own mother.

I consoled myself for my seeming cruelty by thinking that if I had let the real mother have it in a few weeks she would be tired of it, go off and leave it, and even peck at it if it came near her.

The next morning Romney went down to see it, and came back with the cheerful news, "She is taking care of it."

The next morning Mrs. Yellow-wing was very sad. There in one end of her coop lay a yellow chick, cold and dead; it had a piece of green corn fodder in its bill; whether it was greedy and tried to eat too big a piece fast and got choked, or what was the matter, we shall never know. Mrs. Yellow-wing called and called, but of course it didn't get up. I took it away and said: "Now, Mrs. Yellow-wing, I am very sorry for you, but if you had taken the chicken I offered you the other night, you would still have 10."

"Yes, I know," she replied, "but really I couldn't. It was so black and mine are such a lovely yellow."

So you see each hen is perfectly satisfied with her family and thinks them just as pretty as can be. I hope they are good chicks, for that is better than to be pretty.

Well, these same three boys think it is fine fun to get the eggs every night. One lovely warm evening, after supper, I was handed a basket of eggs, all large and clean, some white and some coffee-colored, that the Langshan hens had laid. On top the basket was a letter addressed

AUNT SUSIE,
THE HOUSE.

I thought it was queer for hens to write a letter, but opened it, and found such a neatly written letter; and this is what I read:

THE CHICKEN YARD, July 28, 1887.
Aunt Susie:—We have done our best and laid exactly 41 eggs.
YOUR OWN HENS."

At the bottom of the page was a picture of a boy with a basket full of eggs, and around him were several hens and the big Langshan rooster; also on one side some nests with two or three eggs in each. To be sure, they stood up straight, and the ends were rather pointed; but altogether, I thought it a very nice letter for the hens to get up, and I wish I knew just which one wrote it, but I don't suppose I ever shall.

From One of Our Youngest Readers.

EDITORS PRESS:—My name is Leathy A. B. Vanderbilt. I live 12 miles from Williams, in the foothills. We had 1100 sacks of wheat and 69 sacks of barley.

Crops were pretty good around here this year. I have a sister 14 years old, and I am 8 years old. She and I have a Maltese cat. The two cats have seven kittens; two of them are Maltese. We have two old canary birds and have seven young birds. We have two old dogs and one puppy. We sleep out on the hay nights and the dogs go with us; the dogs go for night watch. One of our dogs is named "Nig," one "Dandy," the other "Barsto."

Williams, Cal.

L. A. B. V.

GOOD HEALTH.

Infants in Hot Weather.

The baby is, or should be, the first thought and care in the household during the hot weeks of summer, and no work is of greater importance than attending to its wants and needs, since at an unheeded moment its health or life may be lost.

For the child dependent upon artificial food, cleanliness of the bottle, purity of the milk, and regulation of the time and amount of its meals, forms a routine of care which a mother is hardly less than wicked if she trusts to other hands than her own.

The woman who knows how to raise a calf or lamb, avoiding the evils of over-feeding, will, out of the goodness of her heart, stuff a little child till it dies of a species of starvation brought about by overworking the digestion.

Over-heating is another potent cause of sickness. Make the baby's bed just soft enough to yield a little to its tender body, and use a thin, small pillow for the head. Such a nest, in a cool, well-aired room, will insure quiet sleep through the midday heat, and then the child may be kept awake in the evening until the house is quiet and the air is cool.

The fevered condition of an infant sleeping half smothered in soft pillows, or within the heat of the kitchen, passes unnoticed by hurried mothers who heat their own blood with the exertion and hurry of their work. There are many rights we women claim and gain, one after another, but none should supplant the right to abstain from hard work and unhealthy surroundings during the early existence of our little children.—*N. E. Farmer.*

A CURE FOR DRUNKENNESS.—I was one of those unfortunates given to strong drink. It reduced me to degradation. I vowed and strove long and hard, but I seldom held victory over liquor long. I hated drunkenness, but still I drank. When I left off I felt a horrid want of something I must have or go distracted. I could neither eat, work nor sleep. I entered a reformatory and prayed for strength; still I must drink. I lived so for over 20 years; in that time I never abstained three months from hard drinking. At length I was sent to the House of Correction as a vagrant. If my family had been provided for I would have preferred to remain there, out of the way of liquor and of temptation. Explaining my affliction to a fellow-prisoner, a man of much education and experience, he advised me to make a drink of ground quassia, a half ounce steeped in a pint of vinegar, and to put a small teaspoonful of it in a little water, and drink it down every time the liquor thirst came upon me violently. I found it satisfied the cravings, and suffused a feeling of stimulation and strength. When I was discharged I continued this cure, and persevered until the thirst was conquered. For two years I have not tasted liquor, and I have no desire for it. Lately, to try my strength, I have handled and smelt whisky, but I have no temptation to take it. I give this for the consideration of the unfortunate, several of whom I know have recovered by the same means which I no longer require to use.—*Connecticut Home.*

MEDICAL ELECTRICITY.—Electricity is now being employed at two establishments in Paris for the treatment of disease. In one of these, conducted by Dr. Vigoureux (the head electrician of La Salpetriere), there is a gas engine driving a dynamo machine, the current from which is led to a number of small electromotors. These are used to work electrostatic induction machines, which are of English make, and the electricity generated is applied to the patients sitting in insulated chairs. The advantage of induction machines over the old-fashioned frictional machines is that they can work at a moment's notice and in all states of the weather. A similar installation is in use at La Salpetriere.

A CURE FOR FRECKLES.—The *American Practitioner* gives the following process as a means for removing freckles: The skin being washed and dried is put on the stretch with two fingers of the left hand, and a drop of carbolic acid is applied exactly over the patch. When it dries the operation is completed. The skin becomes white, and the slight sensation of burning disappears in a few minutes. The thin crust which forms after the cauterization should not be disturbed; it detaches itself spontaneously in eight or ten days, leaving a rosy coloration which is soon replaced by the normal color of the skin.

DOMESTIC ECONOMY.

WHAT TO DO WITH TRIPE.—This is a very delicate dish when properly prepared, and one of the most easily digested. It can be eaten with impunity by dyspeptics, I am told, and yet in many families it is never used. After emptying and thoroughly washing the beef's stomach, cover it with salt and put it in salted water. Let it stand five or six days, changing the water each day; then cut into convenient pieces and thoroughly scrape the whole. By this time the dark coating can all be removed and the tripe should be very white and clean. Next boil it several hours, or until it is so tender that a straw can penetrate it, when it is ready for use. If for pickling, put it into a jar of spiced vinegar. If liked broiled, cut it in pieces four or five inches square, lay it on a greased gridiron and broil quickly; season with pepper, salt and butter, like beefsteak. Stewing is another mode of cooking tripe. Cut it into small pieces of two or three inches, slice three or four small onions; put over the tripe and onions a little warm water. Let it cook slowly until both are tender and the water nearly boiled away. Then add milk sufficient to make a good gravy, a tablespoonful butter made smooth in as much or more flour; salt and pepper to taste. When the milk boils up thick, it is done. Still another mode is to fry it. Roll the boiled tripe, cut in squares, in egg, then in cracker crumbs, and fry to a nice brown. A sauce containing a little flavor of onion and tomato catsup may improve it.—*Exchange.*

RASPBERRY JELLY.—Crush the raspberries and strain them through a wet cloth. Put the juice into a preserving pan with three-quarters of a pound of hot, but not burnt, sugar, to one pound of juice; boil it ten minutes and take care that it does not darken; remove the pan off the fire, strain the juice through a bag and pour it into pots. Do not touch the bag until all the jelly has passed through, else it may become thick.

CAULIFLOWER SOUP.—Take two quarts of the clear soup, separate a small head of cauliflower into very small sprigs, have an inch of stalk to each sprig; wash them and put these sprigs into fast-boiling salted water, boil ten minutes, drain at once, and drop them into cold water. This is to keep them white. The clear soup must be heated to the boiling point, and the cauliflower dropped into it just before serving.

LEMON PIE.—The grated rind and juice of two lemons, to which add four eggs (reserving the whites of two) beaten with two cups of sugar and one tablespoonful of butter. Then take two tablespoonfuls of flour, mixed with a little water, add to it one cup of water and stir into it the other ingredients. The whites of the two eggs beaten with two tablespoonfuls of sugar frost the tops. This makes two pies.

CHARLOTTE RUSSE.—Take two pints of rich milk, and soak three-quarters of a package of gelatine in it. Make a custard of a quart of milk, one pound of sugar and the yolks of eight eggs, add the gelatine and two teaspoonfuls of extract of vanilla. When it begins to congeal, stir in it a quart of rich cream whipped to a froth. Line a mold with stale sponge cake; set on ice.

CREAM COOKIES.—One cup sour cream, one cup sugar, one teaspoonful soda and one of cream tartar, with a teaspoonful lemon juice, a very little grated nutmeg, and two tablespoonfuls caraway seed. Mix lightly, and roll out as soft as possible, using just flour enough to keep them from sticking to the board.

SPONGE CAKE.—Three eggs well beaten, one and one-half cups of sugar, one teaspoonful of cream of tartar in one cup sifted flour. Dissolve one-half teaspoonful soda in one-half cup cold water, add one cup flour; beat each thin after putting in one minute. Flavor with lemon. Bake in a moderate oven.

APPLE TAPIOCA PUDDING.—Soak a small cup of tapioca for a few hours in warm water, pare six or eight good apples, core them whole, fill the cavities with sugar, a little butter, grated nutmeg or liquid flavoring, pour the mixture round the apples and bake an hour. Sauce, sweet cream and sugar.

HARD SAUCE.—One large cup of powdered sugar whipped to a cream with two tablespoonfuls of butter, one spoonful of currant jelly beaten in well, and as much cinnamon as will lie on a half-dime. When mixed, heap on a saucer or glass dish, and set in a cool place to harden.

EGG OMELET.—One pint rich sweet cream, three tablespoonfuls flour, three eggs well beaten, half tablespoonful salt and pepper. Stir flour and milk smooth, add the eggs. Melt a large spoonful butter in a baking-pan, pour in and bake 20 minutes.

CORN CAKE.—Two cups of Indian meal, two cups of cold water or milk, one-half cup of flour, one-half cup sugar, one egg, two teaspoonfuls cream of tartar, one teaspoonful of soda.

MEAT BALLS.—Take cold roast beef and chop fine, season with salt, pepper and sage, put in one egg, make into little balls and fry in butter or drippings.



A. T. DEWEY.

W. B. EWER.

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SAN FRANCISCO:

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Cultivator—C. W. Meador, San Jose.
Carriages—H. M. Sheldon, San Jose.
Pumps—W. R. Allen.
Veterinary Surgeon—H. A. Spencer, San Jose.
Carriage-makers—Prindle & Halsey, San Jose.
Horse-shoer—J. H. Howard, San Jose.
Short Hand Taught—K. L. Miller.
Almond Huller—A. O. Rix, Irvington, Cal.
Orange Trees—W. R. Strong & Co., Sacramento.
Japanese Fruit Trees—H. H. Berger & Co.
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Taxidermist—H. F. Laquien.
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The Week.

The sensation of last week in the grain market has continued, though in more subdued form. The Call Board has not yet reopened and promises to remain closed until it fortifies itself with some new rules. People who know the affair from the inside say there is still a possibility of injury to some and that the situation has not altogether cleared, although there is little likelihood of sensational occurrences. There does not appear any prospect of serious drop in values, as there is too much interest still remaining in upholding them. The farmers have, however, already skimmed off nearly all the cream there is in it for them, and if they do not get down into the skim milk they will have no reason to complain.

The country is full of activity, and all who desire employment can now easily get it in the fruit regions. Some fruit is being lost because

canners and driers cannot handle it as fast as it ripens, although the towns are drummed for fingers to split and spread and fill. The output of canned and dried fruit this year will be enormous, and bids fair to be of a much higher average quality than ever before. The market for it is brisk, the fruit in many cases being bought before it feels the steam of the cannery or the hot air of the evaporator. Such quick work must spread abroad prosperity and comfort. Californians do not have to live on climate alone.

Beet Sugar.

It is now announced that the revival of sugar-making at Alvarado is assured and that ground has been broken for a fine establishment—with a capacity equal to any in Europe, one reporter says. The buildings are now in course of construction. We are glad of it, as we have said before. We have admired the pluck with which the Dyers and their associates have clung to the idea of beet sugar in California, the skill with which they have proceeded to demonstrate success with inadequate appliances, their inventive genius in devising improved processes for economical manufacture, and we are glad they are to have a well-equipped establishment. The beet-growers of Southern Alameda will also be willing to replant their fields with so profitable a crop. The Watsonville enterprise is still talked of. The beets sent from Fresno for investigation by Prof. Hilgard are showing good points and in all probability another week will bring a full report concerning them. Interest in the subject is also arising in other parts of the State.

Sorghum as a source of sugar does not seem to be making much advance. It is telegraphed from New York that at a meeting of the American Agricultural Association held in that city on Tuesday of this week, a paper which commanded absorbing interest was one by Prof. Wylie on "Sorghum as a Sugar-Producing Plant." Experience taught him, he said, that it was undesirable. Dr. C. V. Riley, United States Entomologist of Washington, agreed with Prof. Wylie. Mr. K. Torrence, a Japanese gentleman, commissioned to study agriculture in this country by his Government, said that an experiment of producing sugar from sorghum was unsuccessfully tried in Japan.

Ever since Prof. Wylie's visit to California and study of the growth and sugar quality of the beet as produced here, he has looked upon sorghum with less favor. There certainly does not appear to be much advantage in sorghum for California, except it be for syrup-making for local consumption and sale. For great enterprises which can command capital, the beet seems to be much the better material, and with our soil for growing and our climate, which renders storage unnecessary and gives a long working season, there is only the question of producing cheaply enough to set any bounds to a vast production of beet sugar here. Even this last question it is believed will disappear when we have the best machinery and employ the latest processes invented here.

SILK CULTURE.—It is announced that Mr. Neumann, our pioneer silk-grower, has a fine large colony of silkworms now approaching their last stages in Sonoma valley. Sonoma has a good supply of mulberry trees, and the people will be glad to turn them to account. The State Board of Silk Culture, at its rooms in this city, is progressing well with its work, and the station at Piedmont, now in charge of the Ladies' Silk Culture Society, is also at work in its line. A large number of small growers here and there in the State still find something in the industry. It goes rather slowly, it must be acknowledged, but there may yet be something great in silk. Importation of foreign silk continues. Only last week there were considerable arrivals of Chinese silk which went at once overland. But silk is made with very cheap labor, and so long as our women and girls who want work can earn ten times as much at something else, they will be slow to contest the silk business with the Asiatic. Still the industry remains as a possible means of turning to good account leisure hours at home, and, as we have said, much may yet come of it.

THE First District Agricultural Association Fair will be held this year at the Bay District track, in San Francisco, instead of at Oakland as heretofore.

Vegetables and Fruit for the East.

Since we wrote our last poem on the shipping quality of the spud and the cabbage-head, shippers of these delicacies have been busy, and the tonnage for the present season will roll up some very large figures. Never before, it is said, have vegetables gone East in such quantities as this season. Shipments during June and July are said to have reached ten million pounds, onions and cabbages being the chief articles; but beets, turnips, carrots and summer squash have also gone in large quantities. Potatoes have been shipped, upward of 100 carloads, it is said, and have yielded good prices, arriving some weeks ahead of the product of the truck farms of the South. Our potatoes are naturally commending themselves to the people across the mountains by their quality. We are not surprised at that, because we have always claimed their superiority. The towns to which California vegetables are now sent in greatest quantity are Chicago, St. Joseph, Omaha, Denver, Atchison and Kansas City. Denver is getting a great many carloads.

We are glad of this movement. If it continues, as there is every prospect, it will ennoble the business of truck-farming in this State. So long as vegetable-growing is for the purpose of producing something to be hauled about in wagons, or packed about in baskets, the business will remain with the immigrants from the shores of the Mediterranean and the China sea; but when the produce begins to move freely in cars, the California horticulturist is sure to turn from his trees somewhat and figure what he can make himself from his moister lands. Truck-farming is a nice, clean business, and it is worthy the attention of our most enterprising people. If the market is assured, it will not be long before the mattock of the foreigner will be supplanted by the best cultivators and quick-stepping teams of the American, and then we shall see the ground pour forth its roots and herbs in some sort of style. There is something in it; let the enterprising producer keep one eye on the vegetable side of horticulture, and when he thinks he sees a point write for the *RURAL*, and give us all the benefit of it.

Turning again to the old theme, our fruit at the East, we would note a brief call the other day from R. B. Blowers, who returned a few days ago from his good work at the East. His conversation approves what we have had of his observations by mail and telegraph. He fully believes the marketing of California is on a better basis through the auction method than it has ever been before, and he believes also in the prospect of disposing of vast amounts of fruits at remunerative rates. He shows his belief by taking his own physis, and we should not be surprised if he would ship more grapes than he can grow himself this season. Our market reports this week give a very interesting group of dispatches from the main points where California fruits are being largely sold, and the grower can follow the course of the week's trade quite satisfactorily. Some of the advantages of the auction plan, as experiments so far have disclosed them, are enumerated in the *Record-Union* of August 10th as follows:

The complete success of the auction system of disposing of California fruits in New York is causing for a great deal of congratulation among fruit-growers and the citizens who labored so diligently to secure a trial of the method. Six carloads of California deciduous fruits, seven days from Sacramento, were sold at auction in New York within 20 minutes after the sale began, on the 8th inst. The prices realized were good for all the well-conditioned fruit. The system proves to be the most direct and certain yet tried. A strong point in its favor is the guarantee it gives every grower and shipper that their consignments have an equal "show" in the market with all other consignments. Still another is that the returns are open to the fruit seller, and he is not required to trust implicitly to the reports of sales by middlemen and a host of sub-middlemen, which, if false, the shipper seldom has any possible means of detecting. The public sale by auction absolutely removes the opportunity for cheating, for the publicity of the matter is complete and of instant record. It is a very different thing to the fruit-grower to learn within 24 hours after sale just what his shipment has brought, and waiting three months for returns, with no possibility of knowing what they will be. Under the auction system, the fruit-grower cannot be put off with the old story that his goods arrived in bad condition. If they do so arrive, there are hundreds of witnesses to the fact.

Mr. Blowers gave us some of the reports of

sale which are issued immediately after the event. They give the name of the shipper, the amount and kind of fruit and the price. There seems to be no chance for deception in the record. Fruit trains are now moving eastward frequently, and the shipments for the year will undoubtedly be very large.

FREIGHTS ON WOOL.—Wool-dealers in Oregon who have been buying with a certain overland rate in mind, and growers who have not yet sold their clip, are much put out by an unannounced increase of rates by the Union Pacific. They appeal to the Interstate Commerce Commission that no notice of 10 days of increase was made as the law requires. The grievance seems to be in other matters as well as in rates. It is stated that the new classification makes no distinction between wool in sacks and in bales, which operates, it is charged, as a discrimination against the petitioners. The new tariff, it is said, bears the date of May 14th, and purports to go into effect May 25th; but, as a matter of fact, it is charged that the tariff was not printed until May 23d, and was not posted or in any way made known to shippers until June 1st. Complainants place the amount of their damage at \$5000. They petition for redress. This complaint is accompanied by a petition bearing the signatures of 37 firms and individuals, each controlling between 100 to 160 sheep, asking for speedy action upon the complaint, declaring their familiarity with the facts set forth and their opinion that such discriminations are disadvantageous to the entire wool-growing interests of Eastern Oregon.

FOR THE STATE FAIR.—Preparations are going forward for the State Fair, which will open September 12th. Some counties are making excellent arrangements for competition under the county premium award. At the meeting of the Board of Directors held in Sacramento last week, matters, chiefly relating to the fair grounds, were advanced. There will also be some changes in the pavilion which will add to the comfort of exhibitors and visitors. So far as we can learn, there is a prospect for an unusually good display this year in all departments. We trust to present the facts more in detail in another issue.

QUERIES AND REPLIES.

Two Plums From Japan.

EDITORS PRESS:—By this mail I send you a box containing samples of the Blood plum of Satsuma, the first tree of which was obtained at great expense a year ago last winter. This fruit being the first of the kind ever grown in America, you will no doubt be interested in examining it. I will add that it is nearly six weeks earlier than the Kelsey, firm fleshed as you will see, much larger, of better quality, color and form, it is an early and enormous bearer, and the trees grow with more vigor than any of the other 43 varieties of Japan plums which I have fruited here. The seed also is the smallest yet seen.

The two smaller plums grow on a tree imported at the same time from the same place. This also seems to be very promising, being so large, firm and sweet. A well-known Sacramento nurseryman of long experience pronounces them the two best flavored and most promising Japan plums ever introduced.

The plums I send have been picked a week.
Santa Rosa.

LUTHER BURBANK.

These fruits are exceedingly interesting. The first mentioned is the larger. The specimens sent are almost globular, being 6½ inches around horizontally and 6½ inches around vertically—thus a shade broader than deep. The color is dark red, almost solid color except a slightly lighter shade in the suture. The bloom is thin and of a lilac shade. The flesh is dark red—solid color from skin to pit, firm, rather juicy and of good flavor. Pit very small; ¾ by ½ inch.

The smaller plum mentioned by Mr. Burbank is also almost globular, being 5½ inches around horizontally and 5½ inches around vertically; rich cherry red, slightly mottled with yellow and freely dotted with same tint; flesh deep yellow, juicy, very sweet and of fine somewhat peculiar but very agreeable flavor. The pit is also very small; ¾ by a shade over ½ inch.

It seems to us these plums are very desirable. The smallness of the pits of the true Japanese varieties is striking. A plum 2½ inches in diameter with a pit but half an inch is a point of notice and value. We should advise Mr. Burbank to multiply his stock of these varieties.

FOREST FIRES are raging in the drought-stricken districts of Wisconsin and Northern Illinois, and the destruction and discouragement are woful.

IN seven years a Michigan farmer has had seven horses killed by lightning.

The Herefords.

The chain of the fairs will open next week with the display at the fair grounds and in the pavilion at San Jose. This is the result of a union movement between the District Association and the Horticultural Hall Association, and we think it wiser to combine upon one grand comprehensive effort than to attempt two exhibitions. The fall months are so full of fairs that it would be difficult for fair-goers from the outside to make two visits to the Garden City. Coming first, too, in the series, the San Jose display should be a grand success, as such events commonly are there, and thus strike the keynote of a successful circuit.

Though San Jose is so famous for fruits and horticulture generally, the district is also high in live-stock circles, and we trust will always be able to keep her animal interest as a worthy associate of her fruit enterprises. The district has a good representation of the different breeds, and in some lines has the largest collections of good animals. It may be expected that the fair grounds next week will delight all who enjoy fine stock either in the stalls or on the track.

As pertinent to the live-stock department of the fairs, we give on this page a fine picture of a handsome thoroughbred Hereford cow, "Countess," owned by the Indiana Blooded Stock Company at the time the portrait was taken. Herefords have been multiplying in California during the year since the last fairs, and it is likely that the display may include rather more of them this year than usual. The largest importation, we believe, has been that of Albert Gallatin for his Tehama county property. Whether these animals will drift as far south as San Jose we do not know, but

doubtless they will appear in force at the State Fair. At any rate there are good Herefords not far from San Jose, and in fact they have secured quite a distribution through the State. They are, of course, distinctively beef cattle. They are very potent in fixing their form and markings when crossed with common cattle, and now that it is likely that our beef interest will advance, not upon the range but upon the farm idea, and perhaps will give stall-feeders better encouragement than they have had hitherto, it is quite important that our general farmers should possess themselves of good improved beef blood of some kind. Our growth in population, our increase in wealth and other items of progress are morally certain to stimulate our animal interests, and, we trust, reward progressive breeders better than they have been rewarded during the last decade. It would be quite pleasant all around to have our live-stock resources "boom" a little after their long period of quiet.

I. V. H. SAFFORD, lately murdered at his home near Willows by a cowardly and brutal hired man, was one of our old subscribers and highly esteemed in the community where he lived as an intelligent, sober, peaceable and industrious citizen. He was in San Francisco last month, and we enjoyed a friendly call from him but a few days before his tragical and cruel death.

IRRIGATION.—It is announced that the irrigation movement in Stanislaus is gaining ground, and that those who opposed it are withdrawing their opposition.

Premiums for Orchards.

We take great interest in the enterprise of the Tehama County Board of Trade in offering premiums, to be competed for by orchard planters, who shall set trees within the limits of the county during the season of 1887-8, according to the terms set forth. It seems to us that other counties could follow the lead of Tehama in this matter, and so we print in full the announcement which is made:

ROOMS OF TEHAMA COUNTY
BOARD OF TRADE.
RED BLUFF, July 30, 1887.

On motion, the following report of Committee on Premiums was unanimously adopted:

The Board of Trade of Tehama county offer the following prizes, to be competed for by any resident of Tehama county:

\$750 for the best 500 orange trees.
\$300 for the best 1000 pear trees.
\$100 for the second best 1000 pear trees.
\$300 for the best 1000 prune trees.
\$100 for the second best 1000 prune trees.
\$300 for the best 1000 almond trees.
\$100 for the second best 1000 almond trees.
\$300 for the best ten acres of grape vines, foreign.
\$100 for the second best 10 acres of grape vines, foreign.

the trees have had, into the care from sunburn or insects, into their ability to hold up a good crop of fruit, and a dozen other matters in orchard-making which only a man who is thoroughly informed in the art can secure. This effort will then lead the competing planters to every exertion to inform themselves, to understand the local conditions under which they work, and the result will be a spreading abroad of horticultural wisdom which would not be sought except under the spur of competition. Our Tehama friends have done very wisely. We hope there will be a large list of competitors, and when we go to Tehama to see those young orchards, as we certainly shall if we live until the time for the awards, we shall expect to see collections of trees which cannot be beaten in the State. The fact of the competition will attract horticulturists from all parts of the State, and, if we mistake not, this one enterprise of the Board of Trade will bring hundreds of appreciative visitors to the county.

COMBINED HARVESTER TRIAL.—At the meet-

Land Matters.

Reports from Washington include some notes of general interest about proceedings in the General Land office. One thing is a ruling by Gen. Sparks, that absence of a settler from his claim because of drouth or other climatal behavior, which makes it impossible to live upon it, does not operate against his rights. Gen. Sparks says: "Settlers who are obliged to leave their claims on account of drouth should be prepared to account for their absence from this cause when they make final proof; but in such cases proof should not be offered until the law has been fully complied with, after their return to the land. An enforced absence on account of climatal reasons will not imperil their claim if the fact is established when proof is made, and if proof is not attempted to be made in advance of the time when the residence and improvement and cultivation required by law can be satisfactorily shown."

Gen. Sparks is evidently set against efforts of railways to secure money for land to which they have only shadowy claims. In a case now pending in San Bernardino county, the defendant appealed to the Land Office and the Commissioner, according to a dispatch to the *Chronicle*, declared that suits by the railroad companies, brought for the purpose of extorting compromise and securing payment for land to which the companies have no shadow of right or lawful claim, are, in his judgment, in the nature of blackmail or malicious persecution, for which a criminal action will probably lie against the agents of the companies, and he advises that settlers consult competent counsel, and avail themselves of all the remedies the law affords. In the event that this case goes to the Supreme Court,

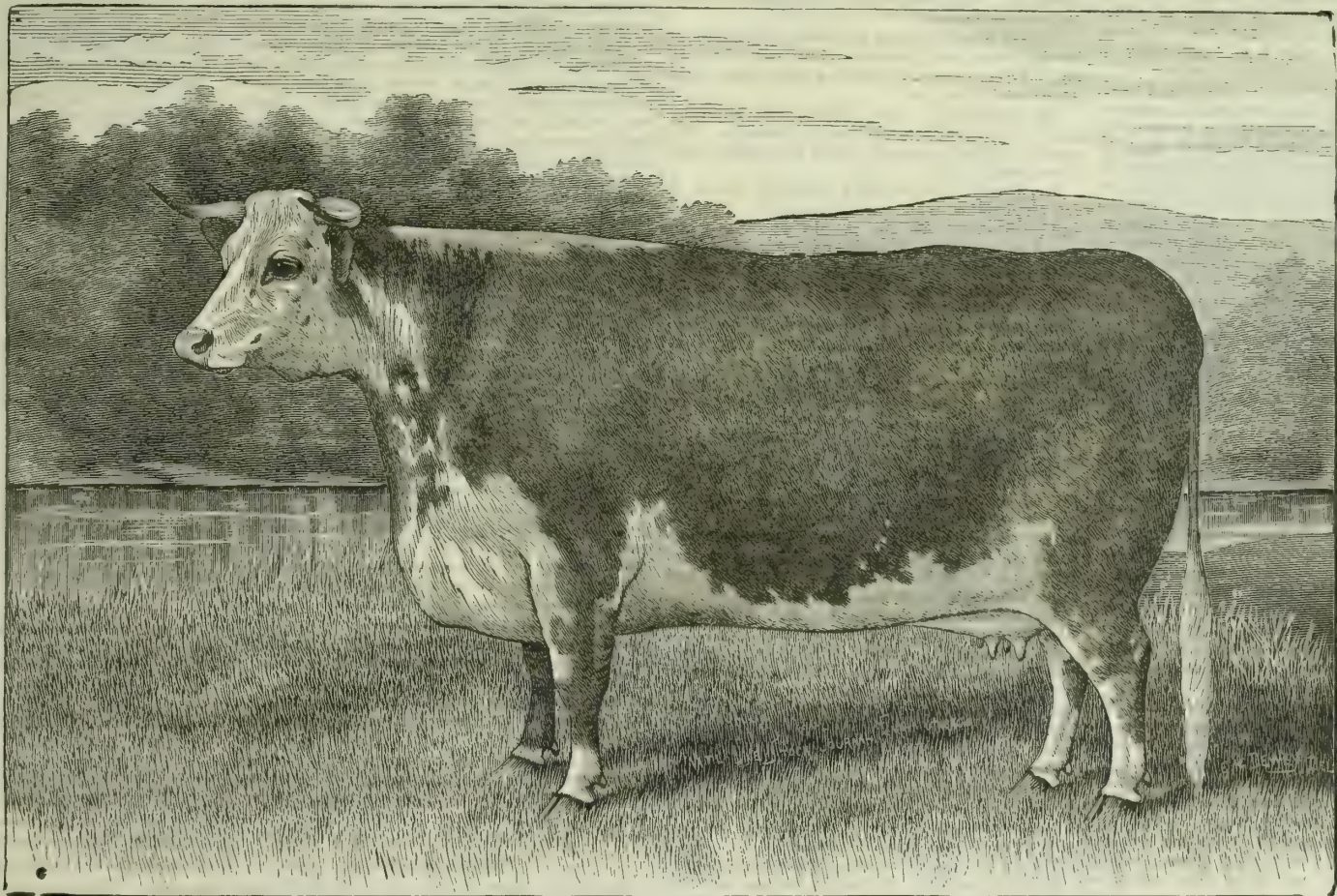
the Commissioner states that he will consider the propriety of requesting the Attorney-General to intercede in behalf of the United States.

But all reports from Washington do not favor Mr. Sparks. This might be expected, for the most violent opposition is visited upon him by many whose evil games he has thwarted. Whether his position in the case which follows is correctly represented, or whether he is covertly attacked by one of his opponents through the dispatches, we do not know. The matter is relating to the rights of married women to enter upon timber lands. It is said that Gen. Sparks has decided against the claim of a lady who has taken up timber land in Humboldt county, California, and there are 40 other cases depending upon the final decision in this case.

It has already been settled that married women may make a homestead entry, and while the law officers of the Department, relying upon one precedent, have been generally denying the right of pre-emption to married women, it seems to be pretty well settled that it will be decided in favor of their right to make sub-entries when the coming cases are disposed of. It is claimed that the Secretary of the Interior will decide against Gen. Sparks on the rights of women in Government land.

CHOICE city real estate in Los Angeles has reached \$3000 per foot; in San Bernardino \$1100 per foot; in Riverside \$500 per front foot.

THE Japanese parties who were in Petaluma last year buying horses are there again—this time to purchase cattle.



THOROUGHbred HEREFORD COW "COUNTESS."

\$200 for the best kept orchard of not less than 10 acres of any age.

\$100 for the second best kept orchard of not less than 10 acres, of any age.

\$200 for the best kept 10 acres of vines, any age.

\$100 for the second best kept 10 acres of vines, any age.

The conditions of all the above offers are as follows:

The plant of all the above to be made during the season of 1887 and 1888, subsequent to this date and prior to the first day of April, 1888.

The examination and award to be made by not less than three competent judges of such products, to be selected by the Board of Trade, and to be non-residents of Tehama county.

Examination and award to be made between the 1st and 15th of May, 1889. Prizes to be paid June 1, 1889. Parties desiring to compete must make entry with the Secretary of the Board of Trade on or before May 1, 1888.

The Board of Trade also offer to pay for the best pear, prune or almond orchard, fee simple title, at the rate of \$200 per acre, on the first day of May, 1890. The planter to properly care for and cultivate the same until that time.—BRUCE B. LEE, G. W. WESTLAKE, M. R. HOOK, Committee. By order of the Board, G. W. JEFFRESS, Secretary.

Such an offer as this is far-reaching in its influence and effects. Obviously it will tend to the development of the county, and that is a good thing in a general way, and perhaps is the main aim in making the offers. It pleases us to think rather of the stimulus which the contest will give to the art of horticulture in the county. Every one who enters for an award will understand that to win it he must most fully inform himself upon every item of tree-planting, cultivation, pruning, or else he will have a poor chance of success. The idea is to get the most valuable commercial orchard, and a committee of experts in fruit-growing will not be satisfied merely with great growth. They will make careful examination into the training

ing of the State Board of Agriculture last week it was decided that the committee on combined harvesters, consisting of Messrs. Hancock, Green, La Rue, Singletary and Chase, should meet in Stockton prepared to go into the field at 6 A. M. Thursday, August 11th, to view machines at work in the field. The place selected was Sargent Bros.' farm, where there is an abundance of grain for all machines that wish to enter the contest. The committee desire to make a most complete test and have selected a place where they may be tested, not only in average, but also in the heaviest down and weedy grain. We hope there will be a general disposition to enter for the contest as far as possible. Their report will be made during the State Fair.

FRUIT PITS FOR FUEL.—A reporter for the *Fresno Expositor* was lately shown through G. W. Meade & Co.'s drying works, where they were handling about 50 tons of peaches and nectarines a day. He wondered what disposition was made of the enormous amount of fruit pits that must accumulate in an establishment of this kind. But few were to be seen, and upon inquiry he learned that the pits were thrown out in the sun and after they became dry were used in the engine for fuel. They are said to be almost as good fuel as coal.

JAR SUPERSEDING CAN.—The *Farmer* mentions that Supt. Pratt of the Sutter cannery has been testing jars in putting up the fruit, and expects to use them extensively, as they show the fruit to advantage and are a vast improvement on the cans.

THE DAIRY.

Failure in Butter-Making.

The cause of the failure in butter-making is given by the *Farmers' Advocate* of Ontario as follows:

1. The Fodder Flavors.—These are too well known to require description; but the feed also exercises an influence on the composition of the butter, which influences the durability as well as the taste.

2. Stable Taints.—Some people call it the "flavor of the cow's tail." This flavor arises from a lack of cleanliness in milking, the neglect of cleaning the udder before milking, and imperfect straining of the milk. Without doubt it is the effete matter from the body of the cow that gives the butter this peculiar flavor, which is intensified by allowing the milk to remain in the stable atmosphere for an unnecessary length of time.

3. Smoky, Musty Flavor.—This condition has its origin in the setting of the milk or cream in an impure atmosphere, principally allowing the cream to sour in dwelling-rooms, where all sorts of necessary and unnecessary flavors are given off, and in erecting the milk or cream cellars in the neighborhood of stables or other places where all sorts of miasmatic or other obnoxious effluvia are given off, especially in summer.

4. Oily (sour oily) Butter.—According to all accurately conducted experiments, this mistake is entirely due to mismanagement in souring the cream. It is especially noticeable when, in order to sour the cream, old cream or sour buttermilk has been added. In all probability, the decomposition of milk sugar into lactic acid, in such cases, takes place in an abnormal manner. Factories in which the above method of souring the cream had been employed produced a very oily butter; but this condition disappeared when the souring process was changed by using fresh sour whole milk.

5. Greasy Butter.—The condition takes place after the butter has been stored for some time, when it partakes of a tallowy or lardy flavor. At the same time the color changes white and tallow-like, particularly from the covering into the interior, which can also be observed when the butter is placed in the sun for some time. The cause of this failure probably lies in souring the cream too much, by which the decomposition of the caseine and the butter fat is already far advanced, only to be afterward still further increased. The white color is probably due to this advanced decomposition of free fatty acids, which, in their turn, produce a change in the butter fat. Careful observation of the souring process, and scrupulous cleanliness with all the milk vessels, are the means of preventing this undesirable result.

6. Fishy, blubbery butter is a failure observed in old samples. The fodder may play a part in the production of such butter, such, for example, as the feeding of large quantities of oil cake, which changes fine butter into that of a blubbery nature; but it is also very probable that this failure is caused chiefly by the improper handling of the milk and cream, the former not being kept fully sweet, while the cream is rising, or being too strongly soured; principally, however, on account of faulty methods of souring the cream. The same remarks apply here as in the case of tallowy butter.

7. Bitter butter is partly caused by a bitter taste in the milk, which is particularly the case with the milk from cows a good while after calving, but it is also caused in part by certain substance in the fodder, such as sometimes found in lupine, also by spoiled foods, and by changes from stall to pasture feeding, or pasture to stall feeding. It is also highly probable that bitter butter can be produced by mismanagement of the milk and cream.

8. Speckled, Streaky Butter.—In colored butter this is caused by the coloring not being evenly distributed, the butter being interspersed with lighter and darker shades, but the cause also lies in imperfect salting or working. When the salt is not worked evenly the percentage of water varies in different parts of the butter, the salt drawing moisture from the surrounding parts in order to be dissolved. The parts having the greatest quantity of water have a darker appearance than those with a lesser quantity, which causes the appearance above mentioned.

9. Moldy Butter.—This takes place soon after the butter is packed, and is caused by a fungus, which, however, can easily be removed, but a disagreeable taste is imparted to the rest of the butter. During the life of the fungus the butter undergoes decomposition, and sooner or later propagates itself over the contents of the firkin. Keeping the tub moist before and after packing is said to be the cause of the failure.

10. Rancid Butter.—This is the most commonly known of all the failures in butter-making. The rancidity originates in the butter which is in contact with the wood of the tub, and spreads into the interior until the whole contents of the firkin is spoiled. The progress can easily be ascertained from time to time by the butter tester. It was at first supposed that the rancidity of butter was caused by its coming in contact with the staves of tubs, it being believed that the butter would absorb some substance from the wood that would give it this flavor. The spoiling was therefore attributed

entirely to the mismanagement in the preparation of the tubs. Undoubtedly a bad tub may favor rancidity, but it is not the only cause, the quality of the butter having considerable to do with it. A good quality either never becomes rancid, or at any rate is much less liable to do so than an inferior article, and therefore, here also, care in the production is the best way to guard against this failure. The fact that the rancidity commences at the outside is due to air coming in contact with it there and decomposing it, or at any rate causing free butyric acid to be formed. Carefully soaking and drying the tubs and thoroughly sprinkling the sides with salt before packing the butter and then storing it in a dry, cool place, are good safeguards against this failure.

Banning Notes.

EDITORS PRESS:—Banning enjoys increasing prosperity each year. Our orchards and vineyards are gradually coming into bearing and are producing grand successes. J. W. Davis shipped some 22 tons of blackberries from his 10-acre ranch. Prices paid for these berries were from five to eight cents per pound at Banning depot. Mr. Davis' vines are three years old. The berries were remarkably large and rich in flavor.

W. H. Yerington has also sold a fine crop of blackberries from vines only one year old. In fact all the blackberry ranches here have paid handsomely this year.

Mr. Hargrave is now picking and shipping the third crop of strawberries this season. We consider three successive crops from the same vines pretty good.

Mr. Harry Ingelow has a splendid patch of red raspberries, which has proved both prolific and profitable. All our people who have engaged in raising small fruits have made money. This climate is well adapted to their growth, and our water supply amply sufficient.

The apricot crop was fairly good. Some small orchards averaged as high as \$6 per tree, notably one controlled by Mr. Harry Yerington.

Peaches are now coming in fast. Mr. R. F. Roth sold his Early Crawford and George the Fourth to-day, at three cents.

Grapes ripen early here, consequently early varieties bring good prices. Mr. C. O. Barker sold his crop of Tronseau at \$100 per ton. White Berger and other varieties are now in season. Mr. Barker will shortly put the pickers to work in the company's 100-acre vineyard, which consists chiefly of Muscatel and Zinfandel. The C. H. Ingelow, the Gillig and other vineyards hang heavy with fine fruit.

The fig crop has been good. Mr. J. M. Gilman is now putting away his second crop.

Mr. Gilman has a fine young orange grove, in which many trees are well laden. Banning is yet too new a settlement to boast of many bearing orange orchards, but the few now producing, and the many planted, give promise of future success in that department.

Prunes are a decided success here.

Our beemen are in good spirits; their crops are fair, and owing to failure elsewhere, honey is in demand, and prices advancing. So far only 12 to 15 tons have been sold.

The grain harvest was also good, much better than was expected. Threshing began the 4th of July, and will continue for months to come. Immediately adjoining Banning are over 12 square miles of grain, all cut and stacked, awaiting the thrashing crews.

On the 17th of this month, a grand excursion to Banning will take place. At that time the company will put up one, five and ten-acre lots at auction, without reserve. This has proved a very prosperous season, and we feel that Banning has already entered the "Boom Belt."

JNO. C. KING.

Banning, Aug. 3d.

WHAT ARE THEY THINKING OF?—We can't understand, says the *Cloverdale Reville*, how campers and hunters can leave fires burning in their camp, and continue on their journey without any feeling of safety for the neighborhood and the endangering of life. Just consider that when a fire is started on any of the ranges there is seemingly no limit to the extent of territory it sweeps over. Fences, cordwood and fine timber and a large extent of grazing is generally made desolate. Consider the suffering of the stock that have been deprived of their feed, and the great losses sustained by the rancher. We should think that no reasonable sane man could ever rest a moment until he was sure not a spark remained of the camp fire.

BLACK MULBERRY.—The *Auburn Republican* thinks that the black mulberry would be one of the best kinds of tree to plant along roads and highways in such a region as Placer county. It makes a dense shade and is a much handsomer tree than the locust. Its fruit is good for home use and would serve to keep birds from the orchards. Its wood is said to be as valuable as redwood for fenceposts. C. A. Tuttle says that on his father's farm in Western New York, mulberry fenceposts were good and sound after being in the ground more than 25 years, and V. V. Mann recalls that in Missouri, when every man was his own cooper, mulberry wood was considered the best that could be had for cooperage.

ANTHRACITE coal has been found near Cochees lake, in Washington Territory.

THE FIELD.

An Effort to Secure Agricultural Statistics.

John J. Tobin, Esq., Labor Commissioner for the State of California, is making a vigorous effort to secure facts about the various industries of California, and we trust he will succeed. We have received the following communication in reference to the work:

EDITORS PRESS:—The necessity and usefulness of Bureaus for the collection of statistics relating to labor industries have become so widely recognized that they have been established, so far, in 18 States of the Union. In several of these States, paid agents are employed to gather the required statistics; the remainder, including California, must depend upon volunteer information, as the Legislatures made no provision for such agents. The attempt to collect statistics by mail has heretofore proved a failure; yet this is the means upon which this Bureau must rely. For various reasons, people have failed to respond to the inquiries sent out by Commissioners. Employers have refused to answer because they believed the Labor Bureau was created for the purpose of arbitrarily prying into the conduct of their business in the interest of discontented workmen. Employees feared to answer through an apprehension that it would displease their employers, and thus hurt themselves. Farmers declined to respond through a suspicion that it was a covert scheme to obtain a valuation of their lands and revenue with a view to increase taxation. Some refused because they thought they could not be compelled to answer, and many because they could not understand what benefit could be derived from furnishing the required facts.

Precisely the same difficulty was encountered when census taking was first entered upon. The masses require to be enlightened as to the intent of the law in creating labor bureaus for the purpose of gathering industrial statistics. They must be assured that they are for the interest of labor and capital alike. It should be distinctly impressed upon them that the names of persons filling out blanks, or those who furnish the Bureau with information, will not be made public, but, on the contrary, will be treated with the utmost confidence. In consequence of a knowledge of such facts, there is but little difficulty in obtaining full and accurate information from citizens in Eastern States where labor bureaus have been established for several years. Therefore I appeal to the editorial fraternity of the entire press of the State to aid the Bureau in correcting false impressions and encouraging ready compliance with fair requests for statistical information.

The accompanying blanks will convey an idea of the scope and intent of the investigation for the present year. The inquiries regarding the agricultural, mining, horticultural and viticultural industries will be found outside of and supplemental to the information of technical character supplied to the respective State Boards in charge of these departments.

JOHN J. TOBIN, Commissioner.

Forms for Answers.

In order to show the line the inquiry is taking in the direction of agriculture, we print below several blanks relating thereto. Mr. Tobin will be pleased to receive applications for blanks from any of our readers who will give him the information he desires. His address is 220 Sutter street, S. F. All answers will be regarded strictly confidential. No names will be mentioned in reports and the blanks will be destroyed after being used.

Farm Labor.

FARMS:
Number owning more than 10,000?
Number owning more than 5000?
Number owning more than 1000?
Number owning more than 500?
Number owning more than 100?
Number owning less than 100?
How many of the foregoing are mortgaged?
What rate of interest is paid on mortgages?
How many farms are rented (Chinese excluded)?
Number of acres in such farms; from ... acres to ... acres?
Average rent per acre?
How many farms are worked in shares between owner and renter?
What are the terms?

LABORERS:
What are the wages paid to road laborers?
How many farm laborers are employed (Chinese excluded)?
How many months in the year employed?
What is the rate of wages monthly, with board?
without?
How many hours work per day?
What kind of food do they get?
What sleeping accommodations are provided?
Are cottages provided for permanent laborers?

CHINESE:
How many Chinese are employed?
What are Chinese paid monthly?
How many acres owned by Chinese?
How many acres rented by Chinese?

GENERAL:
Give your opinion as to the treatment of laborers, etc.

To Viticulturists.

Owner of vineyard?
Nearest town?
County?

VINES:
Number of acres in vines?

Number of acres in wine grapes?
Number of acres in raisin grapes?
Number of acres in table grapes?
Number of acres set out in vines from June 1, 1886, to June 1, 1887?

PRODUCTION:
Have you a winery?
If so, what is its capacity?
Number of gallons of wine produced during the season 1886?
Number of gallons of brandy produced during the season 1886?
Number of pounds of raisins produced in 1886?
Number of pounds of green fruit raised?

VALUATION:
Total assessed valuation of land in vines?
Value of wine produced during season 1886?
Value of brandy produced during season 1886?
Value of raisins produced in 1886?
Value of green fruit produced in 1886?

LABOR:
How many white men did you employ permanently last year?
How many Chinese did you employ permanently last year?
What is the largest number of white men you employed any time last year?
What is the largest number of Chinese you employed any time last year?
How do you house your laborers?
Are cottages provided for permanent laborers?
Have you any difficulty in procuring white skilled labor?
If so, in what branch?

WAGES:
Blanks give forms for stating rates of wages by the day, week and month for different classes of laborers.

To Orchardists.

Name of fruit-grower?
Nearest town?
County?

ACREAGE IN FRUIT:
Total number of acres in fruit?
Number of acres set out in fruit from June 1, 1886, to June 1, 1887?

PRODUCTION:
Estimated quantity of fruit raised in 1886?
Estimated quantity of fruit raised in 1887?
Number of pounds of dried fruit shipped last year?

VALUE:
Total assessed value of land in fruit?
Value of fruit produced in 1886?
Value of fruit produced in 1887?
Value of dried fruit produced last year?

LABOR:
How many white men did you employ permanently last year?
How many Chinese did you employ permanently last year?
What is the largest number of white men you employed any time last year?
What is the largest number of Chinese you employed any time last year?
How do you house your laborers (excluding Chinese)?
Are cottages provided for permanent laborers?
Have you any difficulty in procuring white labor?
If so, in what branch?
Do you employ boys and girls?
If so, how many?

WAGES:
Blanks give forms for stating rates of wages by the day, week and month for different classes of laborers.

In the Midst of Drying.

EDITORS PRESS:—I take time to write you a few lines in the midst of the most pressing business. We are operating a steam heat evaporator in drying fruit. The No. 4 Acme, 120 trays capacity, will contain at once 1½ tons green fruit and in about eight hours we can begin to take out dried fruit. The points of advantage are that it cooks and dries the fruit at the same time, and never burns it; the trays are never changed nor moved until the fruit is done; the bleacher is complete, having automatic doors. We utilize every means of drying fast, as we have an immense quantity to dispose of. We dry the fruit about two-thirds on the machine; then empty it on trays about the size of raisin trays, and set in the sunshine. One day will complete the cure. Batchelor & Wylie, S. F., are agents for this machine.

We are favored here with a good market for all kinds of fruit. First come cherry plums, then early peaches—the very earliest are Briggs' May, Waterloo, Alexander and Lulu. The last named I obtained from J. T. Bogue of Martinez. It originated in New York State and is very early, ripening with the Briggs' May; small pit, like Hale's Early; round, good size; beautiful deep red; sweet, pleasant taste; firm meat, and bears early. The Hale's Early finishes up the June peaches, and reaches into July. Then comes the valuable Early Crawford, with others, reaching to August, which is pre-eminently the peach month. In August we have the California Cling, Orange Cling, Jones' Seedling, Late Crawford and others. For September we have Salway, George Late Cling, and October Free. The fruits mentioned, with pears, plums, prunes, etc., make a continuous busy season from May to October.

I am trying the new process of peeling peaches. Dip the peaches in strong boiling alkali water, as you would dip prunes. Find by experiment the length of time to suit—rub the peach with the hand, and the skin will come off smooth and nice, saving much of the peach and time. Afterward pit and dry. This is an experiment. MONTGOMERY PIKE.

Routiers, Aug. 1, 1887.

FIFTY-SIX GROCERIES have been closed in Oakland on account of high license since June 1st.

Treatment of Farm Hands.

EDITORS PRESS:—I think ranchmen and all others having men in their employ make a great mistake in not treating them more humanely than most of them do, and in not providing more wholesome and comfortable quarters for them. The impression with many employers seems to be that a common laborer is of importance mainly as he possesses more or less the muscle and patience of the mule. Brawn and muscle are at a premium, while brain, experience and judgment are of but little account. In fact, many seem to think a hired man has no use for brains and that he has no business to know anything. A stream never rises higher than its fountain. If you wish to make a man brutish, treat him like a brute. Treat a hired man like a human being; give him clean, comfortable quarters, a clean, comfortable bed, clean, wholesome, well-cooked food, associate with him, take an interest in his welfare, ask questions and observe his methods of working; for no one is so stupid and ignorant but some information may be obtained from him, and he will be far more likely to be faithful and do good service than if treated as a brute.

At the East all farm help are treated with the same social equality as members of the employer's family. All eat at the same table, and sleep in good beds with clean sheets and pillows. Such a thing as a person carrying his own blankets and other bedding with him is not known. It is related of one of the earlier Governors of Massachusetts, Gov. Briggs, I think, that he was in the habit of having all of his hired help sit at the same table with himself and family. Some of his aristocratic neighbors took exception to this and remonstrated with the Governor's wife about the matter. On representing the case to him, he remarked, he had been "thinking about the matter, and had come to the conclusion that as the hired help did all the work they ought to eat at the first table," and so ordered.

Fortunately we have some men among us who set an example worthy of imitation in respect to treatment of hired help. Mr. Hiram Corey of this county is a notable illustration of one who looks carefully to the comfort and interest of his hired help, of whom he keeps from 15 to 25 the year round. They are provided with clean, pleasant, comfortable quarters. Each one has a single bed with spring mattress, clean sheets and pillows, which are changed every week. Every room is furnished with towel, looking-glass, comb and hairbrush. Each laborer is furnished with a pair of slippers, to be worn in the house. The dining-room is a model of neatness and order, and the utmost decorum prevails at mealtime. The food is the same as provided for the family. No laborer is allowed to come to the table without first washing his face and hands and combing and brushing his hair. No one is allowed to spit on any of the floors, spittoons being provided in every room. The result is, every one takes a pride in keeping clean and tidy himself and keeping everything clean and orderly about him. All are faithful, and strive to do their work well and please their employer, and that they are all pleased with him goes without the saying. Would that there were more such considerate employers. J. S. TIBBITS, Santa Rita.

Tulare County Notes.

EDITORS PRESS:—I send you per express a box of Late Crawford peaches. The fruit crop, except plums and prunes, is fine here this season. The larger portion of the crop in this and Fresno county is being bleached and sun-dried. The apricot crop is all cleaned up, and the dried fruit marketed at fair prices, some orchards paying as high as \$350 per acre in dried apricots.

About the finest dried fruit I have seen this season is the new white nectarine. It dries beautifully and dries heavy, and when properly introduced in the Eastern market should command as good prices as peeled peaches. This nectarine is as sure a cropper as the peach in this valley; but it will not stand transportation green.

We could make the finest exhibit from this and Fresno county on stone-fruit, of any part of the State, if the fairs came earlier. As it is, our best fruits are all gone when the Mechanics' and State Fairs come off.

The lime, sulphur and salt remedy, used here for the San Jose scale, has been a complete success, as but little specked fruit shows in the very worst orchard on which that preparation was applied.

Some of the boom in the southern part of the State has reached here and good lands are sought after. I am in hopes people won't go crazy here and run values to such a point that interest cannot be made on the investments from the productions of the soil.

The grape yield bids fair to be heavy, and there will be a marked increase in the raisin pack as well as in the amount of wine manufactured.

The grain crop was beyond expectations; so in all respects our valley is prosperous.

Visalia, Aug. 6th. I. H. THOMAS.

[The peaches sent by Mr. Thomas are very fine, large and fully ripe—as fine Late Crawford as we ever saw.—EDS. PRESS.]

The Wheat Crop of 1887.

Talk as we may truthfully, says the S. F. Journal of Commerce, wheat is still in agriculture the *piece de resistance* of California. Hence more interest is taken in the outcome of our harvest crop than in almost anything else in the State. Add to this that California is one of the leading wheat States of the Union, and the anxiety to test the outcome of her harvest is easily understood. Of course, at this time of the year, or indeed any time till toward the close, the task of setting forth in detail the product of the soil is not at all an easy one. It is very likely to be either above or below the truth. Last year, for instance, estimates almost universally accepted as correct were in error fully 40 per cent; in other words, the product did not exceed in bushels what was generally credited with in cents. The outlook was the best harvest ever had. The result, however, disappointed every one. This year a light harvest is looked for; some placing the surplus at not to exceed half a million tons. The harvest, however, as far as it has gone, gives much better results than was anticipated. From due consideration of all available data on the subject, we present to our readers the following estimate of the product of the wheat harvest of 1887: [Here follows a detailed estimate of the wheat yield by counties which foots up an area of 3,262,500 acres, with an estimated yield in round numbers of 21,000,000 cents—or a little over 1,000,000 tons.] Out of this the estimate is that we shall have 800,000 tons for export—the balance will be held for seed and consumption.

There has been an increase in the product of most of the eastern and northern counties of the Sacramento valley, a decrease in the San Joaquin and Santa Clara valleys and the south. The west side of San Joaquin returns nothing, but the islands in the rivers produce plentifully. It is not improbable that the returns, which only average 11 bushels per acre, may turn out much better when the harvesting is finished—as in the Sacramento valley some acres have yielded 35 bushels, but this is the state of the crop as far as known. It is about 5,000,000 bushels less than the actual yield of 1886, but it will pay farmers much better, as there are better prices.

Many have thought 11 bushels to the acre all over the State, even in a dry year, is much too light. Most people think that 13 bushels is none too large, and confidently affirm that the returns from the thrashers will even bear out that, if it does not make it larger. Thirteen bushels would add six and a quarter million bushels to the above figures and make them slightly larger than those of last year. As a general thing, the result in a year of much rain is less than generally anticipated; in a year of light rain, larger than was supposed.

But whatever the result, 1887 cannot be considered a bad year. The whole crop of the world will be light, not as light as now confidently predicted by those who are at the bull side of the market, but still sufficiently light to insure us good prices.

The Richest Man in the World

Would be poor without health. The dying millionaire consumptive would exchange all he is worth for a new lease of life. He could have had it for a song had he used Dr. Pierce's "Golden Medical Discovery" before the disease had reached its last stages. This wonderful preparation is a positive cure for consumption, if taken in time. For all diseases of the throat and lungs it is unequalled. All druggists.

"A Word to the Wise is Sufficient."

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H. A. SPENCER, veterinary surgeon of San Jose, whose advertisement appears elsewhere in this paper, is a graduate of one of the best veterinary colleges in the U. S. Within the past few years, we understand, he has performed some quite remarkable operations with gratifying success—in one instance removing from the intestines of a horse a tumor weighing four and a half pounds, after the case had been given up by S. F. veterinarians. In another case, where both tendons of a foreleg had been severed, a perfect cure was effected. Dr. Spencer has also written considerably upon the diseases of animals.

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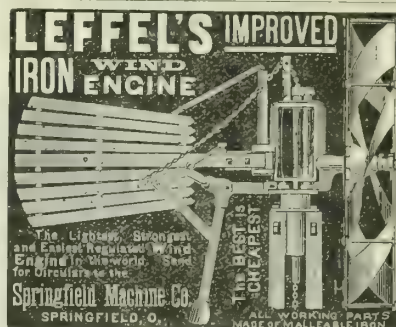
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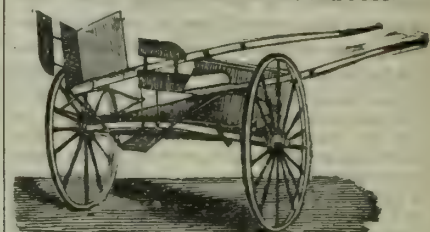
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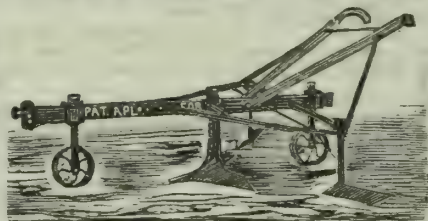
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List of U. S. Patents for Pacific Coast Inventors.

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From the official report of U. S. Patents in DRAWY & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING AUGUST 2, 1887.

367,580.—STATION INDICATOR—G. H. Bade, Austin, Nev.
 367,497.—WHIP SOCKET, ETC.—C. L. Bard, San Buenaventura, Cal.
 367,704.—MITER-BOX—Albert Crum, The Dalles, Oregon.
 367,506.—WINDOW SASH AND FRAME—R. H. Daley, S. F.
 367,745.—THILL COUPLING—M. H. Durst, Wheatland, Cal.
 367,751.—WAGON SCRAPER—J. S. French, Knight's Landing, Cal.
 367,418.—GAS-PRESSURE REGULATOR—J. W. Haggerty, S. F.
 367,519.—CULTIVATOR—L. P. Helmer, Watsonville, Cal.
 367,647.—FEED-WATER HEATER—J. H. Mathews, Berkeley, Cal.
 367,561.—SAW-FILING MACHINE—J. H. Sodee, Seattle, W. T.
 367,457.—CABLE-RAILWAY GRIP—W. J. Thomas, S. F.
 367,569.—EGG BEATER—L. F. Wikidal, Salem, Oregon

San Jose Notes.

[Written for the RURAL PRESS by J. C. H.]

The fruit-driers and canneries in and around San Jose are working to their fullest capacity. An abundance of fruit and competition of buyers direct from Eastern cities has made the business an absorbing and leading interest in this locality. There has been and is now a scarcity of hands for picking and handling the fruit. This state of affairs has established a new feature in the labor question. Every morning carry-alls are sent around to gather up the young people and women for picking and gathering fruit. After the day's work is finished the crews are returned to their respective homes. Wages range from 75 cents to \$1 for lads and lassies from 12 to 15 years, and from \$1 to \$2 for adults. There is a scarcity of hands in and around San Jose, and is at present a serious drawback to the gathering of fruit in season.

Ingham's Orchard Cultivator.

Mr. J. Ingham of San Jose has been laboring for several years to build a sulky cultivator to meet a demand of the fruit-growers of the Santa Clara valley. By experiment and field tests in several of the large orchards and vineyards he has received an unqualified indorsement of his cultivator. His latest improvement is a device that avoids all side draft and a protection from barking the trees. There will be one exhibited at the Santa Clara Fair, and an illustration and more minute description will appear in the RURAL soon.

Flickinger's Cannery.

A RURAL representative made a flying visit to J. H. Flickinger's cannery and orchard, situated three miles from San Jose. This orchard, consisting of about 80 acres, was planted in 1880 on land that had been used for several years in raising grain. The vigorous growth and quality of fruit has been pronounced by experts, among whom is A. H. Hatch, one of the best in this State. A force of 150 persons were busy caring for apricots and peaches, divided as follows: 50 picking, 50 attending to drying, 60 canning. The arrangement of this plant for labor-saving and comfort of the operators, as Mr. J. J. Groome, superintendent, expressed it, is almost perfect. The fruit is picked from the trees and brought direct to the receiving-house, and none but perfect fruit is allowed to pass to the operators. A noticeable feature of this cannery is that every portion is kept scrupulously clean and every can or jar is washed, steamed and dried before using. It is a picture peculiar to California life to see a great army of young people clad in clean outer garments busy filling the cans and jars with fruit. This cannery is putting up 20 tons a day now, and a large force was engaged for the coming week that would bring it up to 25 or 30 tons a day. Mr. Flickinger has given the subject of fruit-raising and marketing much thought and careful study. His theory of picking the fruit and canning when fresh, and using heavy syrups, will bring up the standard of California preserved fruits to the highest grade, and make a market for them in all parts of the world. This young orchard and model cannery has gained quite a local celebrity, and there were a number of visitors present who had come from remote portions of the State to examine this new enterprise.

Real Estate.

Messrs. Spencer & Covill, one of the oldest and leading real estate firms of San Jose, have been quite successful in dividing up several large tracts of land in subdivisions, and disposing of the same to bona fide settlers, a number of whom are late arrivals from the East. Santa Clara valley has become the center of large dealings in land lately, and many parties wishing information are applying to Spencer & Covill.

San Jose.

Money Loaned

On Country Real Estate in large and small amounts at lowest rates, by A. Schuller, 106 Leidesdorff St., room 3.

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.]

	Portland.				Red Bluff.				Sacramento.				S. Francisco.				Los Angeles.				San Diego.			
DATE.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.
Aug. 4-10.																								
Thursday.....	.00	76	Nw	Cl.	.00	100	N	Cl.	.00	90	Nw	Cl.	.00	66	W	Cl.	.00	82	Sw	Cl.	.00	68	Nw	Cl.
Friday.....	.00	82	Nw	Cl.	.00	94	S	Cl.	.00	82	Sw	Cl.	.00	60	W	Cl.	.00	80	W	Cl.	.00	68	Nw	Cl.
Saturday.....	.00	74	Nw	Sy	.00	86	SE	Cl.	.00	72	S	Hy.	.00	54	Sw	Cy.	.00	34	Sw	Cl.	.00	70	Nw	Cl.
Sunday.....	.00	64	SE	Cy.	.00	90	N	Cl.	.00	84	Nw	Hy.	.00	68	Sw	Cl.	.00	82	W	Cl.	.00	70	W	Cl.
Monday.....	.00	68	Nw	Cl.	.00	92	SE	Cl.	.00	86	Nw	Hy.	.00	63	W	Cl.	.00	78	Sw	Fr.	.00	72	Sw	Cy
Tuesday.....	.00	78	Nw	Cl.	.00	80	S	Cl.	.00	68	Sw	Cl.	.00	61	Sw	Fr.	.00	84	Sw	Cl.	.00	72	W	Fr.
Wednesday..	.00	80	Nw	Sy.	.00	76	S	Cl.	.00	70	Sw	Hy.	.00	62	Sw	Cy.	.00	78	W	Cl.	.00	70	Nw	Cl.
Total.....	.00				.00				.00				.00				.00				.00			

EXPLANATION.—Cl. for clear; Cy. cloudy; Fr. fair; Fy. foggy; — indicates too small to measure. Temperature. Wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

The Orpheum.

[COMMUNICATED.]

Our city has just had added to its places of amusement one, an account of which, from an instructive and scientific standpoint, is well worth the attention of our readers. Electricity has had yearly new purposes to serve, and in the future many additions to our pleasures and comforts will be furnished by this manifold agent of usefulness, the modern illustration of Aladdin's lamp.

By a system of wires, the currents through which are derived from a powerful battery, musical instruments are made to play at the touch of a performer sitting at the key-board. Contact is made between the several wires and the battery by means of a small lever attached to each note. As the current reaches the coil at each instrument, its core, movable and delicately balanced, becomes magnetized, and is, by a mechanical device varying in different instances, made to beat a drum, clash a cymbal, chime the bells, and set in lively motion nightingales, cuckoos, and a black bear with rolling eyes and an electric lantern, both brilliantly alight.

These all supplement the orchestra, which latter is composed entirely of Hungarians, who have come direct to this coast from Buda Pesth, Europe, under the direction of Herr Rosner, the courteous and talented inventor of the "electric orchestra." Their playing is excellent, having a completeness of finish, purity of tone and perfectness of unison only to be found in the performances of skilled musicians who have long practiced together.

Our country visitors have a rare treat in store for them, and a night or two spent at the Orpheum will serve to amuse them when in town and their neighbors when they return home. The intention of Herr Rosner is, we understand, to be an immediate return to Europe at the end of three months, for which term his services and those of his entire orchestra have been engaged by the enterprising proprietors of the Orpheum, Messrs. Walter & Roberts, than whom none have been more successful in catering for a rather critical public. Nothing of this kind has ever been produced in America, and we doubt if San Francisco will not lead the Eastern States in wealth, work and play before many years.

The electric storm deserves special notice. The imitation of lightning is produced by a supply of electricity from the electric light works, the connections only being made from the key-board. The machines (these are also suspended in the center of the room) for producing an imitation of wind, hail, rain, the two well-toned organs (a third and larger one is in course of erection), all tend, when supplemented by characteristic music from the orchestra, to give a sense of realism to which no description of ours could do justice.

The management does not, however, rely solely on this class of music. A better variety show has never been witnessed by us. Mlle. Garetta, with her performing pigeons, thoroughly trained and of rare beauty and species, gives as pretty and interesting a performance as young or old could wish to see, and is an excellent addition to a repertoire comprising, among others, Millis, the ventriloquist, who sings a quartet and decapitates one of his "suite." Messrs. Fields and Hanson, a "nigger host" in themselves; Whitfield, the man of a hundred faces, from George Washington to the latest Paddy "at liberty;" Ouda, a youth of 16, who without doubt can give a wrinkle or two to the San Francisco gymnasts—all go to make a performance which those interested in "doing things well on the coast" must pronounce a complete success.

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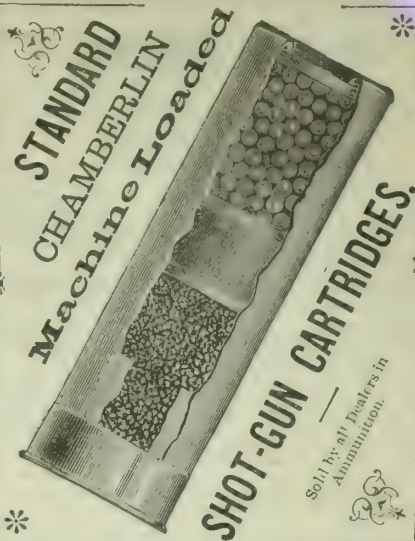
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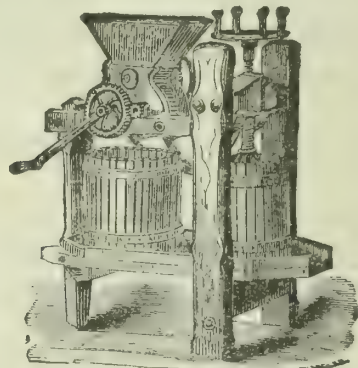
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I have found the Machine (No. 3) very simple, and it does the work to perfection. Parties who have larger Driers of different makes say they cannot turn out superior fruit (apricots and peaches) to mine.

Vacaville, June 12, 1887.

I. W. A. GILMORE.

I found the Machine (No. 2) good, and can truly subscribe to all the merits claimed for it. I have sent apples to Santa Rosa and they sold as first-class.

Laguna, July 15, 1887.

W. H. J. AITKEN.

Evaporator came safe to hand (No. 3). Have tried apricots with good success.

Stockton Nursery, July 15, 1887.

E. C. LEWES.

Before writing I wanted to test the Drier also on peaches, apples and pears. Am now doing so with the very best results. Upon the whole, I am greatly pleased with the Drier.

Batavia, July 20, 1887.

(Rev. Dr.) W. ALEXANDER.

I am doing fine work with the Drier (No. 3). Have tried it in company with Mr. A. J. Lay, and he, after buying it, takes it all. You can refer to me and I will try to sell more.

Glenwood, August 5, 1887.

C. C. MARTIN.

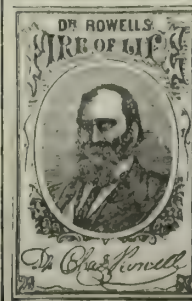
I have been using a Zimmerman (No. 3) Evaporator on my apricots this season, and cheerfully attest the fact that its performance is fully up to its promise. Its simplicity is such that, although novices, we have succeeded in turning out admirable work, and its economy and facility are quite remarkable.

August 9, 1887.

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Santa Clara Valley Agricultural Society

WILL HOLD THEIR

ANNUAL FAIR AND SPEED CONTESTS.

Commencing on Monday, Aug. 15th and Ending Saturday, Aug. 20th,

—AT—

SAN JOSE.

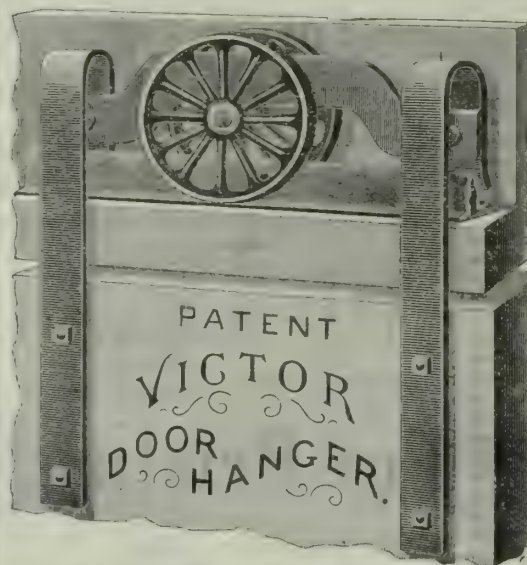
There will be a Large Exhibition of Live Stock and Agricultural Machinery.

INTERESTING SPEED CONTESTS ON EACH DAY OF THE WEEK.

A Balloon Ascension by Prof. VAN TASSELL, who will drop when one mile from the earth by a Parachute.

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Barn Door Hanger

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RAIL.

THE BEST AND CHEAPEST Anti-Friction Barn Door Hanger and Rail in the market, because it is Strong, Simple, Silent in Operation, Secure to Rail.

PRICE OF HANGERS.

PER DOZ. PAIRS.	
No. 1, for doors 3 to 6 ft. wide.....	\$15 00
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Large lot of young birds ready for sale; send for circulars.

BULL PUNCH,

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With Silver-Plated Sheath for Ringing Bulls

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SAN FRANCISCO, 1887.

Opens September 1st, closes October 8th

The Trustees of the Mechanics' Institute take pleasure in announcing that the coming Exposition promises to be the most attractive and important to the producers of this State of any yet given.

Several Counties have already applied for space to make a general exhibit of their resources, and it is now an assured fact that the whole of the immense pavilion, with its annexes, will be filled with California's choicest productions, both natural and manufactured.

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Liberal Premiums in Each Class will be Awarded.

No Charge for Space, Steam or Power.

PRICES OF ADMISSION—Double Season Ticket, \$5; Single Season Ticket, \$3; Adult's Single Admission, 50 Cents; Children's Single Admission, 25 Cents.

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With no cone springs, or springs of any kind. No little rods, joints, levers, or anything of the kind to get out of order, as such things do. Mills in use 6 to 12 years in good order now, that have never cost one cent for repairs. All genuine Enterprise Mills for the Pacific Coast trade come only through this agency, and none, whether of the old or latest pattern, are genuine except those bearing the "Enterprise Co." stamp. Look out for this, as inferior mills are being offered with testimonials applied to them which were given for ours. Prices to suit the times. Full particulars free. Best Pumps, Feed Mills, etc., kept in stock. Address,

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Home of Wheat, Fruit, Wine and Olive; 15,000 acres sold in past 8 months to 220 settlers, representing a population of 1100; 49,000 acres—small subdivisions—average, \$22.50 an acre; 1/3 cash, balance 5 years, 6 per cent. Catalogues and maps free. C. H. PHILLIPS, Manager.

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Have the largest list of Farm property in Northern and Central California. Catalogue issued monthly. Send or call for it. SACRAMENTO, CAL.

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On the new extension of Southern Pacific Railroads, on the lands belonging to R. T. BUELL, Esq., near Los Alamos, Santa Barbara county, Cal. Parties desiring to visit the property now, can go via San Luis Obispo and take the cars from thence to Los Alamos, thence by stage to the Colony. 20,000 acres of the best lands in California, subdivided into 20, 40 and 80-acre farms; \$20 to \$30 per acre. INTERNATIONAL IMMIGRANT UNION, 401 California St., San Francisco

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THE PACIFIC EGG FOOD.



Manufactured by the PACIFIC INCUBATOR CO., Oakland, Cal. Recipe, the result of 20 years' successful experience with poultry. Its use insures plenty of Eggs when prices are highest and keeps fowls in good health. For sale by all seedsmen and grocers. ASK FOR IT.

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The Halsted Incubator Co.
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Price from \$20 up. Model Brooder from \$5 up.
Thoroughbred Poultry and Eggs.
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IN ITS GREAT RANGE OF WORK IT STANDS WITHOUT AN EQUAL.

THE LIGHTEST RUNNING,
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Complete Pumping outfits—all sizes—for every purpose. The latest, best and cheapest. If you need any thing in this line, write to
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Boars and Sows not akin, full grown, and small Pigs for sale; imported stock.

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WINDMILL.

\$35.00 CASH.

Has stood the severest tests of practical use for many years. It is STRONG, DURABLE, SELF-REGULATING, STORM-DEFYING. Requires less wind than any other Mill, and embraces all the latest improvements. It has the shortest shaft and is the best balanced Mill ever made. The frame, or rims, of the wheel are bent, material used in their construction being the best. There is no simpler or more perfect self-regulator made.

Runs in the Lightest Wind.
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Never Blows Down.
Always in Order and Ready for Use.
Any Farmer Can Repair it.
You Will be Delighted.
It is low in Price—only \$35 Cash.
You buy your Mill from the manufacturer.

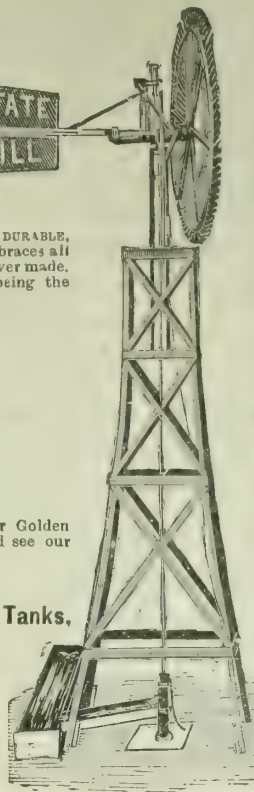
Should a farmer be without a Windmill when he is able to procure one of our Golden State Mills for \$35 cash? You will save the cost of Mill in six months. Call and see our mill that costs but \$35 cash, or send for circular.

Send for our Special No. 14 Catalogue. We carry the most complete line of

Windmill Force Pumps and Pumps for Every Purpose, Tanks,
Pipe, Pipe Fittings, Brass Goods.

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GOLDEN STATE
WIND MILL

MERY'S IMPROVED PIONEER

BARLEY CRUSHER

Using the Benoit Corrugated Rollers.

STILL AT THE FRONT.



This Mill has been in use on this Coast for 6 years,
TAKEN THE PREMIUM AT THE STATE FAIR

Four years in succession, and has met with general favor,
there now being

Over 200 of them in use in California, Nevada & Oregon
It is the most economical and durable Feed Mill in use. I am sole manufacturer of the Corrugated Roller Mill. The Mills are all ready to mount on wagons.

TRAVER, May 3, 1887.

Having used one of the Barley Crushers manufactured by M. L. Mery, of Chico, Butte county, I can say it will do all that is claimed for it, and to those wishing an A No. 1 machine, I would recommend it as the very best I have crushed 35 tons in 11 hours' work.

J. D. GOLDEN.

M. L. MERY, Manufacturer, Chico, Cal.

I thank the public for the kind patronage received thus far, and hope for a continuance of the same.

M. L. MERY,

CHICO IRON WORKS,

CHICO, CAL., Feb. 1, 1887.

M. L. Mery, Esq.—DEAR SIR: The 9x14 Barley Crusher bought of you and used in the California Mills, gave entire satisfaction; have crushed 8000 pounds an hour. I have also crushed as much or more on set 10x20 when working for General Bidwell, which set he is using in his mill to-day. Yours truly,

GEO. SHAND.

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GRANGERS' BUSINESS ASSOCIATION,
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And upward.

ROOMS WITH OR WITHOUT BOARD.

FREE COACH TO THE HOUSE
J. POOLEY.

ONIONS.			Free Mountain.		
Pickling.....	40 @	50	N. H. defective	21 @	26
Red.....	40 @	50	S. Josquin valley	13 @	19
Silverskins.....	50 @	75	do mountain.	16 @	21
NUTS—JOBBER.			Cava's & F. H. L.		
Walnuts, Cal., lb.	13 1/2 @	14 1/2	Oregon Eastern.	18 @	25
do Ohio.	8 @	10	do valley.....	20 @	27 1/2
Almonds, hshl.	5 @	7	Southern Coast.	11 @	18
Soft shell.....	18 @	19 1/2			

Fruits and Vegetables.

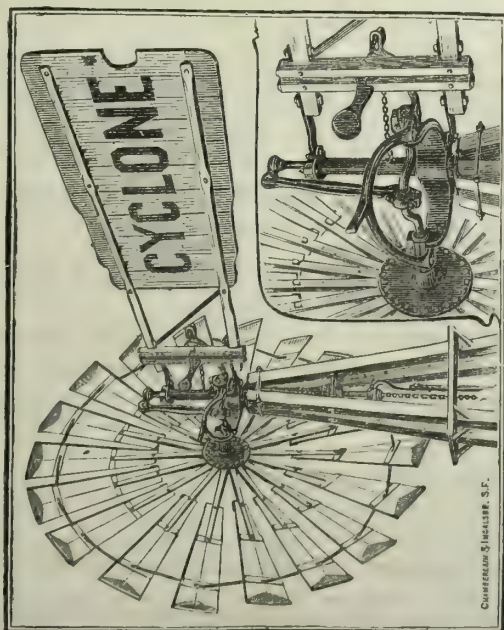
Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Aug. 10, 1887.			1868.		
Apples, bx com.	30 @	50	Fig, loose.....	4 @	6
do choice.....	50 @	1 25	Nectarines.....	8 @	10
Apricots, lb.....	1 1/2 @	1 1/2	do evaporated	16 @	18
Bananas, bunch.	2 00 @	4 00	Peaches.....	7 @	9 1/2
Blackberries, ch.	2 50 @	3 50	do pared.....	1 @	2
Cantaloupes, cr.	1 00 @	2 00	do evaporated.	5 @	6
Cherries white bx	— @	—	Pears, sliced....	5 @	6
do black bx.....	— @	—	do qtd.....	5 @	5
do Royal Ann.....	— @	—	do evaporated.	8 @	10
Cherry plums.....	— @	—	Plums, pitted....	9 @	10
Crabapples.....	50 @	—	do unpitted....	3 @	5
Cranberries.....	10 @	12 50	Prunes.....	6 @	10
Courants ch.....	— @	—	do French.....	8 @	12 1/2
Gooseberries lb...	— @	—	Zante Currants.	8 @	—
Figs, black bx.....	1 00 @	1 50	RAISINS.		
do white bx.....	1 00 @	1 50	Dehesa Olus, fcy	2 40 @	2 50
Grapes, white....	25 @	35	Imperial Cabin.	— @	—
do black.....	35 @	75	et. fancy.....	1 75 @	—
do Rose Port.....	— @	—	Crown London	— @	—
do Tokays.....	50 @	75	Layers, fcy.....	1 50 @	—
Isabel.....	— @	—	do Loose Mus-	1 40 @	—
Wine, Zinfandel	— @	—	catels, fancy	— @	—
do Mission.....	— @	—	do Loose Mus-	— @	—
Limes, Mex.....	4 00 @	7 50	catels.....	1 35 @	—
do Cal. box.....	— @	—	Cal. Valencias..	1 25 @	—
Lemons, Cal., bx	— @	—	do Layers.....	1 25 @	—
do Sicily, box...	6 00 @	—	do Sultanas.....	1 25 @	—
do Australian.	— @	—	Fraction come 25, 50 and	— @	—
Nectarines box...	50 @	75	cents higher for halves, quar-	— @	—
Oranges, Com bx	— @	—	ters and eighths.	— @	—
do Choice.....	— @	—	VEGETABLES.		
do Navel.....	— @	—	Artichokes, doz.	— @	—
do Panama.....	— @	—	Asparagus 1/2 bx.	— @	—
Peaches, bx.....	20 @	50	do ext' choice	— @	—
do basket.....	— @	—	Okra, dry, lb.....	15 @	20
Crawfish, bx...	20 @	50	do green lb.....	5 @	8
do basket.....	— @	—	Parasols, chl.....	1 50 @	—
Pears bx.....	30 @	50	Peppers, dry lb...	10 @	—
do choice.....	— @	—	do green, box...	25 @	50
Persimmons.....	30 @	75	Pumpkins prton	— @	—
Jap, bx.....	— @	—	Squash, Marrow	— @	—
Pineapples, doz.	4 00 @	5 00	do Summer bx	40 @	65
Plums lb.....	1 1/2 @	1 1/2	String beans lb...	1 1/2 @	2
Pomegranates, b	2 @	2 1/2	Tomatoes box...	30 @	50
Prunes lb.....	— @	—	do choice.....	50 @	90
Quinces bx.....	— @	—	Turnips chl.....	25 @	60
Raspberries ch.	4 00 @	7 00	Beets, sk.....	30 @	50
Strawberries ch.	3 00 @	5 00	Cabbage, 100 lbs.	50 @	—
Watermelons, 100.	3 00 @	7 50	Carrots, sk.....	35 @	—
DRIED FRUIT			Eggplant, 1/2 bx	35 @	60
Apples, sliced, lb	12 1/2 @	13 1/2	Garlic, lb.....	1 1/2 @	3
do evaporated...	13 @	14	Green Corn, cr.	50 @	75
Apricots.....	6 @	8 1/2	do sweet cr.....	75 @	1 25
do evaporated...	11 1/2 @	14	do large box...	1 00 @	1 50
Blackberries.....	13 @	13 1/2	Green Peas, lb...	— @	—
Clifton.....	28 @	30	Sweet Peas lb...	2 @	3 1/2
Dates.....	9 @	10	Lettuce, doz....	10 @	—
Figs, pressed....	6 @	7 1/2	Lima Beans lb...	— @	—
			Mushrooms, lb...	8 @	20
			Rhubarb bx.....	— @	—

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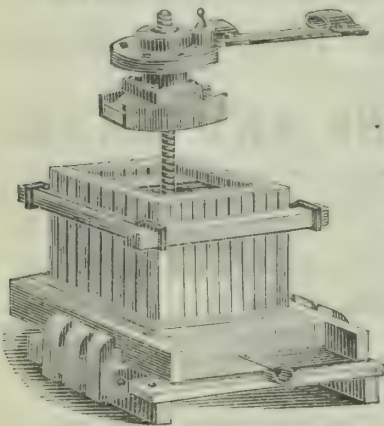
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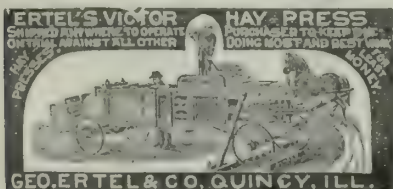
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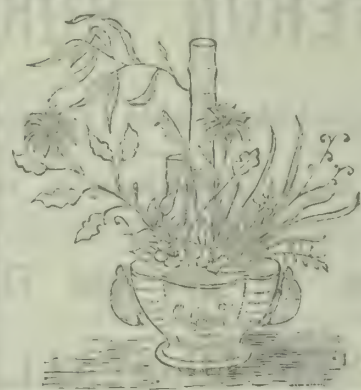
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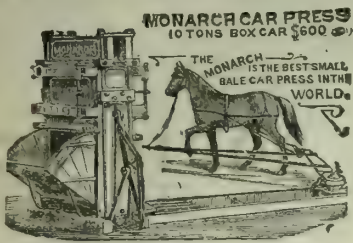


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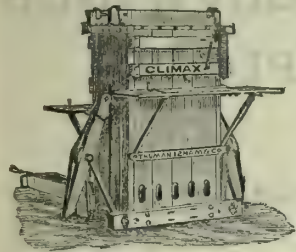
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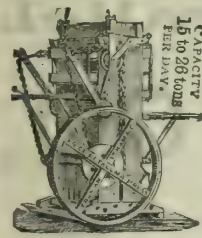


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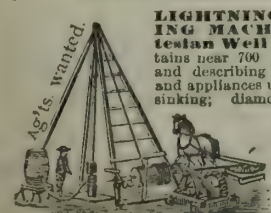
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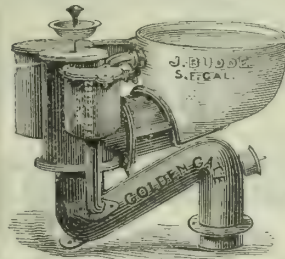
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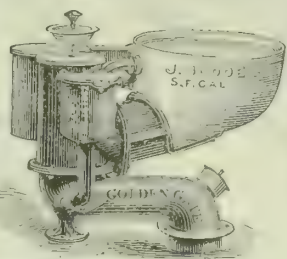
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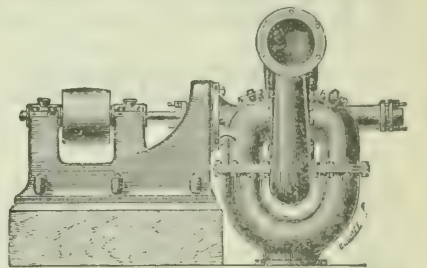
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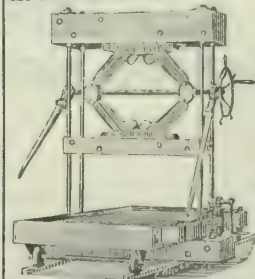
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I desire to call the attention of wine and cider makers to my Improved Press. The follower has a movement of 26 1/2 inches, the first revolution of the screw moves the follower 1 1/2 ins., the last revolution is but 1-16 of an inch, thereby the power increases in the same ratio as the resistance. The platform is 50 inches wide and 10 feet long; is run back and forth under the press on a railroad track.

Has two baskets, by which you can fill the second basket while the first one is under the press, thereby doing double the amount of work that can be done on any screw or lever press in the market that use only one basket, for this reason: While my press is working continuously the other kinds are doing nothing during the time they are emptying and filling their basket.

Printed Testimonials can be had on application of the following parties, who have bought my press: J. B. J. Portal, San Jose; Wm. Pfeiffer, Guberville; Joseph Walker, Windsor; Kate F. Warfield, Glen Ellen; Joseph Drummond, Glen Ellen; Isaac De Turk, Santa Rosa; John Hinkelman, Fulton; J. & F. Muller, Windsor; R. C. Stiller, Guberville; Lay Clark & Co., Santa Rosa; Vache Freres, Old San Bernardino; J. F. Crank, San Gabriel; James Finlayson, Healdsburg; P. & J. J. Gobbi, Healdsburg; Wm. Allen, San Gabriel; Wm. Metzger, Santa Rosa; J. Lawrence Watson, Glen Ellen; Walter Phillips, Santa Rosa; Geo. West, Stockton; Eli T. Sheppard, Glen Ellen; Ranchito Wine Co., Ranchito, Los Angeles Co.; Downing Fruit & Wine Co., Downey; J. L. Beard, Centerville; Wm. Palmatier, Hollister; A. Burnham & Son, Santa Rosa; Paul O. Burns Wine Co., San Jose; E. Emil Meyer, Santa Cruz Mountains, Wright P. O.; Marshall & Hill, Laguna Station; R. J. Northam, Anaheim.

Also manufacture Worth's Patent Hand and Power Grape Stemmers. W. H. WORTH, Petaluma Foundry and Machine Works, Petaluma, Sonoma Co., Cal.

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THE ONLY GENUINE SAW-YER'S Oil-Tanned, Waterproof, hand-sewed Buckskin Gloves manufactured on the Pacific Coast are made by the WATERPROOF GLOVE CO., West Oakland, Cal. The Handsewed Harvest Buckskin Glove will be sent by registered mail at our risk on receipt of \$1.25. Money will be refunded for every pair that does not give satisfaction. Send your address, and price list of other styles, with samples of the Buckskin used, will be sent

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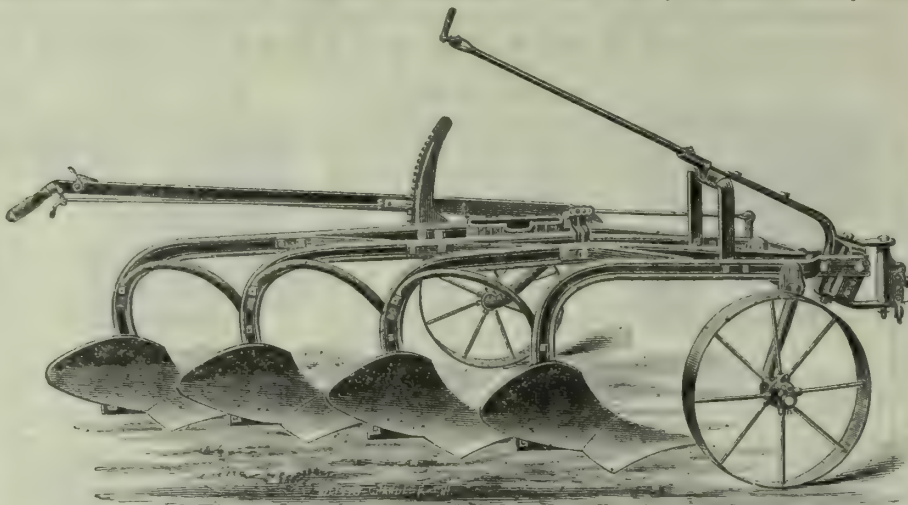
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FOUR
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FIVE
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EIGHT, TEN
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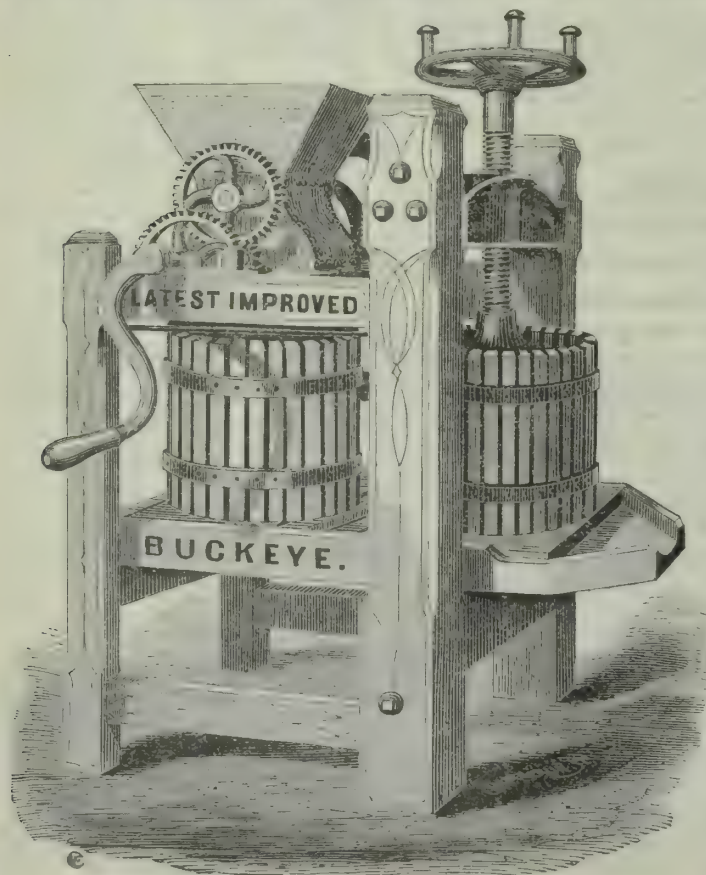
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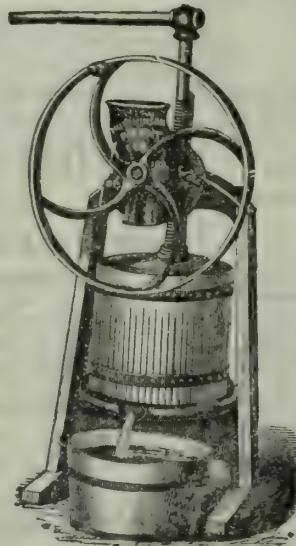
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These Mills are constructed upon a principle entirely different from other portable mills now in the market. It is embraced in a single frame 2½x3 feet, has a two-inch wrought-iron screw, is neatly and substantially made, is conveniently moved from place to place, is easily worked by hand. Two men can grind and press from six to ten barrels per day. This mill crushes apples instead of grinding, as most others do. It has three cast-iron cylinders with straight fluted ribs, the first or upper cylinder crushing the apples into a coarse pomace and then feeding it through the lower cylinders, which crush it into a fine pomace, it being impossible for any to pass through without being thoroughly crushed. You may finely grate or cut an apple, but unless particles are bruised or mashed you cannot press out the cider.

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Buckeye, No. 1, 358 lbs. \$50 00
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HUTCHINSON'S FAMILY CIDER PRESS.

Hutchinson's Family Cider Press will grind from six to eight bushels of apples, and from ten to twelve bushels of grapes, currants, etc., per hour. One man can make with it from two to three barrels of cider, or from 100 to 150 gallons of wine per day.

It is the neatest, simplest, can be easily handled by one man, and is just the thing for grocers and fruit dealers.

This mill weighs 150 pounds.

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No. 0, 102 lbs. \$20 00
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CIDER PRESS SCREWS.

We are manufacturing a superior wrought-iron Screw, of which this cut is a representation. These screws are made of the very best quality of iron, with fine threads, and nuts cut through solid metal, which render them very powerful and durable, and are warranted to have as much, if not more, strength than any other like screw of the same dimensions.

Hutchinson's Wrought-Iron Screws.
24 in. long, 1½ in. diameter. \$4 00 24 in. long, 1½ in. diameter. \$9 50
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Sonoma County.

Next week the program of the fairs will call the throng of visitors to Santa Rosa, where the county fair of Sonoma county will be in progress. There is reason to expect unusually good things from Sonoma county this year in spite of the signal triumphs of the past. The seed sown by a few enterprising residents of the county by their displays of county products under the auspices of Pomona Grange has grown and borne good fruit in the new life and enterprise which has come to the development of the county. It will be remembered that the first gathering of products, after full local display, was sent East and abroad, and its influence in calling the world's attention to the county has never ceased. Fortunately, too, these energetic pioneers in the work of county exhibits have continued their work and their later achievements have far surpassed their early efforts, and thus the enterprising work has grown year by year, displaying new excellence and extending to an ever-widening circle of influence. This year's work will, we expect, attain a still higher standard. As the value of such efforts in attracting attention of enterprising, capable, and energetic people to investment within the borders of the county, more people are drawn to the support of such efforts and those who labored nearly alone in gathering the first display find many to aid them now. All the more honor pertains to the path-finders in this enterprise. Sonoma has always appeared to us one of the grandest counties in California. Its area of good land is large; its diversity, from the enduring pastures of the coast to the warmth of sheltered hillsides, the rich broad valleys and the deep alluvium of its river-bottoms, welcomes almost every agricultural industry to successful enlistment within its borders; its products and resources, aside from the outcome from cultivated fields, its great forest enterprises, and its dairy products and its wool from mountain pastures—all these, and more, make Sonoma almost a kingdom in itself. All it has needed for years has been an infusion of spirit and enterprise to develop its resources, and these during the last few years have rallied to its support in a most satisfactory manner.

Judging from recent reports, the past year has been one of great accomplishment in Sonoma. The growth of the chief towns has been very satisfactory, and it is growth of the right kind, steady appreciation and improvement, which pave the way for enduring prosperity. Santa Rosa, the county seat, where next

week's fair will be held, has long been famous for its natural beauty, in part due to its delightful climate, but of late there has been in progress measures of internal improvement, the betterment of streets and means of conveyance, lighting, dust-laying, etc., which have been a most excellent setting for the architectural gems in business and residence structures, which have risen since newer life has come to the town. One who goes to Santa Rosa next week will see sights which will delight and encourage and create most favorable impressions

ally charmed and held fast by personal investigation. All those who do not care to yield allegiance to her charms should keep their eyes from the sight of them. Those who are ready and willing to be won by delightful natural conditions and by cordial people should visit the county, and a good place and time for beginning will be at the Santa Rosa Fair during the coming week.

POOR FLORIDA.—We are disposed to sympathize with our sister beside the Gulf in her

A California Almond.

Almond-growing seems to be coming upon a much more satisfactory basis in this State than it held a few years ago. It was for some time a question why the thousands of trees which were finally cut out, or worked over into other fruits, chiefly prunes, were unproductive. First, the general verdict seemed to be that the matter of situation or exposure was a prime factor in success with almonds. Later it has come to be considered very largely a question of proper varieties. Whether both

these considerations pertain, and which is the more important, cannot, perhaps, be definitely settled yet, but enough has been learned to warrant almond-planting in many parts of the State, providing a trustworthy bearing variety is secured. Fortunately we have a large number of well-tested seedlings in the State, notably those of Mr. Hatch, which have been frequently alluded to in the RURAL.

We give on this page an engraving of the "Commercial" almond, which originated in Tulare county and has been propagated for a number of years, in a small way, in different parts of the State.

The tree possesses marked and very distinctive characteristics. It is of a peculiarly sturdy growth, the wood being much larger than that of other varieties of



A CALIFORNIA SEEDLING ALMOND—THE COMMERCIAL.

of California spirit and progress. One thing which pertains to recent development in Sonoma county is improved means of transportation and travel, linking more closely the valleys and bringing the whole county into more direct communication with overland highways. This need was urged by enterprising citizens of Santa Rosa valley, and their efforts have resulted in road-building now in progress which will give Sonoma county advantages of egress and ingress which she has not enjoyed hitherto. The line of the Sonoma Valley is being extended through the upper end of the valley to Santa Rosa, and a branch from Santa Rosa to the main line of the Southern Pacific system is also being pushed through. Still her splendid water transportation remains, and with her new rail routes Sonoma will be better circumstanced than many of our counties in the access for her products to various markets.

Just now real estate movements in Sonoma county, and especially adjacent to Santa Rosa, are especially active. The county is being popularized by the energy of real estate men, and the attention of thousands, who might otherwise be left ignorant of the advantages of the county, is being attracted. One excellent thing about Sonoma is, that visitors are gener-

ally charmed and held fast by personal investigation. All those who do not care to yield allegiance to her charms should keep their eyes from the sight of them. Those who are ready and willing to be won by delightful natural conditions and by cordial people should visit the county, and a good place and time for beginning will be at the Santa Rosa Fair during the coming week.

POOR FLORIDA.—We are disposed to sympathize with our sister beside the Gulf in her

many bereavements and afflictions. Her cup was not full, it seems, when she lost her winter-boarder business, and the hosts came to plant the boom idea in Southern California, where it flourishes far more vigorously and substantially than it ever did in Florida. But it was not enough to be left deserted and alone off in her corner on the way to nowhere. Even greater humiliation is to be heaped upon her. It is telegraphed from New York that a sort of an agricultural spy, sent out by the Italian Government to see what American enterprise is doing and can do in the production of Mediterranean fruits, reports that "Florida soil is not fit for the growth of oranges," anyway. This is the unkindest cut of all, except the slur which the New York Sun tacks on to the Italian's statement, that "among all the individuals whom we know to have invested money in Florida orange groves, we cannot recall one who grew rich." Again we are disposed to exclaim: Poor Florida. Pine on your barrens. Lock your doors and sink your keys in the Gulf.

ADMISSION DAY.—Gov. Bartlett has issued a proclamation appointing Friday, Sept. 9, 1887—the anniversary of the admission of the State of California into the Union—a legal holiday.

almond. It retains some of its leaves all the winter, and therefore has been called almost an evergreen. It is very prolific, the out showing its ordinary way of bearing, but only about six-sevenths the natural size of the nuts.

The almond is assuming so much importance in the State at the present time, especially, as noted above, those varieties of California origin which are found to far supersede the European sorts, that a promising almond like the "Commercial" is of peculiar interest. Mr. Leonard Coates of Napa, who is propagating it, thinks it is the largest almond known, and as such it must be of great commercial value. It is thin-shelled and the kernel sweet and delicate in flavor.

PLUMS AND PRUNES.—This will be the subject for discussion at the next meeting of the State Horticultural Society, which will be held at the new rooms of the State Board of Horticulture at 220 Sutter street, on Friday afternoon, Aug. 26th. Messrs. S. F. Leib and J. H. Flickinger of San Jose were invited to be present and take part in the discussion. All interested in fruit-growing are invited to be present.

THE Union Iron Works of this city have secured the Government contract for building another of the five new cruisers.

FLORICULTURE.

In a Ventura Garden.

EDITORS PRESS:—Among the floriculturists of California we find Mrs. Theodosia B. Shepherd of San Buenaventura taking a high position, and it is with much pleasure that we recall the fact of a recent visit which we paid to her residence and flower garden, and a conversation we had with her with reference to many kinds and varieties of plants we saw growing and blooming there, and especially some interesting observations on quite a number of new seedling carnations originated by her.

The grounds of the garden are in the eastern part of the city, fronts 200 feet on north side of Main street and runs back 400 feet, slightly sloping to the south, and, owing to its position near the main business avenues of the place and its charming display of sweet, rich flowers, it furnishes to visitors one of the most superior objects of interest to be seen within the city limits.

Mrs. Shepherd is, throughout the country, considered standard authority on the subject of varieties, exercises most excellent judgment in selecting the most valuable flowering plants for her large collection, and pays much attention to the addition of new varieties by growing seedlings from imported selections. She is largely engaged in growing seeds and bulbs of finest flowers for Eastern seedsmen. Possessing the rare advantages afforded by the peculiarities of the climate of Southern California, she has the ability to raise the seeds of a very wide range of kinds and varieties in the open grounds, when European florists would be obliged to grow in pots, making the rearing more expensive and the results much less satisfactory. Plants here in the open grounds have the benefit of ample room for roots, the great moisture of the atmosphere at night and the unobstructed sunlight of clear weather in most of the daytime, and in return grow their seeds to full maturity and perfection.

Among seeds, there are none more important to florists than those of the stock family, and especially the variety known as Giant Perfection, and while this fine flowering plant is most beautiful as a double flower, we should, of course, remember that all the seeds of stocks are grown from single flowers, as the double flowers are unproductive. We notice the extremely graceful habits of the growth of the Giant Perfection, this display of elegance being due principally to the long stems of the individual flowers. In this garden single flowers of this variety measure two inches across. Its habits of growth, the size of its flowers, its beauty of color and its perpetual blooming qualities, render this variety the king of all stocks. Mrs. Shepherd has grown many others, and says that if she were confined to one variety she would choose this one. We notice some volunteer plants from seeds of this variety which had fallen to the ground, and out of 30 we counted 24 double, and we may regard all as of first class.

In passing through Mrs. Shepherd's brilliant display of carnations—about 70 varieties—we observe a number of seedlings originated by her, all named and of most beautiful description, and will detail a few of the striking characteristics of some of the most valuable as follows:

Deademona—Color, soft, melting peach-pink, of deep shade, fringed, very large and regular in shape; most exquisite.

Mrs. Hamer—Pink, specially fine for corsage bouquets, 3 inches across.

Mrs. Page—Flat petals; very waxy pink; perpetual bloomer.

Romeo—White splashed and edged with wine color.

Mattie K. Saviers—Flesh color, splashed and dotted with wine.

Eva J. Leach—Flesh color, splashed and dotted with carmine.

H. C. Ford—One of the handsomest seedlings she has. A magnificent carnation of the Lydia type, of very large size. Lighter shade of salmon than the Lydia, marked and splashed with carmine, more distinct in the splashing of carmine. Named after the well-known artist, H. C. Ford of Santa Barbara.

Caroline Severance—Flowers very large, hang on long stems like great bells; combination of silver-gray and rose colors with a sort of metallic luster.

Dr. Dimmick—Rich carmine, with maroon pistils, beautifully shaped. Named for the late Dr. Dimmick.

Melia Newby—Rich, velvety maroon, fluted and fringed.

Ruth Morris—Daintily white, small, very pretty.

All these are fragrant and very handsome, with long stems, and most of them very fine winter bloomers.

Mrs. Shepherd has also some very handsome carnations, originated by a lady friend at this place, among which we will mention:

Dainty Darling—Nankeen salmon.

Maude Tait—Very large, peach-pink, not fringed. Both the above imbricated like the Hermosa rose.

Myrtle—Soft rose color, very large and deeply fringed; named for Mrs. Shepherd's eldest daughter.

Flavia—Pale yellow, with white stripe on each petal; imbricated.

There is one more seedling carnation, originated and named by Mrs. Mattie K. Saviers

of Hueneme, that we feel impelled to mention because of its exceeding beauty, viz.:

Theodosia B. Shepherd—Color, rose-pink, shaded with buff-salmon; has salmon center; stems long. A very distinct carnation, with one of the most striking and beautiful combinations of colors.

We see here a very handsome display of grandiflora verbena in variety, from some of which we take single flowers large enough to cover a 25-cent piece. We see some very large flowering petunias of rare qualities, presenting a profusion of lovely shades and colors.

Of chrysanthemums, Mrs. S. has at least 50 varieties and is able to raise two crops a year. She has some extra fine seedlings, one or two of which we must mention. One named Lamanda, for Mr. and Mrs. L. J. Rose of San Gabriel, from one of the Japanese varieties, a light yellow; another, Shower of Gold, which, when in full bloom, is described as literally looking like a shower of gold.

Mrs. S. has about 120 varieties of the fuchsia, and knowing, as all do, the very delicate texture of the flower of this lovely plant, with its white, wax-like, reflexed outside petals and richly colored centers, with its great range of shades, one may well imagine the striking effect of such a beautiful display as is here presented. She is experimenting on the propagation of new varieties in the practice of hybridizing, in anticipation of being able to produce striking results, and promises to report to the RURAL PRESS any novelties she may be able to produce.

Of the Amaryllis she has 16 or 17 varieties; also a large collection of Lady Washington geraniums and begonias in variety, and many of richest markings.

Mrs. Shepherd has succeeded in producing a double Canterbury Bell, exhibiting a marked peculiarity of flower—five distinct bells in each individual flower, one inclosed within another, the mouth resembling a rosette; the color a soft lavender tint; grew from seeds of last year. It has this year produced seeds which suggests the great probability of its peculiarity being perpetuated.

Mrs. Shepherd being a great collector of the best and most beautiful plants, we see here very many kept and cultivated only to fill out a collection of high order.

Admirers of the cactus family would here find a little world of those wonders of the vegetable kingdom, and we will mention by name the *Cereus triangularis*, a noted individual plant of which runs up at one of the front corners of the dwelling-house, very regular in its ascent, lying close against the wall and rising to more than the height of 20 feet. This is a most curious and beautiful object, and very attractive from its dark-green color and magnificent form, keeping a regular size from the ground to the terminal growth.

A noble specimen of the California fan palm tree stands in front of the house, and a handsome row of palms by the sidewalk in front of the garden, and on the inside a heliotrope hedge, with its dark-green leaves and lovely flowers.

Mrs. Shepherd has a quiet and attractive home, opening out from the rear of the dwelling into the garden, and, thus surrounded by the delightful influences of some of nature's most exquisite designs in the floral world, she and her family enjoy their happy lives.

Ventura Co.

McD.

THE STABLE.

The Horse in San Luis Obispo County.

The increase of population, the subdivision of the great ranches, and the appreciation in values of land demand progressive industry in husbandry. The history of San Luis Obispo shows it the most favored region in California for grazing, and the rearing of stock has ever been the chosen and most profitable avocation of its land-owners. In this great fortunes have been made, and the old residents now revert with tender feeling to the happy period of the past when their vast herds of cattle grazed at will over the broad ranches and fattened upon the succulent grasses. Comparatively few were the people dependent upon the products of the land, and their wants were so abundantly and so easily supplied by the self-producing and almost self-caring herd that little thought was given for improvement, and a better condition was deemed impossible. This was an idyllic state of happiness, a condition which to change was to destroy. But the world moved, a new population thronged to the grassy slopes of the Pacific and the change was inevitable. For long years San Luis Obispo maintained its isolation and its customs, ranking from the earliest time to the latest date as the great "cow county" of California.

A Great Step Forward

Was in changing from a cattle-growing region to dairying, and in that it has taken rank as the leading butter county of the State. These leading positions, cattle-growing and butter-making, are because of its superior grazing capabilities, its fertile soil, pure water and healthy climate. The country so favorable to cattle-growing is equally favorable to the rearing of horses, by far the most valuable animal, according to its kind, at the present day. In the cattle-breeding times, prior to the American conquest, the rancheros of San Luis Obispo boasted of their fine horses of the Spanish stock, descendants of the noble blood of Bar-

bary, imported by Cortez. But running wild and breeding indiscriminately it had so deteriorated that good animals were rare, and but little effort was made to improve them. They were condemned by the American immigrant as valueless mustangs and their rearing abandoned to the most thriftless of rancheros. Under this ban the native stock has almost vanished from sight. But there were some good horses in the olden time, and with proper breeding with suitable American horses a fine stock of roadsters were produced, excellent for the stage and ordinary work. In the history of the conquest of California is related the

Famous Ride

Of Col. Fremont and Don Jose de Jesus Pico from Los Angeles to Monterey and return, in March, 1847, a total distance of 840 miles, in 76 hours, using one relay of horses. From San Luis Obispo Colonel Fremont took two horses, a present from his friend Pico, riding one or the other alternately. Upon arriving at Monterey, he was ordered to return immediately to Los Angeles, and the departure and ride to San Luis Obispo is thus graphically told by Father Colton in his book at that time, as an example of the spirit and endurance of the horses of the period:

"At 4 o'clock in the afternoon of the day preceding their arrival, the party were ready to set out on their return. The two horses rode by the Colonel from San Luis Obispo were a present to him from Don Jesus, who now desired him to make an experiment with the abilities of one of them. They were brothers, one a year younger than the other, both of the same color—cinnamon—and hence were called

El Canelo or Los Caneles.

"The elder was taken for the trial, and led off gallantly as the party struck the plain which stretches toward the Salinas. A more graceful horse, or one more deftly mounted, I have never seen. The eyes of the gathered crowd followed them till they disappeared in the shadows of the distant hills. Forty miles on the hard gallop and they camped for the night. Another day and the elder canelo was again under the saddle of Colonel Fremont, and for 90 miles carried him without change and without apparent fatigue. It was still 30 miles to San Luis, where they were to pass the night, and Don Jesus insisted that canelo could easily perform it, and so said the horse in his spirited look and actions, but the Colonel would not put him to the trial, and shifting the saddle to his younger brother, the elder was turned loose to run the remaining 30 miles without a rider. He immediately took the lead, and kept it the whole distance, entering San Luis on a sweeping gallop and neighing with exultation on his return to his native pastures. His younger brother, with equal spirit, kept the lead of the horses, under the saddle, bearing on his bit and requiring the constant check of his rider. The whole eight horses made the 120 miles each in this day's ride, after having performed 40 the evening before."

This celebrated ride has formed the basis of many speeches and tales eulogistic of the riders and the endurance of the native California horses, commonly derided as mustangs.

After the Conquest

And the influx of Americans upon the discovery of gold, the horse of the new-comers took precedence, and no effort was made to improve the Spanish stock. San Luis Obispo continued a "cow county," and the native horses served the purpose of the vaquero. Vehicles were rare and draft horses not required. As a saddle horse in herding cattle, the hardy mustang was the animal that pleased the people. Occasionally an American stallion was brought into the county, but little attention, however, was paid to breeding, and the results were hardly appreciable.

Not until 1875 was any determined effort made to improve the stock of horses in this county. Then Mr. H. S. Rembaugh, one of the proprietors of the *Tribune*, who, in his paper, had often animadverted upon the wild manadas and runs of stallions running over the unfenced valleys and hills of the luxuriant pasture-land, breeding a stock of horses that were an eye-sore to men of enterprise, determined to make an effort to change the order of things. He therefore went to the famous blue-grass region of Kentucky, noted for its fine horses, and conferred with Gen. Withers, a distinguished turfman and expert in horse-flesh, and under his advice purchased the well-bred stallions

"A. T. Stewart" and "Altoona."

Mr. Rembaugh was impressed with the belief, which is entertained with good judgment at this time, that California was destined to become the breeding-ground of the finest race of horses the world ever saw, and that San Luis Obispo possessed peculiarly favorable advantages for taking the lead in the enterprise. His evidence of that faith was his venture of investing his fortune in the work, inaugurating the movement of progress with the utmost confidence of success. His steps were well taken, and if his pecuniary reward was not commensurate with his enterprise, the honor of the achievement must be awarded him.

Returning with these, he started a stud-farm on the southern borders of the town of San Luis Obispo. The horses were noble specimens of their race. A. T. Stewart was described at that time—the spring of 1876—as a beautiful dark brown, with tan muzzle and flanks, four years old, 16½ hands high; good length, bone and substance, weight 1285 pounds, of com-

manding presence and speed and action in keeping with his high breeding. He was sired by the celebrated getter of trotters Mambrino Patchen, full brother to Lady Thorne and sire of Lady Stout, three-year-old record, 2:29, the fastest time ever made by a three-year-old. First dam the Harris mare by Mambrino Chief, sire of Lady Thorne, second dam by Young's Pilot, Jr., son of the famous trotter Pilot.

This excellent horse was put to service, remaining a few years, producing a fine succession of colts, strongly resembling the sire, of good size, free, fleet and strong. The stock is frequently seen in the county and is the pride of their owners. But the time had not come to make fine horse-breeding profitable, and Mr. Rembaugh, meeting the usual fate of pioneers in enterprise, failed and the noble animal was sold and taken from the county.

Altoona

Was but a yearling when brought to San Luis Obispo. A beautiful bay, a fleet trotter and a lofty carriage, he has grown to be the pride of the county, now being the property of Hon. George Steele. Altoona was foaled in 1875 on Fair Lawn stock farm, Lexington, Kentucky, the property of General W. T. Withers, the breeder of A. T. Stewart. He was sired by Almont, son of Abdallah (sire of Goldsmith Maid). Altoona's dam was Theresa B by Prophet, Jr., a descendant of Vermont Blackhawk. Almont's dam was by Mambrino Chief, second dam by Pilot, Jr., thus showing a distant relationship to A. T. Stewart.

As these high-bred trotting horses were the pioneers of their time and of the first to give character to horse-breeding in the county, their pedigrees have been given, a distinction which space will not permit for the many excellent horses that have followed them in the field. The list is now a long one and comprises different breeds, English thoroughbreds, Normans, trotters, etc.

Of these high-bred and valuable stallions may be named Silver Duke, Fallon, Crown Prince, Jr., Debay, St. Elmo, Moreau of the Norman stock, Sir Edgerton, English thoroughbred, Electioneer, Duke McClelland, Adjutant, Alexander, Jr., Alallen and A. T. Stewart, Jr., of the trotting stock, and others, progeny of those named. There are also others not so well known but of great value.

At the Present Day

There are a great many fine horses in San Luis Obispo. Wheeled vehicles have taken the place of the saddle in transportation, and the teams seen to day are a great improvement on those in use but a few years ago. The revolution in horse-breeding is effected, and the people are beginning to appreciate the results. It remains to consider the business as profitable husbandry. No one will question the assertion that this coast region is most particularly adapted to the rearing of stock. Horned cattle have been the resource of the past, and will not a higher grade of animals become a much

Profitable Production?

The land that has made its owners fortunes in growing vast numbers of low-priced animals will make a greater fortune in growing more valuable ones. Breeders well say that it costs little, if any, more to raise a horse that will sell for \$250 or \$500 than to raise one that will sell for but \$25 or \$50. There are many farms from 200 to 500 acres where but a bare living could be made in growing wheat or hay or in dairying, but should these be stocked with a good class of brood mares to be bred with a first-class stallion, a horse to every 20 acres could be sold every year. All the brood mares could be worked the greater part of the year carrying on the farm or teaming, and earning the support of the farmer's family, having the returns of the stock sold as a net income. To no better use could good pasture or hay land be put. Of course capital would be required to stock such a farm, according to its acreage and the style of stock put on it or bred from. Brood mares costing \$100 each and paying from \$20 to \$30 service can bring colts worth at three years old from \$200 to \$500 each at lowest rates and often much higher. Good draft horses sell readily at from \$400 to \$800 a span in the large cities, and first-class carriage horses command fancy prices. As the country advances in wealth and the cities increase in population more fine horses are demanded, and

The Market

Is continually enlarging. In this there is never an oversupply, nor is the market endangered by foreign competition. In this healthy climate dangerous diseases are unknown, and should any appear the horse is easiest guarded or removed of any species of stock. Should a disastrous drought prevail the horse is able to earn his own living on imported food or go where there is better. Thus the business is less liable to danger than any other branch of husbandry, and moreover is the most pleasant as the horse is so helpful, so handy, the companion and pride of man. From the earliest dawn of civilization the horse has borne this relationship to the master of the animal kingdom. The general in the field at the head of an enemy is a pigmy on foot, but becomes a power and demi-god when mounted on his prancing charger. The horse is the ideal of grace, of courage, of majesty and of power. He is man's help-meet in labor and his crown of glory in pleasure. While man lives the horse will be his pet and companion, and for him he will pay all the price his purse can bear.—*Myron Angel in San Luis Obispo Tribune.*

THE FIELD.

Sugar Beets at Fresno.

University Experiment Station, Bulletin No. 72.

The culture of the sugar beet in the San Joaquin valley has until lately remained a bare suggestion. It is well known that they have been successfully grown near Isleton and Sacramento, on the moist lands of the Sacramento river, on which irrigation is unnecessary. It is doubtful that the sugar beet has ever been cultivated where irrigation is indispensable, and this fact, as well as the high summer temperature of the southern valley, has discouraged the attempt. In fact, the very idea of a root filled full of irrigation water, and then wilted by the torrid heat, is enough to excite the antipathy of the manufacturer.

The success of the sugar beet in Los Angeles, however, encouraged the hope that with a proper selection of soil and of the time of planting and irrigation, a root suitable for the sugar-maker might be produced in the San Joaquin valley; and, if so, that the crop might be made to supplement that of the coast valleys so as to prolong materially the annual campaign, the shortness of which is a heavy charge on the capital invested in the somewhat costly plant of beet-sugar factories. As stated in a paper on the subject, published in the December number of the *Overland Monthly*, the campaign period in Europe usually does not much exceed three months—October, November, December—while in California, owing to the favoring climatic conditions, there is no difficulty in lengthening it to the five months from September to January, both inclusive. If by early sowing in the precocious season of the Upper San Joaquin two or three months more could be added to the time of campaign, it would place beet-sugar production in this State on a ground of vantage from which it might calmly defy the competition of its tropical competitor, the sugar-cane.

Preliminary experiments to test the feasibility of growing good sugar beets under the condition of the Fresno climate have, during the present season, been made by Mr. M. Denicke of Fresno. Mr. D. obtained last autumn from Mr. Dyer of Alvarado, some reliable sugar-beet seed, and sowed it at intervals from December to April. The results of the examination of three lots, planted and harvested as stated below, were as follows:

Lot No. 1.—Seed sown in December, harvested May 27th. The lot consisted of four roots, two of which (A) showed just an indication of new growth starting in the center, while in the two others (B) a short seed-stalk was already formed, so that they had evidently passed the proper stage for sugar-making.

Lot No. 2.—Two beets from seed planted early in April by Mr. L. J. McCleary, on sandy, ashy soil on King's river, six miles east from Selma. Harvested June 26th. Little or no indication of new growth starting.

Lot No. 3.—Two roots. Seed sown about March 15th, on "white-ash" soil. Harvested June 29th. Somewhat fresh-looking in the center but no serious show of new growth.

Lot No. 4.—Date of sowing not stated. Roots in good apparent condition. Harvested August 4th. The assays resulted as follows:

ASSAYS OF FRESNO SUGAR BEETS.					
Lot.	No.	Sown.	Harvested.	Average Wt. of Beets.	
				Purity.	Per Cent.
Lot No. 1	A	Dec.	May 27	21	10.1
Lot No. 1	B	Dec.	May 27	24	7.0
Lot No. 2		Apr. 10	June 26	18	10.5
Lot No. 3		Mar. 17	June 29	22	12.6
Lot No. 4		?	Aug. 4	25	13.2

With regard to the data in this table it should be stated for the benefit of the general reader that roots having an average of 10 per cent of cane sugar and a purity coefficient of 80 (that is, 80 per cent of cane sugar in the total solid contents of the juice) would be considered a fair workable material by the sugar-maker. But a higher sugar per cent in the juice may offset a lower degree of purity, and vice versa.

It will be noted that the average of the three first lots (leaving out of consideration lot 1, B) is 11.1 per cent of sugar with a purity coefficient of 81.4; they are therefore amply within the limits stipulated by the sugar-maker. As for lot 1, B, the fact that the roots had begun to throw out seedstalks shows at once that they had passed beyond the limits within which the crop should have been harvested. I conjecture that this growth had been started by untimely irrigation. As for lot 4, although it shows a somewhat higher sugar percentage than No. 3, its lower purity coefficient would nevertheless render it less desirable as it stands; but the appearance of the roots suggests in this case, also, that the time for harvesting had passed by.

Considering that the persons growing these beets were without experience in the premises; that, in fact, irrigation has probably never been before applied to the production of sugar beets; and that the right time and the proper amount must in this case be considered as at least equally as important as in the case of wine grapes, the results thus obtained are exceedingly encouraging. They imply that in Middle California the working campaign for sugar

beets can very probably be extended through the months of June, July and August, making it reach from June 1st to February 1st; and considering that the beets of the first lot had already passed their best condition by a week or two, and that with somewhat improved arrangements for the preservation of the late-grown beets they can probably be carried to the middle of February, we can foresee the possibility of such an extraordinary feat as an eight-months' campaign of a beet-sugar factory, running on fresh beets. With the additional possibility of utilizing beets sliced and dried under the same conditions as the raisin crop, the full 12-month may ultimately be called into requisition.

It must, however, be remembered that in order to realize such results, it must be feasible to bring the beets of the San Joaquin valley and those of the coast valleys within reach of one and the same factory plant. The roots will not bear railroad transportation to any distance; but with cheap water transportation it might be feasible to let the crops of Fresno and Merced start up the factories located in the upper bay region, in June, and to keep them running until the middle of February by supplies from the coast region.

It is to be hoped that more extended and carefully guarded experiments will be made the coming season, even if the omission of Congress to render the Experiment Station bill effective by means of an appropriation should not be made good in time. E. W. HILGARD.

Berkeley, Aug. 12, 1887.

The Hessian Fly and Resistant Grains.

In Bulletin No. 58 of the University Experiment Station (issued Oct. 9, 1886) is given a sketch of the results of an experiment made in 1886 to test the resistance of a large collection of grain varieties to the attacks of the Hessian fly (*Cecidomyia destructor*). The annual report for 1886, which is now nearly ready for distribution, will contain a fuller account of the same experiment. For the purpose of verifying the results of last year, and at the same time to determine other points in view, the full collection of cereals was resown in 1887, on the same fly-infested ground. In addition to the varieties sown last year, there were a number of new sorts, some selected with special reference to their supposed resisting quality.

The present announcement is for the purpose of giving early notice of the varieties which gave best results, and in some cases to compare the outcome of two years' trial. A full consideration of other points involved in the experiment will be reserved for the next annual report. The following table gives the behavior of certain varieties of wheat under attack by the Hessian fly:

VARIETIES OF WHEAT AND THE HESSIAN FLY.		
Name of Variety.	1886.	1887.
	Sown February 25th.	Sown January 24th.
Missoyen	Small crop, but no fly found.	Good crop; no fly.
Palestine	Fair crop; no fly.	Good crop; no fly.
Petali	Fair crop; no fly.	Good crop; no fly.
Volo	Good crop; no fly.	Good crop; no fly.
Atlanti	Small yield; no fly.	Good crop; very few flaxseeds.
Forelle	Fair crop; no fly.	Fair crop; no fly.
Common March	Fair crop; very few flies.	Good crop; no fly.
Diamond		Good crop; no fly.
Ex. Early Oakley	Failure; abundantly infested.	Good crop; very few flies.
McGeehee's White	Failure; largely infested.	Good crop; no flies.
Polish	Fair crop; somewhat infested.	Good crop; no flies.
Red Sea	Failure; badly infested.	Good crop; no flies.
Victoria	Not sown.	Good crop; no flies.
Brenner White Club†	Not sown.	Poor yield; no flies.
Winter Crimea	Not sown.	Good crop; no flies.
Nicaragua	Not sown.	Good crop; very few flies.
White Genesee	Fair crop; slightly infested.	Fair crop; very few flies.
Raub's Black Prolific	Not sown.	Good crop; no flies.
Winter Fulcaster	Not sown.	Good crop; no flies.
Russian Red Beard	Not sown.	Good crop; some flies.
Centennial Black	Nearly destroyed.	Good crop; some flies.
Big White Club, Oregon	Poor; abundantly infested.	Good crop; few flies.
Diehl's Mediterranean	Failure; abundantly infested.	Fair crop; few flies.
Egyptian	Failure; abundantly infested.	Good crop; few flies.
Faltz	Failure; somewhat infested.	Good crop; some flies.
Improved Circassian	Fair crop; somewhat infested.	Good crop; very few flies.
Little Club	Very poor; badly infested.	Good crop; very few flies.
Mammoth	Very poor; badly infested.	Good crop; very few flies.
Nonette Lousanne	Fair crop; few flies.	Good crop; very few flies.
Touzele	Poor crop; badly infested.	Poor crop; badly infested.
Tunisian	Poor crop; badly infested.	Good crop; few flies.
White Banate	Poor crop; badly infested.	Good crop; few flies.

*Seed sown in 1886 was very old, from museum specimen; growth of 1886 resown in 1887.
†Old seed from museum collection.

The foregoing are a few varieties chosen from over 150, which have been tested this year, and they are selected with a view of pointing out some of the most obvious conclusions concerning resisting quality.

First: The value of early sowing is apparent, for it is shown that quite a number of varieties which yielded entirely to the fly last year were able this year, by having a growing season a month longer, to pull through and make a fair to good yield on the same ground that they failed on last year. At the same time it appears that the time of sowing does not fully hold the key to the situation, for some varieties were destroyed both years. The full report will show more instances of this kind than it is thought worth while to cite at this time.

Second: That the resisting quality inheres in the variety largely, is shown by the continued resistance of the varieties which succeeded last year, and which were therefore sent out for experiment in fly-infested districts

last winter. These varieties are the first six enumerated in the table above. In most of these cases an improved yield was secured by earlier sowing this year, but whether yielding little or much, they had the same distastefulness to the fly.

Information Desired.

This brief statement is made chiefly with the design of drawing out reports from those to whom we sent resisting varieties for trial. Such local experience will be of great value in the full discussion which is contemplated. We desire not only the facts of yield and behavior of these varieties themselves but a comparison of them with other varieties commonly sown in the localities; also what is the conclusion of the grower of the value of these strong growing dark varieties, either for home use or in the market.

During the year we have been in correspondence with Miss Eleanor A. Ormerod, Consulting Entomologist of the Royal Agricultural Society of England, in reference to the Hessian fly and its work. Miss Ormerod announced the discovery of the fly in English grainfields in July, 1886. Up to that time its presence had not been observed. Miss Ormerod's tenth report contains a very interesting description of her investigations and study of the insect. One point on which Miss Ormerod desires the observation of others who may be handling fly-infested grain is the point at which the flaxseeds or puparia are deposited in the process of thrashing. She did not find them in the cleaned grain nor in the chaff blown out by the fan, but found them in great abundance with the screenings which in English practice seem to be deposited just beneath the machine. The point of deposit in California would depend upon the kind of cleaner which is used with the thrasher. We would esteem it a favor if any reader who may have opportunity to make examination on this point would send us the results. The puparia are called "flaxseeds" from their resemblance thereto. They are generally about one-sixth of an inch long, smooth, spindle-shaped, or pointed at both ends, and of different shades of chestnut color. When very thickly crowded in the stem, they are irregularly compressed but would still be recognizable. We shall be glad to receive notes on the occurrence of such bodies in screenings, and to receive small samples of screenings which may be thought to contain them. Of course if it is found that these bodies are largely aggregated by the process of thrashing, measures can be taken to somewhat reduce the pest by treatment of the screenings, which is calculated to destroy the insect when in this form. Such measures, coupled with burning the straw and stubble right after removing the grain from the field, would seem to be a serious blow to the increase of the fly. Our experi-

POULTRY YARD.

An English Opinion on Incubation.

1. Procure good-constitutioned eggs. 2. Withdraw your eggs once a day from the incubator for 20 minutes at least. 3. Dip them in tepid water before replacing them. By good-constitutioned eggs I mean such as are produced from a farm where the poultry have a good run, and where the proportion of one male bird in seven is maintained. Moreover, the male birds should be drawn from an entirely different strain, and be in no way related to the hens. It is also essential to remember that the eggs of the first few months in the year produce much finer chickens than later ones. Eggs hatched in August or September are worthless, the chickens always being poor and stunted. When setting a hen the best results will be produced by setting her in the darkest and dampest corner of an outhouse on the ground. She must then be lifted off her nest every day and placed under a coop to feed for half an hour, and the eggs sprinkled with tepid water before she is allowed to return to them. Under such circumstances she will frequently bring off the whole brood, or at least 16 out of 17. To prevent disappointment it is a useful practice to test the eggs. Supposing that, in the case of hens, you set half a dozen the same day. When they have set two days you can test all the eggs, reject any bad ones, make the six settings into five, and reset the sixth on fresh eggs. Testing is easily accomplished as follows: Take a piece of cardboard, exclude all light from the setting-house except a candle, or better still, a reflector-lamp. Take the eggs one by one and hold them sideways against the hole in the card; then hold them up to the candle or lamp, so that the card is between the light and the egg. It will be seen then in the case of a fresh egg, which has not been set on, that the egg is semi-transparent, but when the egg has been set upon for two days, an opaque body will be observed floating about in it. This will be more readily seen if the egg is gently revolved while thus held up. This dark body means that the egg has germinated and is a good one. But if the egg remains clear after two days it is not a fruitful one and will not hatch. The matter can be made quite a certainty by the third day.

Hints on Hatching.

It is hardly the time for setting hens yet, but the weeks roll around fast and setting-time will come soon enough. It is the general opinion that early settings are better than late, so it is well enough to think over methods. We find in the *Southern Cultivator* some hints on setting which are of interest. H. B. Geer writes as follows: We place the nests for our setters right on the ground. It is customary with me to make the nests after this fashion: First, select a rather secluded spot in or about the chicken-house and loosen up the earth. Then I wet it thoroughly and place about it a wooden frame with neither top nor bottom. Then fill in on top of the wet earth with dry dirt to the depth of two or three inches, shaping it into the right form for a nest. Within this space put fresh green grass, and on it place the eggs. The result is a cool, moist nest, that is both gratifying to the hen and beneficial to the eggs. And as a result, nearly every egg hatches. When hatched, however, I do not take the chickens from the nest until the youngest one is fully 24 hours old, for I believe they need hovering more than food during the first day of their existence. From the nest they are taken to a rat and cat-proof canvas-covered bottomless coop, which is inside of a chicken-proof pen about ten feet square. Sawdust or sand is placed inside the coop and the hen and her brood deposited there directly from the nest. The hen is fed first on whole grain, and then when she is pretty well satisfied, the first feed for the little chicks is placed before them, which consists of hard-boiled egg and potato crumbled up together. The potato is alternated with oatmeal uncooked. A little meat is given them every other day and occasionally a little red pepper with their food of a morning. The hen is thoroughly dusted with Persian insect powder as soon as taken from the nest, and twice a week thereafter for the first three weeks. The chickens are fed four and five times a day as above described, and they thrive wonderfully when so cared for. They are allowed all the fresh water they desire.

EGYPTIAN CORN.—Mr. C. A. Starkweather brought to the Stockton Independent from about eight miles north of Oakdale a stand of Egyptian corn as a sample of the crop he has raised without irrigation on 100 acres of summer-fallowed land. Mr. Starkweather informed a reporter that he planted the Egyptian corn as an experiment, and he was perfectly satisfied with the result, as showing the adaptability of the plain land of the San Joaquin valley for such productions. There is very little Egyptian corn raised in this section, but there is a good demand for it. It is an excellent food, either pure or mixed with other grain, for poultry, and Mr. Starkweather is of the opinion that there is no reason why it should not be good food for hogs and cattle.

ment this year included a large collection of varieties of barley. The results, which will be more fully discussed at another time, show that barleys were much less seriously affected this year than last, and that a number of kinds which failed last year gave very satisfactory returns this year. E. J. WICKSON.

Berkeley, Aug. 12th.

TO KEEP FLIES AWAY.—Geo. E. Doering, Ph. D., informs one of our medical journals that an alcoholic solution of oil of wintergreen rubbed on the marble slab of a soda fountain will keep the flies away and not prove disagreeable to customers. It is well known that all essential oils are poisonous to insects. If from soda fountains why not from all other places?

CANNERS and driers at Santa Rosa cannot get sufficient help to handle the fruit crop. That is the complaint in nearly all the fruit-growing sections of the State.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

The Worthy Master Away from Home.

[NUMBER 6—CONCLUDED.]

[Written for the Rural Press by Mrs. W. Johnston.]

June 28th arrived and with it the Australia, bringing us letters and papers from home. How we longed to hear from those loved ones! How eagerly we snatched at every particle of news from the world at large! None can appreciate the dispatches of our daily papers until they are deprived for a season of the privilege of seeing them.

Next to attract our attention was a concert, given by a native amateur club, to raise funds for the benefit of the native church now nearing completion—so near, in fact, that they were holding services in the basement. I am proud to say that the Masonic excursion party, in this case as in all others, responded promptly to the call and did their part in behalf of the good cause. The opening song was "America," sung in English by 15 young men—natives—who pronounced every word so distinctly that had we been at home, or their dark faces veiled from view, we should have thought them a party of Americans, fully inspired with love of their country and mankind. This was followed by a number of native songs, well rendered, some of which seemed so plaintive and the music so charming that we really enjoyed them, although we understood but few of the words. The entertainment was closed with a tableau, representing the killing of Capt. Cook. This at first seemed strange—to represent murder in order to raise funds to build a house for the worship of God; yet when we read His word, we find that in no instance would He permit a man to live who allowed himself to be worshipped as God, but by some means caused his life to be taken. Cook was such a man, and taking this view of the case the tableau was quite appropriate, after all.

Preparations were already under way to have a grand celebration July 4th. Money was freely subscribed by the American residents to make a gay day of it, and well did they succeed. The site chosen was a park on King's street, a very appropriate place. The ground was thickly carpeted with a sod of Bermuda grass and dotted over with beautiful trees. A stand had been erected for the speakers, seats provided for the company and a platform laid for the dancers, so that the comfort and pleasure of all was assured.

The American minister headed the program, and was chairman of the day. W. M., Atkinson, read the Declaration of Independence, after which talented speakers entertained the large and appreciative audience. The King's band furnished music for the occasion. Mr. Merrill announced that a reception would be given by himself and wife at their cottage in the afternoon. Many availed themselves of the pleasure of attending this very social affair. The cosy little cottage seemed truly American, with the stars and stripes floating high over our heads in the yard, and over each door a flag was gracefully draped, while smaller ones were artistically arranged in clusters and designs. All who called were warmly received and made to feel at home by the host and hostess.

The time for starting homeward drew near, and we were all anxious to leave a Government that was already in the hands of a mob who threatened to detain our boat until all their demands were acceded to. These threats caused much uneasiness. In due season, the hour of departure arrived, and even then, after all preparations necessary for the voyage had been made, we felt there was a possibility of being detained. But our fears proved groundless. Our landlord provided bays or wreaths for all his guests who boarded the Australia that day, and we were truly glad when the round of festivities was over and we were once again installed in our narrow quarters on board.

It is a strange sight to see a party leave Honolulu—each one decorated with bays and wreaths. So general is the custom among the natives that it is considered a mark of disrespect, and shows you have no friends if you leave the islands unadorned by one or the other. Some of the natives who came over with us were completely covered with wreaths of green and bays of flowers.

A large crowd came down to the pier to bid us good-by; also the King's band to cheer us for the last time. I could but feel a tinge of sadness as we moved slowly out through the rainbow-tinted surf, and took a last look at the city that had furnished us so much enjoyment. Many of the inhabitants were greatly troubled over the revolution that the Government was then passing through.

Before land was out of sight that disagreeable feeling of seasickness began to creep over a large majority of those on board, and by morning many were unable to respond to the breakfast-gong. We had a stiff head wind all the way, making slow progress, and the rough sea greatly aggravated seasickness. The last night out the boat rolled fearfully and the waves dashed so wildly that they washed clear over the hurricane deck and poured down on the dining-table. One terrific surge threw a bucketful of Spanish mackerel on the bow of the boat, which seemed truly like manna in

the wilderness, for they were quite a treat at the closing of so rough a trip. By the time we had feasted upon this delicious fish, we were nearing the Golden Gate and seasickness was rapidly disappearing, as we began to feel impatient to touch land again.

In due time we got ashore, and were placed in the hands of the Customs officers to whom an account of our baggage had to be rendered. All this well over, we bade our friends good-by and scattered to our respective homes.

Pomona's Service at the Fairs.

At the monthly meeting of the Sonoma County Fruit and Grape Growers' Association, held July 30th, the *Democrat* says that a good deal of deliberation was had as to making the most worthy and effective manifestation of the county's resources. It was generally conceded that hearty co-operation should exist between the various committees and the Pomona Grange committee. The Grange is much better prepared with all the paraphernalia and to a great extent with the material for a large exhibit than any other organization in the county.

Mr. Rogers urged that Sonoma has abundant reason to put forth every effort in her power this year. The other counties are envious of the success she has achieved, and would compete strongly for the honors.

The discussion finally gave birth to the idea in the minds of a few of the members that it would be wise to dissolve the Committee on Mechanics' Fair Exhibits, and resolve the entire association into a committee of the whole to co-operate with the Grange Committee, for the attainment of the success of the common cause. After some little discussion, the idea was reduced to words in a motion made by Mr. White. The motion was carried.

President Whitaker stated that any who might desire to make an individual exhibit at any of the fairs where the Pomona Grange is to be represented can do so under the supervision of the Grange, if agreeable, and such displays will receive every attention necessary free of charge.

Mr. Adams stated that the collection made by the Grange this year would be twice as large as the one of last year. As the speaker continued, he grew enthusiastic on the subject of the county's eminence in agriculture, horticulture and viticulture, and opined that no other county in the State could even approach a standard of comparison with old Sonoma. He referred humorously to the manner in which the farmers and enthusiasts in agriculture had showered contribution after contribution of every variety of product upon the Exhibit Committee at the fairs last year. The committee was literally covered up with sheaves of wheat, barley, oats and samples of the various products of the soil, and was compelled to improvise ingenious methods for their display. Extra tables and sub-tables, benches and sub-benches were constructed—in fact, they had a flight of steps, reaching from the floor to the ceiling, and presenting an array imposing and magnificent.

At the supervisors' regular monthly meeting, August 1st, the sum of \$300 was appropriated to Pomona Grange to enable it to make a suitable showing of Sonoma products at the State and Mechanics' Fairs.

The Gridley Monument.

The statue of Gridley was imported June 10th, and the duty upon it was paid by W. C. Townsend. A dispatch from Washington, 3d instant, states that the Secretary of the Treasury has decided that he has authority to refund the duty and will do so.

The Stockton *Independent* mentions a meeting of the Monument Committee, on the 6th, at which the sub-committee appointed to receive the monument reported that the work had been performed in a satisfactory manner.

A communication was received from Mrs. Gridley, stating that she would be satisfied with whatever action the committee saw fit to take in the matter of an inscription and inclosing the following data for their information: "Rael Colt Gridley; born in Hannibal, Missouri, January 23, 1829; died in Paradise, Stanislaus county, California, November 24, 1870, aged 41 years, 10 months and 1 day."

Admission Day, Sept. 9th, was fixed as the date for unveiling the monument, and a committee consisting of Fred West, H. S. Sargent, and one from the Pioneers and the Grangers, was appointed to make arrangements for the ceremonies. The choice of an orator rests with this committee. Justice Paterson of the Supreme Court sent a communication to the General Committee regretting that a pressure of official business would prevent him from attending the exercises.

SANTA ROSA GRANGE is receiving applications for membership at every meeting. The fourth degree has just been conferred upon a class of three, and another class is waiting for the first degree. A special meeting of the Grange has been fixed for Saturday, Aug. 20th. The members at Santa Rosa are making great calculations for the State Grange. A large attendance and a good time are confidently expected.

The young Grangers of Danville give a social dance in Grange hall at that place on Friday of this week.

Grange Insurance Companies.

[By M. WHITEHEAD, National Lecturer.]

Perhaps in no more marked manner have farmers proven their ability to look after their own business interests, through organized effort in the Grange, than in the many successful Grange fire-insurance companies that have been started and are now running successfully in many States. Literally, they are saving millions of dollars to farmers every year. And how simply and plainly it is accomplished! In the old way the farmer who insured his buildings paid, in addition to the amount really required to cover the risk, local agents' commissions, general agents' commissions, large salaries of officers, cost of expensive headquarter buildings, amount added to "surplus" of the company (undivided property), dividends (divided profits), greater risks and therefore expense of city fires. Under the Grange plan he pays only for the fires and the exceedingly small sum required to run the company.

The State Insurance Commissioner of Massachusetts is authority on insurance matters. Two years ago, in his annual report, he said:

The too great cost of insurance challenges the attention of a frugal public. We pay too much for insurance protection. Plainly it should not, as for a quarter of a century it has, cost the people of this country \$100,000,000 and more to protect themselves by insurance against \$60,000,000 loss of property by fire.

In his last report (1887) just issued, the Commissioner continues:

Two elements make up the cost of insurance, (1) the payment of losses, and (2) the expenses of carrying on the business, which, if conducted on the stock plan, includes profits to the capital engaged in it. These may be termed the lost cost and expense cost. The expense cost was the larger part of the cost of fire insurance in 1886 to the people of Massachusetts. The same is true of the year before. The popular discontent with the expensiveness of fire insurance protection is manifesting itself in efforts to cheapen it by avoidance of needless expense in the transaction of the business and by expedients to prevent loss. A great influence is exerted by the mutuals, which save the expense of capital, and escape the burdensome charges for procuring business in the form of commissions to agents and brokers.

These insurance lessons are among those that farmers have been learning in their Grange halls, and many companies are now in successful operation in different States. In the Jefferson County (N. Y.) Patrons' Fire Relief Association the cost for insuring \$1000 was \$2.18 for five years, and in the Chautauqua County (N. Y.) Patrons' Fire Relief Association, \$1.76 for three years.

The following report of 61 co-operative companies, submitted to the State Grange of New York in 1883, shows what the farmers of that State are saving in the item of fire insurance: Number of policies in force, 31,143; amount of risks in force, \$61,761,715; average amount of each policy, \$1983.16; average cost of \$1000 three years, \$1.84; cost of insuring \$61,761,715 three years, at \$1.84, \$113,641.66; cost of insuring same amount three years in stock companies, at \$8 per \$1000, including survey and policy, \$494,093.72; difference in cost, \$380,452.16; interest on difference in cost for three years, \$68,481.39; total saving to the policyholders in the co-operative companies for three years, \$448,933.55.

One of the oldest of these Grange mutual fire insurance companies, "The Farmers' Reliance," of N. J., gives the following figures in its last annual report: Whole amount insured, \$1,298,550; running expenses one year, \$131.35; increase of business for the year, \$150,000.

The charge that property insured in mutuals fares much worse than that insured in stock companies, is, says Commissioner Tarbox of Massachusetts, "so wild and reckless of the fact, that, in justice to the system it unfairly assails and in defense of the true history it falsifies, it must be challenged." He proceeds to quote the actual results among the companies bankrupted by the Boston fire of 1872, and shows that the superiority of specific capitals over associated mutual liability, as a basis of insurance, is not apparent. "The losers by the Boston fire found the mutual obligations of the mutuals more efficient than the cash capital of the stock companies for their protection." When it is remembered that the parties comprising a farmers' co-operative insurance company would be even more likely to fulfill their obligations in case of necessity than a city company, the strength of the system is apparent.

Again, Grange insurance companies only insure the buildings of "Patrons in good standing"—selected risks. And farmers' fires are not great city conflagrations, which, starting from one small fire burn up hundreds, perhaps thousands, of their risks besides. Farmers' companies cannot be broken up in that way; their risks are isolated, scattered.

BUSY GRANGERS.—The Stockton *Independent* of last Sunday says that the committees appointed by the San Joaquin Grangers to collect specimens of the county's products for exhibition at the State fair, and the later fair to be held in Stockton, have been very successful in their work, and secured excellent samples of all kinds of grain grown in this section of the State. A committee of ladies is now engaged in arranging the samples for exhibition, and the male Grangers look wise and say that this year's exhibit will be larger and better than ever before. A number of the ladies interested visited the new pavilion on Saturday to spy out a location for their attractive display.

They want the most prominent space in the new structure, and the management of the association seem in no wise averse to giving the energetic Grangers just what they desire.

The State Grange.

There will be a large attendance of Grangers at Santa Rosa the first week in October. Our advice to those who have never seen the thrifty county seat of Old Sonoma, is, by all means, to attend. The ride from San Francisco occupies but two hours, and the trip is a very pleasant one.

Special arrangements have been made with the S. F. & N. P. R. R. Co., so that round-trip tickets, good for ten days, will be issued for the small sum of \$2. All the hotels in Santa Rosa have given special reduced rates, which will be published in due time. One of the most commodious and handsomest halls in California has been secured for the sessions of the Order. The Feast of Pomona will be a sight worth all the labor, time and money it will cost any one to attend the State Grange.

Santa Rosa Grange is one of the live organizations of the State. They know how to entertain, and will spare neither toil nor coin to make a success of the occasion. They have committees appointed and at work—and working hard—to arrange every detail. The election of officers of the State Grange, of itself, ought to call out a large attendance.

Let all who can, attend the next session of the State Grange to be held in Santa Rosa. They will see a fine country and a neat and thriving city; they will have a good time themselves and should assist others in having a pleasant visit, and, all in all, a week will be devoted to a good cause by a good people.

Literary Day at Sacramento Grange.

EDITORS PRESS:—A good attendance of members graced the hall to-day, notwithstanding the busy season in field and orchard. The sisters came out in full force, but the brothers were called upon to look after the ice-cream, furnish their own cake and wait on the fair sex. You may imagine the variety and delicacy of the cakes that each had to provide with his own hands after rambling over many pages of cook-books! Of course it was all done in the latest mode. It was gay, picturesque and—well, we passed the ordeal; but it would not do to repeat too often—the cost of skill would suffer by their hands. The charge was gently laid at their feet for further time, when they were not so busy. Adieu, cakes, etc.

Following is the program: Opening song, Grange; recitation, "Independent Farmer," Harry Beach; music, Ruth Merwin; recitation, "Legend Organ Bell," Flora Greenlaw; Matron's offering, Ida Flint; music, Frankie Stevens; essay, "Tobacco—Its Uses and Abuses," E. Greer; song, "Little Blue-Eyed Baby, Sleep," Gussie Wilcox; address, "Sounds of Vowels," J. E. Welty.

All the parts were well rendered, and a social time was spent by all. G. T. R. Sacramento, Aug. 15th.

Urgent Work Forbids.

Prof. Geo. Davidson of the U. S. Coast and Geodetic Survey, having been invited to lecture before the State Grange at Santa Rosa, in October, has promptly acknowledged the invitation in a letter, from which we make the following extract:

You know that I have always held myself ready to help the progress of this State, and therefore you will appreciate fairly the regret I must express at not being able to accept the invitation. Just at this season I am under a dreadful pressure of work, not only in the charge of fieldwork, but in finishing the 2300 pages of MSS. for a fourth edition of the "Coast Pilot." Otherwise I would cheerfully have acceded to your proposition. Very truly, GEORGE DAVIDSON.

While we can but share the regret expressed by the Professor at his inability to do the desired favor, we cannot help congratulating our sea-going citizens, whose voyages are to be made more safely through his devoted labors.

POWDERLY ON TEMPERANCE.—Extract from one of his letters: "I know that in refusing to touch even a drop of strong drink I was and am right. In refusing to treat another to that which I do not believe to be good for myself to drink, I know I am right. In refusing to associate with men that get drunk, I know I am right. In not allowing a rumrunner to gain admittance into the Order of the Knights of Labor, I know I am right. In advising our associates not to rent halls or meeting-rooms over drinking places, I know that I am right. I have done this from the day my voice was heard in the council halls of our Order. My position on the question of temperance is right. I am determined to maintain and will not alter it one jot or tittle."

BRO. JAMES N. LIPSCOMB, W. M. of the State Grange of South Carolina, has been appointed Chief Clerk in the Patent Office at Washington. The *National Farm and Fireside* happily remarks that while this is a serious loss to the Patrons of Texas, whither he was soon to go as Deputy National Lecturer, it is a gain to the country to secure the services of such a man, and the farmers of Northern Virginia are also likely to be benefited by having him with them during exhibition week at Grange Camp.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

HELP SCARCE.—Chico *Enterprise*, Aug. 12: The largest force ever employed on the Rancho Chico is now at work, and still the cannery is short of help. Employment could be given to 100 more in the orchards and cannery if they could be had. Even Chinese help is scarce, and none can be had from S. F. In one district the schools were to open last week, but were kept closed that the children might continue to work in the orchards and canneries. A number of boys were brought up to Cana from S. F., but a large number of them turned out hoodlums and would not work. Large quantities of fine fruit will go to waste this year.

THRASHING RATTLES.—Sam Schoonover has been running his thrasher the past week on the ranch of Supervisor Bowers, below Dayton. Last Monday they were thrashing in a field near the river and were throwing in a stack of grain close to a clump of trees, when all of a sudden, just after an unusually large amount of wheat had been placed in the draper, the old machine began to jerk and tear, the fans stopped and the belts on the thrasher began to break loose. The men who were feeding the machine began yelling and climbing into the wagons, calling out "Rattlesnakes! watch out!" The feeder and thrasher were alive and squirming with rattlesnakes of all sizes. They had taken refuge in the stack of grain and had been fed into the machine, completely blocking it up. The men set to work and killed 54 of the varmints, and took a dozen more out of the thrasher. Three or four of the snakes were of unusual size. The rattles were taken from the larger ones and averaged from 10 to 20 to each snake. After several hours' delay the machine was started again.

DAM FOR THE IRRIGATING CANAL.—W. M. Cutter in *Appeal*: There is a point a short distance above Oroville where the river narrows and the banks are perpendicular, where a dam could be built which would take the water out at the elevation necessary; but, as it would have to be 50 feet in height and would constitute a standing menace, it was not selected, although it would diminish the length of the canal more than one-half. The point where the dam is to be several miles farther up, and its size can be judged when I say that an experienced and entirely responsible party is ready to construct it and guarantee its permanence for \$25,000. The dam will be constructed at such a point and its height will be such that even if it did wash out no injury would be done to any one. The dam is really a very small matter; it is the construction of the 11 or 12 miles of canal made necessary by placing the dam at a spot where its washing out could do no damage that requires the great bulk of the expenditure.

Contra Costa.

GRAIN IN SAN RAMON VALLEY.—Martinez *Gazette*, Aug. 13: In an interview with J. M. Stone of Danville, who has harvested a large portion of the San Ramon crop, we were enabled to form an estimate of the yield throughout the valley. The following instances are illustrative of the general yield: Myron Hall of Alamo got 30 cents to the acre on his farm; William Hemme of Danville, 27 cents to the acre; W. Z. Stone, above Danville, 33 cents to the acre of cheviater barley; the Cook farm, in Green valley, over 20 cents to the acre. Grain on Frank Webb's place, Walnut Creek, turned out nearly double what was expected. Notwithstanding the large crop harvested, an average of five cents to the acre was left upon the ground on most of the farms, owing to the fact that a considerable portion of the grain had lodged.

Lake.

COUNTY PRODUCTS.—*Avalanche*, Aug. 11: Ira M. Carpenter brought in for the exhibit some Smith Club wheat. There are 170 heads that were grown from ten kernels of seed. Each head contains 60 kernels, making a yield of 1000-fold. . . . C. W. Bingham brought to this office some Early Crawford peaches that measured nine inches in circumference. They were raised on land that, four years ago, was considered worthless by all but Mr. Bingham. He has certainly proved that this land is, if not the best, at least good for raising peaches. Lake county has thousands of acres of just such, that is Government land, open to those that will take it up.

FROM UPPER LAKE.—Cor. Clear Lake *Press*, Aug. 9: The crops generally prove better than was expected. In fact, the yield exceeds that of any former year in this end of the county. . . . Upper Lake now has the appearance of a spring garden. Fresh flowers and green fields greet the eye on every side. Thrashing is the order of the day. The fruit crop is up to the average, and a cannery would not be misplaced here. The hop crop is extra good, and picking will soon commence.

Los Angeles.

SPUDS, CABBAGES AND LAND VALUES.—Westminster Cor. *Times*: Henry Pope planted over three-quarters of an acre in Early Rose potatoes last spring, and a half-acre in cabbages. He sold in June 140 sacks potatoes at \$1, reserving seed and feeding out small ones, and the cabbages in bulk to Chinamen for \$40; total money receipts, \$180. He has now planted three acres, including the above acre and a

quarter in second crop Early Rose to mature in October. What now is land worth that will pay \$150 per acre for the first half of the year, and a probable \$75 to \$100 the second half? Is it overestimated at \$500? It can be bought, however, for \$150 to \$200, and will only reach its value by subdivision, and the close cultivation which a larger population will justify.

Mendocino.

HOP-GROWERS' MEETING.—Ukiah *Dispatch and Dem.*, Aug. 12: The Hop-Growers' Association of Mendocino convened in the courthouse last Saturday at 2:20 P. M., Pres. L. F. Long in the chair, and J. A. Poage, Sec. On roll-call a majority of members were found to be present. Voted that the officers of the past year be continued in office for the present year. It was resolved that Chinamen hop-pickers should not be paid to exceed one cent per pound.

Monterey.

SAMPLE FRUIT.—The Salinas *Democrat* office was favored last Saturday week with a box of fine apricots and peaches grown in the Corral de Tierra country by T. M. Bramers. The apricots were large, perfectly formed and of good flavor. The peaches were Golden Clingstone, tipped the scale at a half pound each and measured in circumference between 9 and 10 inches. The samples were perfect beauties and tasted as good as they looked. Mr. Bramers informs us that his orchard and vineyard are doing well this year and that he will have an abundance of grapes as well as other fruits.

Plumas.

CHEESE FACTORY.—Greenville *Bulletin*: A. F. Martin is building a cheese factory, which without doubt will become an enterprise of much interest to the dairymen of Big Meadows. The building is 25x60 feet and divided into three compartments. It will be supplied with a cemented cellar. It is estimated that the capacity of the factory will be 10,000 pounds of milk per day. When the factory begins operations it should prove quite a stimulus to the dairying interests of that section.

Sacramento.

INDIAN HOP-PICKERS.—Record-Union, Aug. 16: The hop-growers are bestirring themselves to procure help for the picking of their crop, which should commence in about a week. The Chinese have combined and demand increased pay for picking, which the growers feel unable to give. As quite a number of Indians were employed in this vicinity to gather last year's crop, and worked well, it has been considered advisable to see whether the red men cannot be procured to work this season, and the railroad company has been asked for rates of transportation for 1200 or 1400 natives—bucks, squaws and youngsters—from Reno, as it is thought that numbers can be secured from the vicinity of Pyramid lake and other localities in Nevada. Last year it required about 2000 persons to harvest the hop crop in the immediate neighborhood of Sacramento.

San Benito.

GOOD WHEAT.—Free Lance: Thos. Williams lately brought into this office a clump of wheat, grown on his ranch near San Juan, which is well worth looking at. The wheat, fairly selected from the field, measures five feet eight inches in height; has long, well-filled heads and as plump, bright grain in them as ever grew in this or any county.

San Diego.

GRAIN CROPS.—Union, Aug. 11: The wheat crop of San Diego county this year is carefully estimated at 25,000 sacks, and the barley crop at 10,000. No one in San Diego was hurt by the recent collapse of the wheat ring in San Francisco, as our dealers marketed their wheat two months ago, when prices were up.

San Joaquin.

FRUIT FOR TEXAS.—Stockton *Independent*, Aug. 14: Yesterday a carload of fruit was shipped from this city to San Antonio, Texas. The fruit comprised choice lots of grapes, peaches, pears and plums, grown on the lands of Geo. S. Ladd, Geo. West and other orchardists of this county.

Santa Clara.

PRUNE PROFITS.—W. D. Pollard in *Mercury*: The French prunes on the old orchard of W. D. Pollard, one and a half miles north of Saratoga, yielded in 1886 \$500 per acre, clear of expenses, except trimming and cultivating. These prunes were dried and afterward sold in Peoria, Ill. The orchard is now owned by Lyman McGuire and is 12 years old. In 1884, it brought \$500 per acre, green, at three cents per pound, and has paid nearly \$600 per acre.

ACRES OF DRYING FRUIT.—Santa Clara *Journal*, Aug. 12: The Santa Clara fruit-drier now has about ten acres covered with drying fruit. An immense amount will be dried there this week. They are now devoting their entire time to apricots. The delivery of fruit, cutting, drying, packing and shipping of it makes the business loom up in fine shape. Nothing like it has ever been seen in Santa Clara before.

Santa Cruz.

ORCHARD NOTES.—Pajaronian, Aug. 11: It is the exception this year to see a poor apricot. Either the orchardists have struck the variety adapted for this climate or apricots have scaled but little this year. . . . A Corralitos orchardist informs us that his prune crop will be light this year, most of the fruit having fallen from the trees. At D. A. Rider's mountain fruit farm, above Corralitos, the young prune trees are well loaded with fruit, and a yield of several tons is expected. . . . The blower is being

put in place at the fruit-drier, and the engine is expected here this week. When the blower gets in operation the process of drying will take less time and the drier will not only handle more fruit but give employment to more people. . . . The berry-growers keep up their steady gait in big shipments from Pajaro. The berry crop of Pajaro valley this year will exceed that of any previous season.

Shasta.

FIGHTING FIRE.—Cottonwood *Index*, Aug. 11: Early last week a fire broke out on the South Fork, near J. M. Cook's farm, and despite all efforts to check it, spread rapidly, devouring everything in its path. J. Lynch was the principal loser, the wild flames reducing to ashes his granary, containing about 900 bushels of grain, and about 2½ miles of fencing. M. K. Miller lost considerable of the fencing around his orchard, and the intense heat scorched and killed many valuable fruit trees. It required great effort to save his houses and stubble from being swept away. Others lost considerable fencing and barely escaped being burned out of house and home. . . . Too much praise can hardly be given John Allen, foreman of the Diamond Range, for his noble efforts in staying the flames. His coolness and judgment in directing his men certainly did much toward helping to control the fire at times when it did not seem that twice the number could do much good. . . . Thousands of acres of feed have been destroyed, and whole sections of timber ruined. The heaviest damage is the destruction of feed and timber, although thousands of dollars' worth of other valuable property was destroyed. The general belief is that these fires are the work of incendiaries.

Sonoma.

HEAVY HAY.—Sonoma *Index-Tribune*, Aug. 13: Twenty-two tons of wheat hay was cut and baled this week on four acres of Frank Riser's land, two miles northwest of this place. As this hay will readily bring \$13 per ton, the product of these four acres amounts to \$286. Wm. Schukowsky, who baled the hay, informs us that it is the heaviest yield he has observed for years.

Sutter.

ORANGE CLINGS.—Farmer, Aug. 12: Chas. Weeman brought to our office a few days since a small limb of a peach tree bearing 12 peaches. When we say they were all very large, ripe orange clings, grown on trees not yet three years old, so full as to endanger their existence, and further, that Mr. Weeman has 200 such trees on his place at the lower end of town, it evidences the capabilities of the slough bottoms on which the above splendid specimens were grown.

Tehama.

HORTICULTURAL ENTERPRISE.—Red Bluff *Cause*, Aug. 15: Tehama county makes a splendid showing in the progress of fruit-growing. The number of acres planted to fruit trees is now estimated to be 175,293; to vines, 5972, making a total of 181,265 acres devoted to fruit-growing. Within the last three years many prune and olive trees have been set out. These trees, it is found, grow rapidly and luxuriantly in our soil. The orchards and vineyards are as yet all young.

Tulare.

THE PERENNIAL PEST.—Pixley Cor. *Delta*: The rabbit is one of the leading topics here, and likewise a great puzzle. Jacks seem to have taken possession of this part of the valley. They are shot by wholesale, but for every one thus sent to its doom there seems to be a whole litter substituted. Poisoning has been tried, but it is rather risky business. Cannot something be done to exterminate this nuisance? The amount of grain they destroy is immense, and in places it is impossible, without the protection of a rabbit-proof fence, to grow trees or vines.

FOOTHILL PRODUCTS.—Visalia *Times*, Aug. 11: E. B. Cluer of the Star ranch, in the foothills, 25 miles east of this city, last Monday brought to the *Times* office five tomatoes that weighed six pounds. They were not so large as one might imagine, but the flesh was solid, and their flavor was better than those raised in the valley. Mr. Cluer has raised tons of them this year, and is bringing them in quantities to this market, where they are readily sold at 1½ to two cents per pound. He states that his crop will last until Christmas, as his ranch is in the thermal belt where they have little or no frost, and he gives it as his opinion that, by setting out plants again, he can have tomatoes in this market in April next. On his ranch may be found blackberries, strawberries and all kinds of vegetables. Currant cuttings procured last spring, and set out in March, immediately took root, and have already produced several bunches of currants to each bush, fully matured and ripened. Fine potatoes are grown on the Star ranch—the first crop having been harvested, and the second crop now being planted. As for cabbage, the soil there cannot be beaten in the production of this vegetable.

Yuba.

HOPS.—Marysville *Appeal*, Aug. 12: The hop crop near Wheatland is reported the best in appearance that has ever been grown there, and should high prices prevail the growers will make an enormous profit. The time for picking is not a great way off.

NEVADA.

WASHOE HAY.—Reno *Gazette*, Aug. 15: Said a prominent Truckee meadow rancher last evening: "I have just been figuring on

this year's hay yield of the tract of country within, say five miles of Reno, and my figures add up 30,000 tons. The yield is much heavier than was anticipated early in the spring. I know of an instance where two crops of alfalfa have already been cut off one field, and each yield averaged over six tons to the acre. Several thousands of tons of the new crop in the stack have already been sold to cattlemen for \$6.25 a ton. Baled hay delivered in town brings \$10 a ton."

HORSES FOR CALIFORNIA.—H. Murdoc, living in the extreme northern part of the county, is in town, on his way to Sacramento, where he expects to sell a band of 185 horses now on the road to market. They are all good American horses, and will, the owner thinks, bring about \$14,000 in California. Mr. Murdoc says that the immense immigration of people to this coast consume a great many horses, and California is bound to grow as a market, especially for draft horses.

FRUIT SUITED TO THE REGION.—Said Mr. Kelly, the well-known Reno nurseryman, this morning: "You ask what kind of fruit trees I would recommend be planted in this section of Nevada. Well, apple, pear and plum, especially those varieties that blossom either very early or very late in the spring. Some trees blossom so early as to escape the dangers of the frosts that we have nearly every year about the 15th of May, but those that blossom late can, as a rule, be depended on for good crops. I keep at my nursery peach and cherry trees, and sell them to persons who are determined to have them, but I never recommend patrons to buy them. This is no peach nor cherry country." [We saw very good Mayduke cherries in Carson the first week in August, 1886, which had been grown at Genoa. This was the only variety that survived out of a large number which were planted.—EDS. PRESS.]

OREGON.

HOPS.—Portland *Rural Spirit*, Aug. 12: A letter from the McKenzie river, near Eugene City, says that owing to dry weather, the hop crop will not be equal to that of last year. The picking season will be later, and when it does commence, owing to the lateness, there will be a rush and pickers will be in demand. A 15-acre yard will pay out to pickers about \$1000. One merchant last year advanced \$6000 to hop-pickers. Over \$20,000 was paid out in Lane county last year to hop-pickers.

A NEW PAVILION.—A directors' meeting of the Mechanics' Fair Association was held at the Portland Savings bank Wednesday evening. There was a large attendance, and much interest was taken in the report made by Mr. Frank Dekum as to the new building the association expects to erect on B and 14th streets.

Sonoma County Notes.

EDITORS PRESS.—The busiest time of the year is upon the residents of Sonoma. There is plenty of work for willing hands, in field, orchard, hop-yard and forest, and in railroad building. Proprietors of canneries, fruit-driers, etc., find great difficulty in obtaining help enough to care for the fruit as fast as it is delivered by the growers.

There is a great deal of grain still to be thrashed. The yield of wheat, oats and barley has been surprisingly large. Everybody, it seems, underestimated the grain crop.

Hop-growers are in good spirits at the promise of a big crop. They also anticipate a fair price. Hop-picking will soon be in order, and already there is a great demand for pickers. Every man, woman, and child, who is able and willing to work, can find healthy and fairly profitable employment in the hop-yards during the next 60 days.

The boom has hit Sonoma county. During the past fortnight a great deal of real estate has been changing ownership, at prices that to the "oldest inhabitant" seem startling. Town and country property both find ready sale. There are two buyers for each piece of ground that is put upon the market.

Work has been commenced on the broad-gauge railroad from Benicia to Santa Rosa. There is no longer any doubt of the construction of this much-needed artery of commerce.

Those best posted in vintage matters think there will be fully two-thirds as many grapes in Sonoma county in 1887 as there were in 1886. The heavy frosts injured the crop materially, but there are many acres of new bearing vines to offset the damage done by frost and blight. Therefore the shrinkage will not be so heavy as many had imagined.

The annual fair of the Sonoma County Agricultural Park Association will open at Santa Rosa on Monday, August 22d, and continue during the week. Everything points to a most successful exhibition. The Pomona Grange is preparing an exhibit which will bring honor to the Order that collects, as well as the county that produces, such riches. It is expected that the editor of the PRESS will be present.

Our county is prosperous, our people happy, healthy and intelligent, and our success assured. OCCASIONAL.

Santa Rosa, Aug. 16, 1887.

DELEGATES TO THE FORESTRY CONGRESS.—Gov. Bartlett has appointed a commission of three to attend the American Forestry Congress, at Springfield, Ill., Sept. 14th to 16th. The Commissioners are John Muir of Martinez, Joaquin Miller of Oakland and James Bettner of Riverside.



His Messenger.

[Written for the RURAL PRESS by M. B. CULVER.]

Into the heart of a dusty town
A wandering bird dropped lightly down;
On a swinging spray he sat and sang
Till every street in the old town rang
With liquid notes from the silver bill.
Twitter and warble and softest trill
Entered houses through window and door,
And filled every shop from roof to floor.

Every one wondered, and paused to hear
The jubilant melody, soft and clear,
And many a hand brushed away
Moisture from cheeks where it seldom lay,
As pictures arose of valley and hill,
Of forest nook and mountain rill,
Of beautiful youths and maidens fair,
The dear old home and mother's chair.

The unconscious bird flew far away,
Through pastures green and meadows gay;
But the song lived on through all the day,
And an added softness gently lay
On the little town with houses gray.
Men spoke more softly, and women smiled.
The bird, with his song so undefiled,
Made each "become as a little child."

Calistoga, July 24, 1887.

Jim's Misfortunes.

[Written for RURAL PRESS by FANNIE ISABEL SHERRICK.]

James Stewart was a miner. He lived in one of the highest, as well as the most Western of Colorado mining towns, and his home was in one of the many little cabins that clustered at the foot of the great mountain overshadowing the town.

In this log cabin he kept house with another young bachelor friend, and, as women are scarce in a mining town, they were forced by necessity to perform all the household duties that are usually left to feminine hands.

But their success was really surprising in this direction, and there was not a neater cabin than theirs in all the camp. Both were miners, yet it chanced that they worked in different mines and in different shifts, so the house was seldom vacant. While one slept the other worked, and the labor of cooking, etc., was pretty equally divided.

But one day Jim, so he was generally called, had his time changed, and he, too, like his friend, plodded up the long steep mountain-side at midnight, lantern and candle-stick in hand.

But whether he toiled in the deep mine from midnight to dawn, or slept securely in the little cabin, lulled to sleep by the music of the river that rushed through the narrow valley, his thoughts were always the same—always of the bright-eyed girl he had left behind, the dear girl for whom he was working day and night. Some day he hoped he might build her a snug home, and they would live so happily among the grand old mountains which were so green and blossom-covered in summer, so pure and white in winter.

In spite of his rough exterior, Jim had a kind and tender nature, even a poetic one in some respects, for not a letter went to "Susie" that did not contain a few of the mountain flowers pressed between the pages, and many a night going up the mountain did he stand and look back upon the town beneath and the far-away stars above, drinking in the wonder and the glory of the world about him, and sometimes he dreamed over the sunrises and sunsets even as an artist would have done, with an innate love for all the infinite grandeur that God had created.

He sat in the cabin one afternoon, writing his home letter, when John, his companion, entered.

"I say, Jim, here a good investment for you—four shares in the 'Mountain Maid.' They've made a big strike there. They're keepin' it a secret to-day. To-morrow the whole town will be alive with the news. There's bound to be a big excitement over it, for it's a richer thing than the 'Granite' was. Collins gave me the cue. Now I tell you what, Jim, here's your chance if you want to make money. Buy these shares to-day and by to-morrow night you may realize a thousand dollars on two of them."

A thousand dollars! It looked like a big sum to Jim. He felt strongly tempted to invest his earnings in the scheme, and, persuaded by his friend, he eventually did so before the afternoon was gone.

And sure enough, the day following the mining shares trebled in value. The whole town was rife with excitement, and Jim was

but too glad that he had followed his friend's advice in regard to investing. Before night-fall he had disposed of two shares at a profit of more than a thousand dollars, with a prospect of a fabulous gain on the others.

His first impulse was, of course, to write to Susie.

"The dear girl," he said to himself, "she shall wear silks and satins yet, and who knows, perhaps diamonds." He smiled at the thought. What a change it would be for Susie, who was selling dry goods in New York.

Then he wrote her of his plans. In one month she was to be with him. He would begin the little home right away. As soon as it was finished she must come.

He began to count the days and how swiftly they flew by as he labored for Susie. In fancy he could see her blue eyes brighten over that last letter and the prospect of being so soon with him.

In the meantime he held on to his remaining mining shares.

But in less than two weeks they became scarcely worth the paper on which they were written. The rich vein reported by experts did not pan out as expected and the entire expectations of the company came to naught. Those who had invested largely were doomed to a bitter disappointment, and the excitement which had prevailed in the camp over the "Mountain Maid" subsided to an occasional grumble from the victimized ones.

But such are the ups and downs of mining life. As for Jim, he only set his teeth hard and worked with a desperate energy at his daily toil, as though every strike of the pick against that hard mother earth relieved in a measure his feelings against her for having foiled so many human hopes. To him she seemed pitiless in the denial of her riches; unlocking the doors of her treasure-house only to the favored few.

Yet in a day or two he rallied, becoming again his own cheerful self.

"You see I still have the money for the home and Susie's trip laid away," he said to John. "I shall not tell her of the other loss until she comes. With a cottage all our own and a few dollars saved, we surely can begin life together. I'm sure I can always make a living, even if humble for us both."

"Why, of course," John said cheerily, though he felt a little conscience-stricken for having advised Jim. "There's no use repining. You'll have a better start now than most folks."

"So I will," replied Jim, "so I will," and he went about his dish-washing and cooking with a brighter smile than ever, thinking how nice it would be when Susie came to be his helpmate.

And so his air-castles grew with his happiness and he laid many plans for the coming summer. But as usual, "man proposes and God disposes."

There came a cry of fire one night, then a pistol shot (which is the usual fire-alarm in these mining camps), followed by the clanging of the great bell that hung in the town, and down came the volunteer fire-corps as quickly as they could speed from town, tumbling head over heels down the steep embankments in their haste to reach the spot.

And there rose the flames higher and higher, reddening the mountain side and lighting up with a lurid glare the humble homes of the miners.

It was Jim's cabin, all ablaze, the flames leaping through the roof and from all sides before the firemen reached it. His neighbors awakened suddenly from sleep, gazing with terrified faces at the unearthly scene from their windows.

"Thank God there was no one in it," said one woman, knowing that Jim and his companion were at work on the midnight shift. "The whole thing went like a tinder-box and if there'd been any one asleep then, there'd been no chance of getting out that narry winder."

No one knew how the fire originated. It was supposed, however, that one of the men had left a few coals in the stove, which had accidentally fallen out, setting fire to some paper and the wood piled up in the corner.

Not a thing was saved, the cabin being almost totally destroyed. The cookstove was the sole article of furniture recognizable among the debris.

Jim and his friend of course knew nothing of this misfortune until the next morning.

When Jim reached the cabin and saw the wreck left by the fiery demon, he covered his face with his hands and almost wept. He was like one struck dumb.

"Cheer up, old boy," cried John, "all's not lost that's in danger. The cabin can soon be rebuilt, and as for our household goods, they were not worth much, you know."

Jim took his hands away from his face and looked at his friend for a moment in silence. Then he said quietly:

"John, all my money was in that cabin, hid away in a little box under the bed."

"Poor boy!" It was all John could say, looking up with a suspicious moisture in his own eyes. There was nothing he could think of to comfort his friend, but he walked toward the cabin, scrutinizing the charred remains of their household belongings with eager eyes. Presently he picked up something that glittered.

"It looks like silver," he cried. Let's have it assayed."

Jim shook his head. "I had more of it in bank bills," he said, "because I thought it easier to carry, and anyway I hardly think that could be a part of it."

But John insisted on having it assayed. However, he came back from the assayer's with rather a blue look.

"After all," he said, "it's no good, only the solder from our tea-kettle."

The loss of his money was a terrible blow to Jim, yet he tried not to be down-hearted, breaking the news as gently as possible to Susie, and making the future as bright as he could.

And Susie showed her true womanliness and her Christian spirit in her reply.

"Dear Jim," she wrote, though the tears fell from her eyes as she followed the page, "how thankful we should be that I was not out there. Things are never so bad but that they might be worse. God knows best, I am sure. He sends us these trials for our own good. Do not be discouraged as long as we both have life and health. I have managed to save something myself this year, and it is all yours, you know. Begin once more and keep up a brave heart for your own Susie's sake."

"God bless her!" Jim whispered when he had read the letter; "not a complaint, not a reproach in it. Surely she's worth toiling for—and may God make me worthy of such treasure."

Certainly the delay was hard for them both, but perhaps the sacrifice and the disappointment made each stronger and nobler. Certain it is that when the next spring saw them united, no two people could be more grateful or happy, even though their house-keeping was begun on a smaller scale, and they had no valuable shares in a great paying mine.

They were quite sensible enough to realize that the rich are not always the happiest.

True Greatness.

The path to true greatness is never found by searching for it. They who court fame, and plant themselves in her way whenever she happens around, are always those she fails to see when selecting her favored ones.

The man who burns the midnight lamp in a feverish search for this great end, who makes every stroke tell, who longs and wishes and counts his successes with miserly jealousy, is often distanced by some gentle woman who never dreamed of greatness, whose only hope of reward was the approbation of those for whom she labored, and who wakes as from a dream to hear her praises sounded from every side. It is not because the man has chosen a harder path—a more crowded path—than his modest sister, but only because fame is generally a just divinity who crowns those best fitted, though she does not always reward those entitled to her blessings.

Little did Goethe's Lottie dream in her far-away German home across the seas of the millions who would read of her lovely sunny nature from the charmed pages of the devoted poet. She was only a simple girl performing her homely duties for her father, and being mother and elder sister both to the helpless children of the family, yet her womanly dignity, her sweet girlish innocence, her quiet beauty, so charmed the great Goethe that they are present even to us now, though a hundred years have passed since she so unconsciously won his praise. And thus it is that no labor, however mean, is without its reward. To do each duty well and the best we can is all that is required, for nothing that falls to our lot should be unworthy of our efforts. And since only true genius or true nobleness of character deserves greatness, if we do the first and are the last, we will surely find the royal road to fame.

AN Irish woman once made a remark worth noting. It is the custom in Ireland on the occasion of a death in the family to invite all the neighbors to the wake over the body; but "once on a time" this old woman was slighted by not being invited. She watched the people going to the ceremony for awhile in silence, but at last, unable to contain herself longer, she said: "Well! well! I'll have a corpse of me own in me own house some day, and then you'll see who'll be invited."

Helps in Home-Making.

Our wise and famous poet of long ago, the illustrious Milton, has said, "Nothing lovelier can be found in woman than to study household good." And hence all who take part in discussions of home work, engage in a study which to the mind of the poet is superlatively lovely. Then certainly it cannot be said that the helpful letters of this column can in any sense be pronounced trifling or unworthy the attention of intelligent and practical managers of the home. All should study. No matter how thoroughly or systematically a lady may have learned housekeeping, the steady advancement of the day will be sure to make some improvements on old-fashioned methods and she will be profited by finding them out. Women are not receiving their great aids in the way of labor-saving inventions and the like, for naught. Many bright, inquiring minds working together discover helpful modes of performing unpleasant work, and hit upon useful little discoveries that are truly startling, in view of the fact that they are so simple and yet have never been thought of before.

But I have one question to ask that has never been answered satisfactorily—to me at least, and if any kind sister would take interest enough to answer it, should she be able, I shall feel very grateful. It is this: When dark-green ink has been spilled on new marble and has remained long enough to be absorbed, what will remove the dark shadowy stain that has seemed to sink below the surface polish? PENELOPE.

Humorlets.

A CONVICT, however poor, can always have a watch and chain.

THIS is a glorious and favored land for the fellows who don't get left.

IT'S smitten at first and it's mitten later on; yet there is a heap of difference.

DECOLLETE boots show a low tied in the affairs of men.—*Duluth Paraphraser.*

THERE are a great many p's in pepper, but not half so many as there are in coffee.

THERE isn't so much atmospheric depression when a pie is formed as there is when a form is pied.

WE hear of a man in Duluth whose breath is so strong he can't hold it more than ten seconds.—*Duluth Paraphraser.*

IT is only the unsophisticated maiden who likes moonlight nights. The others prefer the dark, genuine article.—*Judge.*

THE most afflicted part of the house is the window. It is full of panes; and who has not seen more than one window blind?—*American Inventor.*

"IT'S never too late to do good." Reckon that's why so many wait until they are going to die before they begin to do good.—*Kentucky State Journal.*

IT must be hard on a talkative woman to marry a barber. Whenever she'd think she had the last word, he'd be sure and have the "next."—*Charlestown Enterpriser.*

"LEMMY, you're a pig!" said a father to his son, who was five years old. "Now, Lemmy," he continued, "do you know what a pig is?" "Yes, sir! A pig is a hog's little boy."

"WHAT did Adam and Eve wear before they put on aprons?" asked the teacher. And after a moment's hesitation the new boy from Hardacre Crosslot said:

"Nuthin' but bathin' suits."—*Burdette.*

ONE of the greatest puzzles to the observing spectator who watched the youngsters playing cohenhagen, was to know why those girls who fought so hard against being kissed played the game at all. They didn't have to.

THE Cleveland Medical Society expelled a doctor for agreeing to take no pay if he did not effect a cure. The unanimous opinion expressed was that the establishment of such practice would fill the almshouses with physicians.

HE sat on a log on the banks of the Arkansas creek, when a traveler came along and saluted:

"Good day, mister. Waiting for a rise?"

"That's just what I am waiting for," was the reply.

"Got a flat-boat up stream?"

"No, sir. I'm a government engineer. Congress has appropriated \$18,000 to improve the river, and I'm waiting for a rise so I can find the stream. How long since you saw anything of it?"

WEBSTER'S spelling-book has had a circulation of over 50,000,000 copies.

YOUNG FOLKS' COLUMN.

Poor Baby.

Is it not rather a cruel joke to play on Tommy to run away from him right in the woods where it is so still and lonely? He looks very sad about it. The girls seem to think it is fine fun, for they are laughing behind the tree. Of course when he begins to cry they will run to him, but we think it is too bad to frighten a baby even for a moment. Tommy may learn to be afraid and that will be sad, for boys should be brave, you know. We wish a mouse would jump out of the bushes and then we would see who would be frightened.

Sparrows in the Tuileries.

[The following pleasing sketch was written from Paris for the *Youth's Companion* by Minnie Buchanan, formerly of California and well known here.]

Little Toinette is a French child, as you may guess by her name.

She was baptized Marie Antoinette; but like some American children I know, she chatters so fast that when she tries to tell her name it is hard to catch more than the two last syllables; so Toinette is what all her little playmates call her.

Toinette dearly loves little birds, and every fine day she goes with her mamma or the nursery governess to the Gardens of the Tuileries to feed the sparrows there.

The children of Paris have a great many parks and squares to play in. Toinette's little brothers and sisters like best to go to the Champs Elysees, where there are Punch-and-Judy shows, goat carriages and long rows of little booths where cakes, candies and sweet drinks are sold.

But there is so much romping and noise in the Champs Elysees that the birds are frightened away, and Toinette likes birds better than anything.

So she gets her mamma to go with her over to the Tuileries, for, although the gardens of the Tuileries and the Champs Elysees are very near together, you must, to get from one to the other, cross the Place de la Concorde, a big, open place, where crowds of carriages are always passing, and it would be very dangerous for a child to go alone.

Toinette thinks it is fun to cross the Place de la Concorde. There is a tall obelisk in the middle, a big fountain each side, and a row of great statues all around. At the foot of each fountain or statue there is a small raised stone sidewalk for people to stand on to save themselves from the carriages.

When Toinette is going to cross she takes her mamma's hand, and they wait on the edge of the first sidewalk until there is an open space between the carriages; then they run over to the walk around the nearest fountain or statue, and wait there for another opening, and so on until they get across.

There are no kind policemen to help you across, as in the American cities. French policemen, even when they are near, pay no attention to you or to the carriages.

Doubtless many of you know that on this very Place de la Concorde the queen for whom little Toinette is named, the beautiful Marie Antoinette, was beheaded.

Toinette hurries over to the Tuileries, and down the wide stone steps that lead to the garden where all the little princes since the time of Louis XIV have played.

There she sees her beloved sparrows, dipping their bills in the great round basins of

water sunk in the ground, hopping about in the tranquil open spaces of sward, or saucily picking at the eyes and noses of some of the gray statues that stand around on their pedestals.

Toinette takes a package of bird seed from her pocket and runs over to a small stand on one side to buy a loaf of bread for two cents; a little round loaf, that looks as if it were made for a doll.

When the loaf is broken into little crumbs, the fun begins.

A good many birds know Toinette and fly around her as soon as they see her near the bench where she is accustomed to feed them.

She begins to chirp to them in a sweet voice, saying to them in French: "Here my birds, come my pretty birds, Toinette has brought the breakfast for her dear little birds."

When they hear this the birds come to her in a perfect cloud, twittering, chirping and making a fluttering noise with their wings.

She throws the seeds in the air. That is a pretty sight, for the birds dart in and out, catching the seeds before they fall to the

other side of the River Seine, Toinette knows it is time to go home.

The birds all fly to their nests in the trees of the Gardens of the Tuileries.

Toinette, who is a rosy-cheeked little lassie, keeps her eyes bright by going to bed not long after her birds are asleep.

GOOD HEALTH.

HOW LONG SHOULD A NERVOUS PERSON BE TREATED?—The question of how long treatment should be continued in a neurotic case when no evident benefit is produced has recently been raised in a Hamburg law court. A medical man, says the *Lancet*, having as a patient a merchant suffering from "nervousness," treated him by galvanism. Altogether he galvanized him 445 times, but the nervousness did not disappear. Then came the matter of fees. The sum claimed was \$556. The merchant disputed this on the ground that the treatment ought not to have been continued so long, as it was not producing any benefit. The court referred the matter to the medical board, which gave as its opinion that the doctor ought to have asked the patient, after some 50 sittings, whether he would like to continue

DOMESTIC ECONOMY.

APPLE DUMPLING.—Sift one quart flour, add half a teaspoonful salt and lard half the size of an egg. Wet up with cold water to a stiff dough. This divide into six or seven parts. Pare as many good-sized apples, cut through the middle, removing the core; cover with the dough, pressing the edges together till no seam remains; then when all are ready roll two or three times over in dry flour, and drop into boiling water. Boil steadily half an hour, not once lifting the lid till ready to remove to the table. Eat with cream and sugar sprinkled with grated nutmeg.

CINNAMON RUSK.—Take one cup mashed potatoes, one of sugar, one of hop yeast and three eggs; mix all together. When light add half a cup of butter, one tablespoonful of ground cinnamon and flour to make a stiff dough; let rise; make in small cakes and put in buttered pans. When light, grease the tops with butter; sprinkle thickly with sugar and cinnamon; bake in a quick oven.

COLD LEMON PUDDING.—One-half box of gelatine soaked in four tablespoonfuls of water for 10 minutes; add a pint of boiling water, juice of two lemons, one cup of sugar; strain and set away to cool.

When cold, stir in the whites of three well-beaten eggs. A thin boiled custard can be used to pour over this pudding, or thick, sweetened cream.

TRANSPARENT PUDDING.—Beat eight eggs very light, add half a pound of sugar, the same of fresh butter, melted, and half a nutmeg, grated; set this on the stove and keep stirring until it is thick as buttered eggs; put a puff paste in a pie-plate, and bake in a moderate oven. This quantity will make two pies.

ITALIAN SAUCE.—Put into a saucepan a little parsley, a shallot, some mushrooms and truffles, if to be had, chopped finely, also a piece of butter as large as a walnut; warm them together; add half a glass of white vinegar, some pepper and salt; let all boil gently for half an hour; strain and add a teaspoonful of oil.

CREAM CARROTS.—Cut in half-inch bits one pint of carrots. Boil in just enough salted

water to keep from burning; when tender, add one pint milk or cream, one tablespoonful cornstarch, butter the size of an egg, salt and pepper to season. Simmer five minutes and serve very hot.

BROWN BREAD.—One pint each of Indian meal, graham flour and buttermilk, two-thirds of a cup of molasses and one teaspoonful each of soda and salt. Steam three hours. Sour milk may be used instead of buttermilk by using a little shortening.

DRIED FRUIT ROLL.—Take a small loaf of bread dough, when ready for baking; roll it about half an inch in thickness; spread with the fruit made smooth and seasoned; commence at one side and roll up, and steam an hour; eat with butter sauce.

JUMPLES.—Rub to a cream a pound of butter and a pound of sugar; mix with it 1½ pounds of flour, four eggs and a very little brandy; roll the cakes in powdered sugar; lay them on flat buttered tins and bake in a quick oven.

CREAM SPONGE CAKE.—Beat two eggs in a cup and fill up the cup with sour cream; one cup of sugar, one and one-half cups of flour, two level teaspoonfuls of baking powder. Flavor with lemon or vanilla.

STEAMED RICE.—One cup of rice, one teaspoon of salt, three cups of boiling water; steam one hour; add one cup of sweet milk; cook 20 minutes longer, when it is ready to serve with cream and sugar.

SCALLOPED ONIONS.—Boil, and if large cut into quarters. Put into a shallow dish, cover with white sauce and buttered crumbs, and bake until the onions are brown.

COCOANUT PUDDING.—One pint of milk, one grated cocoanut, four well-beaten eggs, two tablespoonfuls of butter melted and sugar to taste. Bake a light brown.



BABES IN THE WOODS.

ground. Such a shower of seeds and sparrows, such a rush of little fat bodies and little brown wings you never saw.

When Toinette has used all the seed, she seats herself on the bench and scatters crumbs on her lap, on the ground and on the bench at either side. This is the prettiest sight of all.

The sparrows fly all around her, on her head, on her shoulders, and often right into her lap. She talks to them very softly and the birds are as bold as can be, for they know she is their good little friend.

Toinette, you must know, is a very small girl, only five years old; and when she is seated on this bench in the Tuileries, her toes do not touch the ground.

Sometimes when her feet are swinging a crumb will fall on the end of her slipper, and two saucy sparrows will cling to her foot, fighting to see which shall have the crumb.

The old carved stone benches in the Tuileries, those that have been there since the time of Louis XIV, are very pretty to look at, but they have no backs.

So Toinette always sits on one of the new benches, quite like those we have in our parks in America.

When she has been seated a few minutes there will always be a row of sparrows along the back of the bench on either side of her. Generally these are the young ones who cannot fly very well. They sit and balance themselves like little fat balls, while the mother and father sparrows bring crumbs and feed them.

When the big red sun begins to drop down behind the Chamber of Deputies, on the

them, as it was doubtful whether the treatment was doing any good. The court, however, declined to accept this view, holding that it was for the patient to say when he had tried the treatment as long as he was disposed to pay for it, and so gave judgment for the full amount claimed. This judgment seems to accord with the principle that applies to newspaper subscriptions. A man must pay for his paper as long as he takes it from the postoffice.

VALUE OF LIME-WATER AND MILK.—Medical and other professional men often break down from their inability to keep a regular time for meals. An eminent doctor says: "Being often out for many hours, and becoming too exhausted to digest a full meal when at length able to get it, I conceived a plan which answered admirably well, and which other doctors have gladly adopted. I provided myself with a small bottle of lime-water, which I add to milk when passing a dairy-shop; or I put a small flask of the mixture in my pocket. A water biscuit with this will keep a man harmless on a long fast, and enable him to digest a meal when he can obtain it."

INGROWING NAILS.—The *British Medical Journal* says: Dr. Mial has used tannin for ingrowing nails, and does not find it necessary to enjoin rest. A concentrated solution—an ounce of fresh tannic acid dissolved in six drachms of pure water, with gentle heat—is used by painting the irritated soft parts twice a day. Two cases recently had no pain or lameness after the first application, and went about their work immediately, which they could not do before. The painting with the tannin is to be continued until the nail has grown to its proper length and breadth. No other treatment was necessary.



A. T. DEWEY.

W. B. EWER.

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The Week.

The twin displays at San Jose, one in Horticultural hall and the other in Agricultural park, are well under way as we write, and with pleasing promise, high hopes and large attendance. They happily inaugurate the Pacific fair season of 1887, and what with county, district and State exhibitions, the next two months will afford an unbroken course of entertainment and instruction to the persistent fair-goer. The inward flow of moneyed immigrants from the East abates not, but waxes; and the wave of "boom," which has so long been gathering volume in the Southern California counties, and sending advance ripples and splashes up the coast and over the Tehachapi, now bids fair to become tidal, and roll its prosperous surges far north of the Golden Gate. The division of large bodies of land, the piping of water upon them, the auction-sales of lots on town-sites, and the general activity in real estate and rise in prices have already reached as far up as Sonoma, and the beneficent epidemic shows no sign of abatement. Well, let the happy settlers come—between San Diego and Shasta "there is room for millions more."

The Pacific Railway Commission.

We don't know how the representatives of the United States Government, in the persons of the Pacific Railway Commissioners, were treated during their sessions at the East; but we shall not blame them if they leave California with the idea that it is a pretty hard place and wholly under railway domination. We have read the reports of their sessions with considerable diligence, and our conclusion is, that they have been pretty thoroughly baffled, and not very pleasantly baffled, either, in their effort to find out a few things about the manner of construction of the Central Pacific and the manner of the administration of its affairs, so that it cannot pay its debts to the Government, and so that if the Government should take the road at the maturity of its mortgage, it would have a line with no terminals, and one which would not pay the cost of running cars over it. People have suspected as much, but the fact has not come out so badly and unhandsoemly as it has during the few days' investigations of the Commission in this city. The whole state of the case seems to be, that this unfortunate concern in whose treasury at one time "there was not a single cent for 17 days" should have been built by Government aid in such a way that the builders were all made helplessly rich, and yet the concern itself never accumulated anything, and now is not worth taking as a gift, if the grantees had to run trains upon it.

This seems to be what has been learned by the inquiry of the Commission. Every effort they put forth, which seemed likely to disclose how this state of affairs came about, was promptly met by loss of memory as long as that game would work; then by loss of books and records, and then, when witnesses were approached with questions which did not relate to memory nor to records, they blankly refused to answer—of course, under advice of counsel, chief of whom is a gentleman who, a few years ago, could not find anything too bad to say of the official acts of the men whom he is now advising to silence. Perhaps he knows better than any one else that silence is the least dangerous answer. And so the Commission had to appeal to the United States Courts to decide whether they could insist upon a witness answering their questions. This appeal seems to have availed nothing, nor, in fact, would any one expect much from it. Courts have often proved exceeding tender of the feelings of these corporations.

We hardly think this Commission has been fairly treated by the people of California. Possibly the knowing ones argued that the business is over with, the deed's done and not to be undone, and what use is there now to incur the opposition of powerful men simply to determine whether the Government has fairly lost the land and bonds it gave to build the road? The question now is not a living issue. So many lines are now in competition that there is no likelihood of a return to the old discrimination and extortion, so let it go, and if those most interested can save their reputations, it will be best on the whole.

By some such reasoning as this, perhaps, the people have satisfied themselves and have held aloof while the Commission has been waited on, at first obsequiously and finally defiantly, by the retainers and henchmen of the railway, until on Tuesday what seemed to be a climax was reached, which is reported by the *Bulletin* in these words:

Chairman Pattison asked Mr. Cohen if he had any witnesses to produce. That gentleman replied by calling upon Mr. Littler to swear the chairman, as he desired to ask him a few questions. The other two Commissioners thought the formality of swearing the chairman a useless one, as he was already under oath.

"Well, then," said Mr. Cohen, "I call upon the chairman to produce every letter he has received as chairman of this Commission, that they may be put upon record."

Mr. Pattison looked somewhat surprised, and smiled, evidently thinking Cohen was joking. The latter repeated his demand emphatically, when the chairman said he would not entertain the proposition a moment, and he considered it the height of impertinence on the part of counsel to make such a request.

Mr. Cohen said he believed the defendants here, for such the railroads appeared to be, had a right to know who had been inspiring the questions and compiling the figures that have been used in this investigation. He said measures would be taken to get the opinion of the United States Court on the question.

Chairman Pattison remarked that all the letters he had received were turned over to the

secretary of the Commission as soon as read and were now in his possession.

It seems to us that this was the height of discourtesy, and, to use a mild term, it was a disgrace to California that a chairman of a Government Commission, sitting in our city, should be set upon in this way. It is charitable to believe that the legal gentleman who offered this insult to the Commission has lived abroad so much of late that he has unlearned much of his California breeding.

And so the railroad "has the right to know who is inspiring the questions" which they find themselves compelled to refuse to answer. Why do they wish to know? Are the questions only answerable by crimination of the respondent? And if so, what is to be done to the people who suggest such questions to the Commission? Are they to be set upon by all the hired myrmidons whom the company, according to the testimony, seems to have had all along to flay those hostile to it?

The whole matter has an uncanny look, and the manner of its progress has not been creditable to our people either for what they have done or for what they have left undone. The Commission has exhibited a most praiseworthy determination to get at important facts and thus discharge its duty manfully. It has met with no open support from our public; it has been brow-beaten and badgered by individuals, whose motives are perhaps best known to themselves. We are glad the future sittings are to be at the East, for if they should remain here longer we should tremble for our reputation. Enough has been done already to lead us to apprehend in their report very little that will be creditable to California manhood or public interest.

Lest the foregoing may be thought to contain insinuations that those high in railway authority have not told the truth in their testimony before the Commission, we desire to add that such an impression is not intended. The remarks are intended to apply to what was not told rather than to statements actually made. For instance, since the above was written, Senator Stanford has filed a sworn statement before the U. S. Court in which he declares as follows:

In my testimony given to the Commissioners I have said in substance, and now repeat, that I have never corrupted nor attempted to corrupt any member of the Legislature, or any member of Congress, or any public official, nor have I authorized any agent to do so.

We do not doubt the truth of this as a personal statement, but what the Commission and the public desire to know is, rather whether such things were actually done than by whose authorization or authority. The railway people seem to think, according to some of their statements, that this investigation is being pursued as a result of personal spite against them. Such a motive should not prevail, most assuredly. It seems to us that the investigation is merely to ascertain how public business has been transacted and the inquiry is wholly in the public interest.

Death of Ex-Senator Sargent.

Hon. Aaron A. Sargent died very suddenly on Sunday last, Aug. 14th, at his residence in this city, after a brief illness, from which it was hoped he was recovering.

Beginning life as a printer boy in Massachusetts, he came to California in '49 and was soon publishing the *Nevada City Journal*. He subsequently studied and engaged in the practice of law, until in 1860 he was elected to Congress.

After serving three terms in the House of Representatives and one in the U. S. Senate, he was sent, under President Arthur's administration, as Minister to Germany. His vigorous support of the rights of American pork-shippers rendered his position at Berlin so unpleasant that he resigned and returned to San Francisco, where he resumed the practice of law.

Chief Justice Searls, a political opponent, but warm personal friend of the ex-Senator, says: "As a man, he was upright, honest and true to his friends; as a lawyer, he was active, energetic and brilliant; as a citizen, he was the possessor of excellent qualities, and, although a strong partisan in politics, had very many things in his character to admire."

Mr. Sargent was in his 60th year. He leaves a widow, one son and two daughters.

Look Out for Sharks.

Although we have very many thoroughly conscientious real estate men (we speak it boldly), there are some of the most unconscionable rogues in the business, and the intending purchaser must look carefully out for them. One of their chief methods of operation seems to be finding Government land for a large fee. How they work practically can be learned from the following extract from an article in the *Livermore Herald* of last week:

The attention of the *Herald* has been called to a deception practiced on parties looking for Government land in this vicinity. It claims that parties furnish descriptions of Government land for a large fee, always payable in advance, and send intending purchasers to the country, where they are met by an agent and shown the land claimed to be vacant. The purchaser returns to the land office, files up and pays the Government fee, and on his return finds he was duped, the land shown belonging to other parties. A German, now in town, was taken in in this way. He spent all his means, and now finds out the land filed on is a mass of chaparral and rocks, six miles from the land shown him. Another San Francisco party brought his entire family and household goods to the mountains and spent nearly \$1000 before finding out he was duped. There is no Government land in this vicinity fit for cultivation, except by an immense outlay of time, labor and money, and the truth should be told to strangers. Considerable feeling is being stirred up by these affairs, as they are working a great injury to the country.

This is a most wretched and disgraceful piece of business, and criminal prosecution should lie against it. There is one way in which the intending settler can ascertain much about the Government land still available in this State, and that is by application to the Immigration Association, at 10 California street. This association is supported by contributions from enterprising citizens, and we know its officers are highly esteemed. They have maps of the counties showing Government lands still open and descriptions of the character of the land. One can get much information for the asking, instead of being robbed of big fees and lied to by the real estate shark, as in the case described by the *Livermore Herald*, as quoted above.

Railroad Lands Thrown Open.

It was telegraphed from Washington that on August 15th the Secretary of the Interior revoked the order of withdrawal of indemnity lands for the benefit of the Atlantic & Pacific Railroad Company, and in a long letter to the Commissioner of the General Land Office directs that they may be restored to settlement under the pre-emption and homestead law.

It is stated that between 25,000,000 and 30,000,000 acres are involved in this decision in the case of the Atlantic & Pacific alone. The order also applied to all the other railroads named in the secretary's rules of May 23d last, except the St. Paul, Minneapolis & Manitoba, the Hastings & Dakota, the St. Paul & Pacific, the St. Paul & Sioux City, the Sioux City & St. Paul and Winona & St. Peter. These are still under consideration and undecided.

The Atlantic & Pacific Company seems to have made a hard fight to retain possession of the lands now thrown open, alleging errors of the Government in the matter, etc. Secretary Lamar's comments upon this point will be received with satisfaction as showing that there is a power which corporations must respect. We quote this paragraph:

Criticism upon the alleged shortcomings of the Government with respect to this grant came with an ill grace from this company. The people, whom the Government represent, had some rights under the grant as well as the company. On full consideration of the whole subject, I conclude that withdrawal for indemnity purposes, if permissible under the law, was solely by virtue of executive authority, and may be revoked by the same authority; that such revocation would not be a violation of either law or equity, and that said lands having been so long withheld for the benefit of the company, the time has arrived when public policy and justice demand that their withdrawal should be revoked and some regard had for the rights of those seeking and needing homes on the public domain.

HOPS IN NEW YORK.—At the annual meeting of the N. Y. Hop-Growers' Association, held at Utica on the 15th, Oneida, Madison, Lewis, Otsego and Montgomery counties were represented. The reports of delegates showed the crop will be about half that of 1885, while the acreage is from 25 to 35 per cent less.

Lakes Donner and Cascade.

The accompanying cut presents a view of two notable Alpine waters, Donner and Cascade lakes; the former named after the Donner family, who, in the fall of 1846, perished near its borders, and the latter after a beautiful cascade that pours its waters into the basin of this lake. They lie on the eastern slope of the Sierra Nevada mountains, Donner two miles west from the town of Truckee, and Cascade 20 miles to the south of that place, and a little to the west of Lake Tahoe. Donner is three miles long by one and one-half miles wide, Cascade being of somewhat smaller dimensions. The former is situated at an altitude of 6000 and the latter of 6552 feet above sea level; the waters of both being clear, pure and cold. Donner, which is very deep, occupies, like most of these Alpine lakes, a depression rooted out by an ancient glacier. It is drained by the Little Truckee river, which, running two miles east, unites with the main Truckee, the outletting stream of Lake Tahoe.

Donner was originally surrounded by a heavy forest of pine, spruce and fir, the most of which in the vicinity of the lake has since been cut away, leaving only a fringe of the primitive forest standing on its margin. The hills around, denuded of the stately trees that formerly clustered thickly over them, present now, with their hideous stubble of stumps, an altogether forlorn and desolate appearance. With "its dream of woods" there has departed much of the glory of the landscape as seen before it was so ruthlessly marred by the axe of the lumberman. Once felled, the trees are not on this more arid slope of the Sierra followed so soon by a new growth as on the opposite side of the range; and, unless the second crop of trees shall be protected and nurtured or artificial arboriculture shall come to be practiced here, not again will this generation or the next see anything like the original tree-growth restored to this once grandly beautiful wilderness land. In descending from the Summit the traveler on the Central Pacific railroad gets at one or two points a tolerably good view of Donner lake, but not of Cascade, which lies at a greater altitude and a long way from the line of the road.

Looking at Lake Donner, sleeping so placidly in its glacial bed, it is hard to believe that there ever should have been witnessed on its shores other than scenes of tranquillity and peace. And yet, in these majestic solitudes, far from the abodes of civilized man; here, under the shadow of the great mountains, in "the sounding aisles of the dim woods" by the softly murmuring waters of the Truckee, there occurred at the period mentioned one of the most trifling events ever recorded in history—an event so sad and appalling that the name attached to this lovely water will stand forever the synonym of heroism and horror! A brief sketch of this occurrence is as follows:

With the overland immigration to California of 1846 there came a company from Illinois under the captaincy of Geo. Donner, a former well-to-do farmer of that State, who brought with him his wife and six children. By reason of unexpected delays this company failed to reach the Sierra Nevada until the early part of November, when, having arrived at the base of these mountains, they followed up the Truckee river till they came to a point one mile above the site of the present town of Truckee, where they camped for the night.

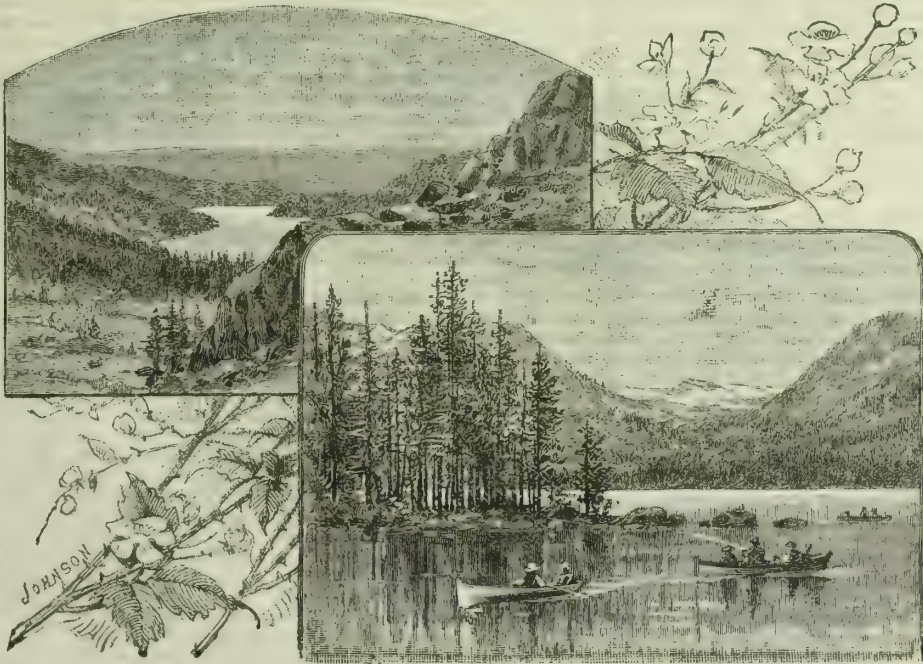
As usual, these immigrants turned out their stock to graze, a procedure against which they had been warned by Truckee, their Indian guide, who advised them that the weather threatened a storm. And, sure enough, the snow began to fall during the night and continuing for several days, reached such a depth that it was impossible for these people to find their cattle, which, scattering, had sought shelter in the woods and deep canyons with which the country abounds.

For protection against the cold and inclement weather the snow-beleaguered immigrants set about constructing rude cabins, and it being found that they would soon be short of provisions, a party was dispatched over the Sierra to Sutter's Fort for a supply. Meantime, the scanty stock of food became exhausted and the entire company was reduced to the direst extremity when the relief party from the fort arrived with such limited quantity of provisions as they were able to bring, wallowing through the snow. They found their companions in a terrible condition, the whole of them nearly fatally famished, thin, their strength gone and bodies reduced to skeletons. Several had died

in camp, the survivors in some instances having fed on their remains; and if report may be credited, more than one of the children had been put to death to furnish food for such of these unfortunates as had become insanely reckless. A good many, seeking escape from their impending fate, had endeavored to make their way over the mountains; while a few of these succeeded, more turned back discouraged, quite a good many having perished in the attempt.

On examination, the fearful discovery was made that two of the company, Captain Donner and Luis Keisberg, being too much enfeebled to travel, and there being no means for carrying them, would have to be left behind. This was a hard alternative, but there being no help for it, these two brave men, on being made acquainted with the situation, quietly submitted to the inevitable.

And now came the hour for parting, the wives with their husbands and the children with their fathers, for Keisberg, too, had his family with him. And this parting, as all well knew, must be final, there being but little food to be left for the abandoned men, and the winter being now too far advanced to leave any hope of more being brought in. When it came to be determined whether she would go with her children and live or stay with her husband and die, Mrs. Donner chose the latter, nor could the entreaties of the wretched father alter her purpose. This settled, the heroic woman embraces her little ones, kissing them over and over as she presses each to her heart; then looking tenderly into their eyes she sadly turns away. The rough men around, moved to tears, with soothing words and gentle force then place her in the cabin and hasten their departure, for already there are signs of a gathering storm, the chill gray air foreboding more snow. There is no time for lingering, there is danger



LAKES DONNER AND CASCADE.

and possibly death in delay. The children must be mounted on the backs of the men and all must up and away; and so they hurry off, leaving the three doomed ones behind.

The passage of the mountain is successfully made and all, the rescuers and the rescued, arrive safely at Sutter's Fort. Two months having passed by, another party made their way over the Oordillera to Starvation Camp; not now with the hope that they would find there any one alive, but merely to gratify that natural desire of our kind to know the worst. Arrived at the hut and entering, they were astonished beyond measure to find there Keisberg still alive, the poor creature having subsisted all this time on the flesh of Mrs. Donner, which, after her death, he had taken the precaution to pack away in the snow. Though horrified at his recital of the cannibalistic feast, this party commiserating his sufferings, kindly cared for this most unfortunate of all men, taking him with them to Sutter's Fort, where he was tenderly nursed and all his wants provided for until he had fully recovered his health and strength.

Despite his protestations to the contrary, there are some who believed Keisberg took the life of Mrs. Donner for the purpose of prolonging his own. But however this might have been, few will care to sit in judgment on a case in which the offender is not amenable to any human tribunal—in which, if arraigned, he may justly claim acquittal under the ruling that self-preservation is the first law of nature. After the mournful events we have related Luis Keisberg was no longer the man he had been before. From the genial and companionable person of former days, he became moody and finally morose and misanthropic, his whole life being darkened by the shadow of such a great calamity. Let us hope that with the sunset of life the clouds will be lifted, revealing their silver lining and the cheery light beyond.

HARVESTING by the light of blazing gas wells is the latest agricultural trick in Indiana. The toilers find it much more comfortable than working under a mid-day sun.

A Field Day for Combined Harvesters.

The State Board of Agriculture is doing for the new combined harvesters what we would like to see extended to the whole family of agricultural implements—that is, to hold field trials, at which committees inspect their work and farmers have a chance to be present and judge for themselves of their operation. There were two field days for combined harvesters this year, one on Aug. 11th, the other Aug. 14th. Both were held near Stockton, which is a headquarters for the manufacture of these machines. The first was on low tule ground, with much down grain, on the farm of R. C. Sargent, the other on hard ground with straight grain on the farm of Miss Julia Weber. At each trial there were present some of the committee of Directors of the State Society, consisting of H. M. Larue, Chris Green, G. W. Hancock and C. M. Chase. The other member of the committee, C. Singletary, was not present. Secretary Ed Smith of the State Society accompanied the committee.

At the first day's trial on Mr. Sargent's farm, the test was made on reclaimed tule land, that had a heavy mixed growth of wheat, barley and weeds, lodged and tangled in all shapes. The ground was soft and yielding, not only to the horses, but the machines also sank sometimes until the framework touched the ground. Under all these conditions, the test was indeed very severe. For this trial five machines ap-

"Little Houser" with 14 animals, turned out as much grain as the Holt and Improved Houser with 22 animals each, and was credited with 6½ sacks. The Love Houser machine saved 9½ sacks and the Tretheway machine picked up six sacks.

Of course all the machines worked at great disadvantage in such grain on such soil, but the result is of great importance. Mr. Larue credited with saying: "The trial of the harvesters was very satisfactory, as it proved that combined machines could cut any grain on tule lands, pick up the worst-lodged grain and save as much, if not more, grain than any other harvesting machinery. The committee wanted just such a trial for these machines, and he was surprised to see such heavy machinery doing faultless work."

The second day's trial on August 16th was the greater one, judged by the number of machines in the field and the number of visitors present. The grain stood up well except in one place at the upper end of the field, where there was some oats and a patch of lodged and tangled grain, which caused considerable annoyance. The grain was very smutty and made an excellent test for cleaning machinery.

For this trial nine combined harvesters of five different patterns were entered for competition, some of them being new, while others had been used by farmers through several seasons. The Shippee Harvester Company had three Houser machines in the contest. Two of them, a large improved machine and the "Little Giant," were new, and the other was George Mosher's. Tretheway & Martyn had two "rubber" machines, Holt Bros. had one of their manufacture owned by John Bunch and C. H. Wakefield, Matteson & Williamson had two "Harvest Queens," and Myers & Cowell entered their link and V-belt harvester. Besides these, there were on exhibition, but not competing, Hudson & Patterson's steam harvester, which moved about in the grain like a thing of life. Miller's Centennial Young push machine was at work in the field.

Following is the record of each machine's work as kept by Secretary Smith, with the measurements and other data recorded for the committee:

No. 1—Tretheway & Martyn's "Rubber"—	
Size of cut, feet.....	10
Animals.....	14
Men.....	3
Size of cylinder.....	48x21
Sacks of grain.....	5½
Weight of grain, pounds.....	747
Weight of screenings, pounds.....	28
Time of run, minutes.....	18
Stops, minutes.....	1:10
No. 2—Houser (George Mosher)—	
Size of cut, feet.....	14
Animals.....	20
Men.....	4
Cylinder.....	28x16
Sacks of grain.....	8½
Weight of grain, pounds.....	1119½
Weight of screenings, pounds.....	11
Time of run, minutes.....	15
Stops, minutes.....	1:15
No. 3—Holt Bros.—	
Size of cut, feet.....	14
Animals.....	16
Men.....	4
Cylinder.....	28x16
Sacks of grain.....	7½
Weight of grain, pounds.....	1041½
Weight of screenings, pounds.....	74
Time of run, minutes.....	20
Stops, minutes.....	6:10
No. 4—Harvest Queen, No. 1—	
Size of cut, feet.....	12
Animals.....	18
Men.....	4
Cylinder.....	28x16
Sacks of grain.....	6½
Weight of grain, pounds.....	900
Weight of screenings, pounds.....	11
Time of run, minutes.....	17:30
Stops, minutes.....	1:15
No. 5—Tretheway & Martin's, No. 2—	
Size of cut, feet.....	16
Animals.....	20
Men.....	4
Cylinder.....	48x21
Sacks of grain.....	8½
Weight of grain, pounds.....	1100
Weight of screenings, pounds.....	15
Weight of No. 2 grain, pounds.....	200
Time of run, minutes.....	17:30
No. 6—Improved Houser—	
Size of cut, feet.....	14
Animals.....	18
Men.....	4
Cylinder.....	28x16
Sacks of grain.....	7½
Weight of grain, pounds.....	990
Weight of screenings, pounds.....	57½
Time of run, minutes.....	30
Stops, minutes.....	14
No. 7—Myers & Cowell's—	
Size of cut, feet.....	12
Animals.....	14
Men.....	3
Cylinder.....	28x16
Sacks of grain.....	7½
Weight of grain, pounds.....	950
Weight of screenings, pounds.....	37

Time of run, minutes.....	28
Stops, minutes.....	12
No. 8—Houser, "Little Giant"—	
Size of cut, feet.....	10
Animals.....	10
Men.....	3
Cylinder.....	28x16
Sacks of grain.....	5 1/2
Weight of grain, pounds.....	755
Weight of screenings.....	17
Time of run, minutes.....	18
Stops, minutes.....	1:40
No. 9—Harvest Queen, No. 2—	
Size of cut, feet.....	11 1/2
Animals.....	14
Men.....	4
Cylinder.....	28x16
Sacks of grain.....	6 1/2
Weight of grain, pounds.....	880
Weight of screenings, pounds.....	5 1/2
Time of run, minutes.....	17

These records afford much interesting data concerning the machines which should be kept for reference. The contest lasted until evening. Interested parties kept up with the machines, and about 50 buggies were strung along in the rear. All along the route after each machine farmers got down on their knees and scraped over the ground to see what quantities of grain were lost by the machines. It was found that all the harvesters did good work, and there was but little complaint from any one about the waste of wheat.

In the evening there was a public inspection of the grain samples from the different machines. Of the result of this examination, the *Stockton Independent* of Aug. 16th says:

The work of the improved Houser was found to be the cleanest and best, very little smut being noticeable in a large lot of wheat. The other samples were well sprinkled with smut, and some of them had considerable straw. The work of the Holt and Harvest Queen, No. 1, was next to the Houser, as the committee judged from the samples. Samples of the grain thrashed at the first contest were compared with yesterday's samples and examined together. The committeemen were strengthened in their unofficial opinion that the improved Houser is the best cleaner.

This judgment is of course unofficial, and the report of the committee will not be made until the time of the State Fair. Though this report will be of value and interest, we count the greatest benefit of such trials in the opportunity it affords inventors to bring their machines into use before large numbers of farmers who are able to judge for themselves of the good points in each machine.

RAPID TRANSIT.—The *Reno Gazette* tells of a man at Lake Tahoe, employed by the Virginia & Gold Hill Water Co., who heard one morning of an accident that had happened to his father the day before and at once made arrangements to come and see him. A box six feet long and V-shaped, so that it would readily pass through the company's large flume down the mountain to Lake View, was made for him. Lying down in it, his head resting on his satchel, the cover was nailed on. He had a hole cut in it large enough to allow him to look out when he so desired. The box and contents were carried to the flume and laid in the rushing water, and off it darted at lightning speed. Shortly afterward he was at the base of the mountain, having traveled a distance of eight miles in as many minutes. He kicked the cover off the box, got out and boarded the Virginia & Truckee local passenger train that came along, bound for Reno.

PROF. AND MRS. J. G. LEMMON.—The *Paso Robles Leader*, noticing the presence in that town, last week, of our whilom contributor, Prof. Lemmon, and his wife, indulges in some reminiscences of a mountain-scaling trip with him, years ago, and closes as follows: "Prof. Lemmon is well known among botanists and naturalists, and has spent many years in the pursuit of his avocation. He found the home of the common potato away up in the mountain fastnesses of Arizona, and nearly paid for his curiosity by being hunted by the Apaches. The Professor's life has been a checkered one, embracing service in the army during the rebellion, and a term in the awful prison-pen at Andersonville, Georgia, where he endured privations from which he has never fully recovered. He and his worthy wife count their friends by the hundred all up and down the coast, and the writer is proud to be considered among the number."

HOW TO TOTE A BIG MELON.—A Los Angeles county watermelon, said to measure five feet in girth and to weigh 103 pounds, was on view in the window of the *Call* office in this city last week. The question arose how to handle so huge a piece of refreshment—for carrying even a 30-pound melon in the arms is no trifling task. But "necessity is the mother of invention," and the *St. Louis Globe Democrat* says a young Missourian has devised a double running noose of wire with a wooden handle, by means of which a melon can be carried as readily as a valise; and now all the melon men are wondering why they never thought to invent the thing.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Alkali Soils.

EDITORS PRESS:—"Reclaimer," in his article on the value and reclamation of alkali lands in your issue of August 6th, appears to forget that (as I have elaborately shown in my reports on the subject) the alkali infesting such lands is of very variable kind and intensity, and that what is sufficient to render them productive in one case may be altogether ineffective in another. "Reclaimer" has apprehended correctly that deep and frequent tillage is an indispensable condition in the successful cultivation of all alkali lands, and that surface irrigation is to be avoided in all cases. But in order that tillage may be practiced, land must first be tillable; and that is too often not the case where alkali prevails, especially on adobe soils. Some such soils defy all tillage when impregnated with "black" alkali (carbonate of soda), and to render tillage possible the noxious salt must first be neutralized by means of gypsum, as long ago prescribed by me. Again, there are cases in which seeds will not germinate in alkali soils even when these have been deeply tilled and irrigated from below. This may happen either because the amount of alkali present is too great, or, again, in the case of "black" alkali, which usually makes the seeds rot in the ground.

Again, there are soils in which even sub-irrigation will bring the alkali to the surface, this depending on the fineness or coarseness of the soil texture.

What your correspondent says about the intrinsic richness of alkali soils is assuredly true, since the alkali salts are to a great extent merely the surplus plant-food left in the soil by deficient rainfall and drainage. But to bring out their merits it will not do to work blindly, by rule only, otherwise disappointment will too often follow. **E. W. HILGARD.**

Mission San Jose, Aug. 9, 1887.

Fresno Notes.

EDITORS PRESS:—Much is said about Fresno county and her lands which is thought by some to be a delusion; but by a residence here one will feel as the Queen of Sheba felt after she had beheld the wisdom of Solomon, that the "half had not been told." The wheat harvest is now about completed, and thrashing machines are running at their full capacity, and hauling wheat to the different warehouses is the order of the day. The wheat yield is far beyond expectations and of very fine quality. The fruit crop is abundant this year, especially peaches, pears, nectarines, apricots and grapes. I don't think there is a spot on God's footstool that will beat Fresno county on peaches, apricots, nectarines and grapes. Meade & Co.'s fruit-drying and raisin-packing establishment has been running now a little over two months, and they have received from 4000 to 6000 boxes of fruit per day ever since the peaches began to ripen. Since they started up, the Pacific Fruit Company of San Francisco, under the management of Mr. Williams, Fresno's pioneer nurseryman, has built another drier here of the same capacity, and is also running in full blast. Meade & Co. have about 300 or 400 women and children employed, besides men who make the trays on which the fruit is dried and boxes in which it is shipped. This gigantic work of those two packing-houses is a blessing to the fruit-growers and the people in general of this county. The fruit-growers are enabled to get remunerative prices for their fruit, and the labor class finds employment. They pay a cent and a quarter per pound for the fruit delivered at the drier, and at these prices some orchards have paid their owners from \$200 to \$250 per acre. Mr. Conlan, one of our prominent fruit-growers, received from 250 apricot trees \$572. The apricot yields well here. Mr. Covell, another fruit-raiser, had a tree of apricots that yielded 19 boxes of about 42 pounds to the box.

The two fruit-packing companies are offering five cents per pound for Muscats and Muscatel raisins, which will pay the owners about \$150 to \$200 per acre. The raisin-growers are expecting to do well on their raisins this year, although the yield, they think, will not be as heavy as last year.

According to the statistical report of the San Francisco Produce Exchange, I see that Fresno county is the third county in wheat-raising, and I think she is going to be the banner county on fruit. I have lived in Sacramento county for 12 years, where it is claimed as fine fruit is grown as is found in the State, and Fresno beats them on apricots and nectarines, and I am almost persuaded to say on peaches, too, for they ripen more perfectly and they are just as large and of sweeter flavor. Fresno grapes have a world-wide reputation for being the finest grapes. The Sacramento river, I think, beats us some on the Bartlett pear, but not bad enough to boast of, and our strawberries and blackberries cannot be excelled.

Fresno City is growing very rapidly and I think ere long can boast of a city of 20,000 inhabitants. The enterprising citizens of the place are doing all they can to make it a model city. Thos. E. Hughes is having a hundred-thousand-dollar hotel erected now on I street, opposite the Masonic temple, that is going to

rival most of the Occidental hotels and will reflect great credit on the place. Uncle Tommy knows how to do things and his heart and soul is for Fresno county. Several fine brick structures have gone up in the last year. Old wooden buildings are giving way to fine brick structures and everything shows improvement. Mechanics and laborers are in great demand and wages are good.

The real estate firms have done a good business during the past season and they are consistent men—they show their faith by their works; they not only sell land, but they buy and own and improve land; they spend their money here; they expect to live here, educate their children here, and spend their days here, and, in fact, we have an industrious, wide-awake population—men, women and girls who are not afraid to work and don't think work a disgrace. If our people only pursue their present course and do the work themselves, have their children work, and not rent their lands to Chinamen and let their children grow up in idleness, we shall have a prosperous, thriving, and happy population. The old adage that idleness is the mother of vice is as true as gospel, and I think many parents have seen this demonstrated in California. **W. P.**

Fresno City.

THE VINEYARD.

The Grape Interest of Santa Clara.

The meeting of the Santa Clara Viticultural Association, held last Saturday, was the annual meeting. In his address as retiring president Mr. D. C. Feeley said:

During the past year we have had quite a large accession to our membership, and questions of vital importance have been discussed.

The establishment in San Jose of a storage wine-cellar with a capacity of half a million gallons, under the care of a competent cellar-master, was freely discussed, but for the present deferred.

We have been seeking information relating to the condensing of grape must, and the best machines available for that purpose, and it is confidently expected that by the time the vintage of 1888 is ready there will be one or more of these factories in active operation in the county.

The prices paid for wines of the vintage of 1886 have been, as a rule, unsatisfactory, in fact in some cases below the actual cost of production. This is only a temporary depression, caused by the wine combination in San Francisco, as the market for California wines in the East has been steadily increasing. If the wine-producers wish relief from the corners made at their expense, they must organize and meet combination with combination. They should organize co-operative wine-cellars wherever there are grapes enough to warrant it, and put a competent man in charge of them. Inferior grapes should be grafted over, or their product sent to the still, and only good wine should be offered for sale.

Last spring a gentleman told me that he had just sold 4000 gallons of wine of the vintage of 1885 for 35 cents per gallon, and in order to make room for this year's vintage he sold 37,000 gallons of the vintage of 1886 for 14 cents per gallon. The new wine, he said, was as good as the old at the same age. Here we had a difference of 21 cents per gallon, or \$7770 on the quantity sold. This showing tells its own story and furnishes food for reflection. I feel confident that the public-spirited gentlemen who own and operate the eight banks of this county will assist this struggling industry by loaning, upon reasonable security and at a low rate of interest, the necessary means to hold these wines until they ripen, when they should be sold in the East as Santa Clara county wines.

I think I reflect the feelings of this society when I express thanks to Prof. Hilgard for his untiring efforts to advance the wine interests of this State; also to our secretary, Mr. Combe, for his many able articles relating to the industry in this county, which have appeared from time to time in the local press, and were extensively copied throughout the State.

Election and Other Matters.

The secretary, L. D. Combe, submitted his report for the term. It showed total receipts from fees and dues \$78; expenses, \$18.75; committee expenses, \$9.50; general expenses, \$23.65; paid over to treasurer, \$18.85; total, \$70.75; leaving balance on hand of \$7.25; amount in the treasury, \$83.

The election of officers for the coming year then took place, Mr. Feeley declining to serve again, and resulted as follows: President, John T. Doyle; vice-president, D. Wright; treasurer, Frank Dunn; secretary, L. D. Combe.

Doyle spoke of the necessity of action at an early date in having an interview or open consultation with Senator Stanford, Congressmen Felton, Morrow and others of the representatives who would attend, in regard to needed legislation for the wine interests of this coast.

On motion the secretary was instructed to notify Senator Stanford and the Congressmen that a meeting for consultation, to be held in San Francisco on August 24th, would be agreeable; and a committee consisting of Messrs. Doyle, Portal, Pierce, Merithew and Combe was appointed by the chair to make all necessary arrangements.

HORTICULTURE.

Paralysis of Apricot Trees.

The following essay by Rev. M. Ongerth of Alameda was read at the last meeting of the State Horticultural Society:

At the last meeting of your society a very important essay was read in relation to the apricot and all that concerns its cultivation. I regret not having been able to attend the meeting so as to follow its very interesting and instructive discussion. Being myself a pomologist, I take the greatest interest in the matter. I now take the liberty to call your attention to the experience I had with a certain peculiarity of the apricot tree. Three times I had an opportunity (twice in my own orchard and once in that of my neighbor) to observe paralysis on two apricot trees from five to six years old, and on one apple tree four years old, grafted on English Paradise. The symptoms were in every case the same. All three trees excelled by surprisingly exuberant growth, by very healthy foliage and by abundant normally developed fruit. I observed these three cases in different years, but they all occurred at the same time of the season—that is, toward the end of June.

In the morning the trees appeared to be in full health; shortly after 10 o'clock the stems of the leaves suddenly became weak and every leaf without exception hung lifeless on the tree. In the afternoon the fruit and the bark began to shrink, and in 48 hours all leaves and young shoots were entirely withered and the fruit shrunk and nearly dried up. I tested two trees with the knife, and found that paralysis and death had taken place from the grafting point upward, whereas, the part below the graft, that is, the trunk, neck of the root, and all roots, had remained intact and perfectly sound. I understand that similar cases have occurred in California; I therefore state the method to prevent the same.

According to information collected from many parties it results that no weakly tree is attacked with paralysis, but only those which exhibit too exuberant growth; therefore these alone require careful watching. To prevent the paralysis, simply bend a branch or bough of medium size so as to break it, but without separating it from the body of the tree; if necessary, a slight cut may be made with a saw or otherwise, so as to facilitate the breaking. Let the branch with all its fruits and leaves hang on the tree until the following spring; then cut it off and cover the wound properly. Every single fruit on the tree thus treated will fully ripen and the tree itself will soon show moderate, normal growth. The very greatest care should be taken when cutting off the branch in the springtime, not to make a wrong cut, so as not to stimulate the wood growth, which would increase the tendency to paralysis instead of decreasing it.

There are cases of partial paralysis where only one branch is struck by it; in such cases, the tree, as a rule, recovers. Nature, in such instances, has helped herself and produced that effect which man does by breaking the branch.

Varieties.

Classed among the best apricots are the three following: The Breda, the Beauge and the Ungarian Best.

The best known of all is the Breda. It is of medium size, its pineapple taste is refreshing and its productiveness surprising. It belongs to the very best of its species; it has one advantage which no other species of apricots possesses—that is, seedlings from its stones but very rarely degenerate, so that, as a rule, 95 per cent of its seedlings produce the genuine Breda and therefore do not require grafting.

None but the stones of the very best fruit, entirely ripened on the tree, should be used as seedlings.

The Beauge belongs to the large-sized fruit, superior for its size, its beauty and flavor, as also for its productiveness and the soundness of the tree.

The Ungarian Best is most likely the least known here. Its size is large to very large, has a greenish-yellow flesh, is very sweet and of a delicious flavor. In regard to productiveness and durability of the tree, this kind is second to none.

If the soil is very dry, graft the apricot on peach or almond; on any other soil, graft on apricot seedlings or plum, of which latter the St. Julien is the best for this purpose.

Remarks.

After the reading of the paper the secretary of the society remarked that the Breda was long ago discovered to be a very unsatisfactory bearer, at least in some parts of this State; also that working apricot upon almond was disapproved by California experience. A good union is not made, and the trees, though they may grow to a considerable size, will part at the union and show that the fibers have not knit together.

SEVERAL of the southern counties are taking measures to make displays of their products at St. Louis next month, in connection with the G. A. R. Encampment, for the sake of swelling the boom yet higher.

THE White river Utes in Colorado are reported to be on the war-path, and the Governor has telegraphed for U. S. troops to suppress the trouble.

Ladies' Toilette.

This consists of a ladies' jacket and costume. In this instance the jacket is shown developed in fawn-colored broadcloth, and is superbly adjusted. The front is made double-breasted by a handsomely shaped gore joined to the right front. The closing is made in double-breasted style with button-holes and ball buttons to just below the waistline, but may be continued to the edge if desired. The seams at the back and sides are beautifully curved, and so are the single bust darts which fit the fronts, all being arranged in the manner known as "lapped," which is effected by lapping one edge over the other flatly and stitching each edge to position. The shoulder seams are made in a similar way. The outline is rounding, and a uniformity of depth is observable all around, the edge being finished plainly.



LADIES' TOILETTE.

In the lower part of the side-back seams are inserted narrow loops which turn forward and are stitched at the edges. The collar is in high rolling style and is mounted on a band, and two rows of stitching finish its edges; a clasp closes it at the ends of the band. The sleeves show five rows of stitching at their wrists and fit in a superior manner.

When fine cloths, such as that here used, are made up, the edges are not turned under and stitched, but cloths that show a tendency to fray had best be turned under before stitching. Sometimes a lining of silk or Surah is added, being finished separately from the edges of the jacket. All light shades, such as pearl, putty, mastic, mode, etc., and also dark greens, blues, grays and browns, are favored for jackets of this style. Broadcloth is preferred for such jackets, but checks, cheviots, stripes, etc., may be chosen if desired.

The costume is developed in novelty wool goods, and its gores are trimmed as far up as exposed by the drapery with a double box-plaiting of the material. The plaits are broad and are pressed well in their folds and stayed underneath. This plaiting is not a part of the pattern, but can be easily made. The costume will be liked especially for all varieties of cotton textures. Bands will frequently trim the

skirt instead of plaiting, or a gathered or kilted flounce will be chosen.

The hat is of fancy straw, with a facing of velvet on its rolling brim; it is trimmed with a full scarf of gauze and a bunch of flowers and leaves.

This pattern may be had of H. A. Deming, 124 Post St., S. F.

Los Angeles County Nurserymen.

The annual meeting of the Los Angeles County Nurserymen's Association was held at the office of the president, T. A. Garey, 115 West First street, Aug. 5th, and is reported in the Los Angeles papers. The following officers were elected for the ensuing year: T. A. Garey, president; A. M. Herbert, vice-president; Byron O. Clark, secretary; Milton Thomas, treasurer. The executive committee of last year was re-elected.

The secretary was instructed to have a re-

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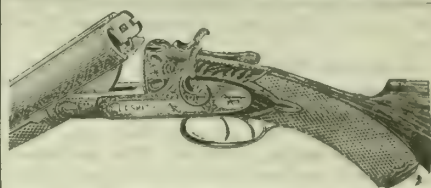
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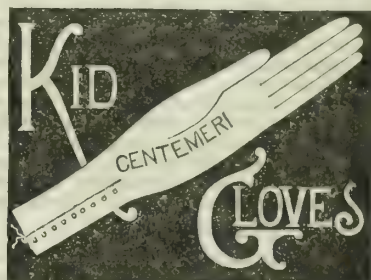
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Origin and End of Worlds.

(Translated from *Diario del Hogar* by M. N. M.)

The following is an extract from a recent lecture by the eminent French astronomer, C. Flammarion:

How many years has the sun been revolving? On the hypothesis that nebulous matter may have been in its origin of extreme tenuity, the quantity of heat engendered by the fall of all these molecules toward the center which has produced the solar system, has been calculated. Granting that the specific heat of the condensing mass may have been that of water, the heat of condensation would have sufficed to produce an elevation of temperature of 28,000,000 degrees Centigrade (Helmholtz and Tyn-dall).

It has long been known that

Heat is Only a Mode of Motion;

It is an infinitesimal, vibratory movement of the atoms, all heat converting itself into motion, and all motion into heat. This condensation sufficed (and much more) to fix the present temperature of the sun and the original temperature of all the planets. If this brilliant star continues condensing, as is possible, a condensation that should diminish its diameter by 2-1000 of actual longitude would engender a quantity of heat sufficient to cover the loss of the emission during 2000 years. In the present degree of the emission, the solar heat produced by the former condensation of its mass would still last 20,000,000 years. The measure of time exacted for the condensation which the primitive nebula underwent to form our planetary system

Defies our Imagination.

To compute it by thousands of millions of centuries would be no exaggeration. The experiments of Bischof upon the basalt seem to prove that in order to pass from the liquid to the solid state, and to cool from 2000 degrees to 200, has required for our globe 350,000,000 years. The sun had already existed many other millions of centuries. What is all the history of humanity in comparison with such a period? A bubble on the ocean. During thousands of centuries the terrestrial globe rolled in space like an immense chemical laboratory. A perpetual deluge of boiling water was falling from the clouds upon the red-hot surface and was ascending in vapors to the atmosphere to fall again. When the temperature came to be less than that of boiling water, the vapor liquefied and was precipitated. In the midst of these frightful tempests, the terrestrial crust—broken thousands of times by the convulsions of the central fire—was vomiting flames and was being solidified; the surging volcanoes were making elevations above the levels of the hot seas, and the first islands appeared. The primary semi-fluid combinations of carbon formed rudimentary

Attempts at Life,

A substance which hardly deserves the name of organic, as it was not merely mineral, nor yet vegetable, nor animal. The primitive plants—the algae—which float inert upon the ocean, were now in progress. The primitive animals—the zoophytes, the elemental mollusks, the corals and the medusae—were likewise in process of formation. Insensibly, from century to century, the planet lost its roughness, the conditions of life were perfected, beings multiplied, differing from the primitive trunk, gaining organs, at first obtuse and rudimentary, but subsequently developed and perfected. It was the

Primordial Age

In which nascent life was represented. Algae, crustaceans and vertebrates yet without heads, appear to have had exclusive possession for 53 hundredths of the time that had elapsed since the earth became habitable. The primary period, which succeeded, is typified by the carboniferous vegetation and the reign of the fishes; to it is assigned 31 hundredths of the time following. The secondary period, during which the splendid conifers dominated the vegetable, and the huge saurian reptiles the animal world, lasted 12 hundredths. Then the earth was swarming with fantastic beings, engaged in perpetual warfare in the midst of the ungoverned elements. Thus I have here, according to the compared thickness of the lands which were deposited during these successive epochs, 96 hundredths of the elapsed time occupied by living forms, absolutely distinct from those which at present embellish our globe—a condition relatively formidable and coarse, and as different from that which we know as if it were that of another world. Who would have then dared to raise the mysterious veil of the future, and foretell the distant time in which man would appear upon the newly transformed planet? During the tertiary period, the mammals and the animals which exhibit more or less physical relation to the human species, succeeded to the inheritance of these primitive ages. The duration of this period did not reach three-hundredths of the total. The quaternary age witnessed the appearance of

The Human Species

And the cultivated trees. This period does not represent one-hundredth of the scale of time. How these magnificent contemplations augment the ideas that we habitually form of nature! We imagine that we ascend very high into the past when we behold the ancient pyramids still standing on the plains of Egypt, the obelisks covered with the mysterious hieroglyphics, the silent temples of Asia, the antique pagodas of

India, the idols of Mexico and Peru, the secular traditions of Asia and of our Aryan ancestors, the instruments of the age of stone, the arms out from silex, the arrows, the spears, the knives, the rapiers and the stone slings of our primitive barbarism. We hardly dare to speak of 10,000, of 20,000 years. But even if we should admit 100,000 years as the age of our species so slowly progressive, what would that be at the side of the apparently fabulous accumulation of centuries which have preceded us in the history of the planet? Allowing but 100,000 years to the

Quaternary Age

(The existing age), we see that the tertiary period must have lasted 300,000 years, the secondary 1,200,000, the primary nearly 3,000,000, and the primordial more than 5,000,000 years. What is this history of life compared to the total history of the globe, which has required 300,000,000 years for the earth to solidify, while its exterior temperature was descending to 200 degrees? And how many millions shall we need to add to represent the time which has elapsed between the temperature of 200 degrees and that of 70 degrees, the probable maximum of organic life? The study of worlds opens to us in the order of time, horizons as immense as those which open to us in the order of space; it causes us to think of eternity as we think of the infinite. * * * We all

Admire the Beauty

Of terrestrial nature—the green hills, the perfumed meadows, the murmuring rivulets, the forests with mysterious shadows, the groves animated by the songs of birds, the mountains crowned with snow, the immensity of the seas, the sun in the west between clouds of gold and carmine, and the sublime ascent of this star above the summit of the mountain, mingled with colors when the first rays of the morning tremble in the gray vapors of the plain. We admire the works of man, which to-day crown those of nature—the bold viaducts thrown from one mountain to another over which peeds the locomotive; the ships, marvelous edifices, which traverse the ocean; the brilliant cities, the palaces and temples, the libraries (museums of the mind), the arts of sculpture and painting, which idealize the real; the musical inspirations, that cause us to forget the vulgarity of things; the efforts of intellectual genius, which investigate the mysteries of nature, and transport us to the infinite. In the midst of this radiant life of which we make a part, we live happy. But all this beauty, all these flowers and all these fruits, will pass away. * * *

The Earth Was Born. It Will Die.

It will die when its vital elements shall have been spent, or perhaps by the extinction of the sun in whose rays its existence is suspended. It may die by the shock of a celestial body which it might meet in its path, but this end of the world is the most improbable of all. It may die, we say, by the slow absorption of its elements. In truth, it is probable that the water and the air are diminishing. The ocean, like the atmosphere, appears to have been much more considerable than at present. The crust of the earth is penetrated by the waters, which combine chemically with the rocks. It is almost certain that the interior temperature of the globe at ten kilometers of depth reaches the boiling point and impedes a further descent of the water; but the absorption will continue with the cooling of the globe. The oxygen, nitrogen and carbonic acid, which compose our atmosphere, appear to suffer likewise a slow absorption.

The Reflective Mind

Can discern through the mist of future centuries the epoch still very distant in which the earth, deprived of the atmospheric vapor which protects it against the glacial cold of space, concentrating to it the solar rays, as in a hothouse, will be cooled as with the sleep of death. From the summit of the mountains the mantle of snows will descend upon the table-lands and the valleys, casting from them life and civilization, and covering forever the cities and nations upon which it may fall. Human life and activity will contract insensibly toward the intertropical zone. St. Petersburg, Berlin, London, Paris, Vienna, Constantinople and Rome, will successively sleep beneath this eternal shroud. The shores of the ocean will be changed, and the geographical map of the earth will be transformed. Life will then be confined to the equatorial zone until the day in which the last tribe shall come to seat themselves, enfeebled by hunger, upon the shore of the last sea, in the forceless rays of a sun whose light will thereafter fall upon an ambulant tomb. Overpowered by the cold, they will be touched with the finger of death and their bones will be forever hidden by the all-involving snows. But perhaps the earth may die only by the extinction of the sun! Our fate would be always the same (would be always death by cold), only it would be longer delayed. The sun

Will Be Extinguished.

It constantly loses its heat, because the energy which it expends it, so to speak, unimaginable. The heat emitted by this star would boil per hour 2900 cubic miriameters of water at the temperature of ice. Almost all this heat is lost in space. The quantity which the planets retain in passing and utilize for their life is insignificant, relatively to that which is lost. If, however, the sun actually condenses with a velocity sufficient to compensate such a loss, or if the rain of aerolites which must fall incessantly on its surface is enough to make up the difference, this star will not yet cool; otherwise, its period of cooling has begun. This is more probable because the spots that periodically cover it can only be regarded as evidence of its cooling. The time will come when these spots will be much more numerous than now, and will begin to cover a considerable part of the solar globe.

From century to century, the spots will gradually increase, but not regularly, because the first fragments of crust, which cover the liquid incandescent surface, will continue to sink, and will be replaced by new formations. Future ages will behold the mighty flames diminish and burst forth again, until the far distant day in which the cooling invades definitively the entire surface of the star and its last intermittent and pallid rays disappear forever. Already we have seen 25 stars sparkling in the sky with a spasmodic splendor, become extinct. Brilliant stars saluted by our fathers have disappeared from the celestial maps; the sun is only a star and must suffer the fate of its sisters. Suns, like planets, are born to die, and in eternity their long careers will be but as the space of a morning. Then the sun, an obscure star, but still calid and electrical, will be an immense world inhabited by strange beings.

The Planetary Tombs

Will continue to revolve around it, until the solar republic in the inexorable transformation gives place to other systems of worlds, to other suns and to other souls. Such is the destiny of the earth and of all worlds. Shall we conclude that with the evanishment of existing globes, the universe will be at some time no more than an immense dark tomb? No! As in the eternity of the past, so it shall be in that of the future. God has been creating eternally, and will not cease to create worlds and beings; in other words, the forces of nature cannot remain inactive. The clashing of the molecules will cause new flames to reappear, and the transmutation of motion into heat will create other nebulae and other worlds. Universal death will never reign.

"Be wise with speed;
A fool at forty is a fool indeed!"

So said Young. Straws show which way the wind blows, and there are a score of symptoms, any one of which shows the existence of catarrh. Neglected, it will rob the blood of its purity and the system of its strength. Get Dr. Sage's Catarrh Remedy. It cures even long-standing cases, as thousands testify, and should be used for colds in the head, which often result in confirmed catarrh.

"O, It Was Pitiful!"

Of course it was! He tried one remedy after another, and finally gave up and died, when his life might have been saved by taking Dr. Pierce's "Golden Medical Discovery"—the great "Consumption Cure"—which, if promptly employed, will soon subdue all threatening symptoms, such as cough, labored breathing, night-sweats, spitting of blood, etc., and restoring waning strength and hope, effectually stop the poor consumptive's rapid progress toward the grave. Is it not worth trying? All druggists.

Its thousands of cures are the best advertisement for Dr. Sage's Catarrh Remedy.

Dr. Charles Rowell's "Fire of Life."—A Valuable and Reliable Testimonial in Its Favor.

The following letter, evidence in favor of that remedy for the certain class of disease to which it is specially applicable, and which is daily becoming more popular, speaks volumes in its favor. The writer is an intelligent and reliable citizen, well known in this community, who not only willingly contributes this testimony in behalf of the remedy named, but requests its publication for the benefit of suffering humanity:

SAN FRANCISCO, July 19, 1887.

Dr. Charles Rowell—DEAR SIR: Since my return from the East, your letter of the 14th inst. making inquiry after the health of my daughter, who was for a long time suffering from Rheumatism in her lower limbs, was received. I have this to say in brief: The young lady, we thought for many months, would never walk again. I employed the best medical skill in the State, and then sent her to several mineral springs. Some of my friends induced me to try your "Fire of Life" remedy. I had no faith in it, but they said: "Give it a fair trial." I did so, and in two months the patient could walk; in six months she never had a rheumatic pain. She is now traveling in Europe and writes me: "The remedy of Dr. Charles Rowell has driven every vestige of pain entirely out of my system." Yours truly,

Baldwin Hotel.

A. C. MORSE.

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ROCK CANDY DRIPS, \$3

For five gallons. Maple Sugar at 10c.; and Strictly Pure, 15c. per pound. Flour is lower. Coal Oil is lower. If you want a complete outfit of anything at wholesale prices, write for full list right now to

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are constantly happening. A kick of a horse or cow may cause a bad bruise; the slip of an axe or knife may result in a serious cut.

Any of these things may happen to one of your family at any moment.

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JAMES LINFORTH, - - Agent,
120 Front St., San Francisco.

Vine-Growers' Meeting.

At the meeting of the Grape-Growers' and Wine-Makers' Association in this city, on August 16th, President H. W. McIntyre presided.

Discussion on Legislation.

After the reading and adoption of the minutes, Mr. Secretary Rixford read the following communication:

An Invitation.

To the California Wine-Makers' and Grape-Growers' Association—GENTLEMEN: A large number of the growers in the San Francisco viticultural district desire to consult with their members of Congress on the subject of the practicability of securing favorable legislation in Washington to protect genuine wines against unrestricted competition with spurious compounds. This desire comes especially from the Santa Clara and Livermore valleys, and, no doubt, is participated in by all the public-spirited citizens of the State. For this reason I have been induced to call a special meeting of this district, to be held at the offices of the State Viticultural Commissioners, unless otherwise advertised, in due time, on Wednesday, August 24th, at 11 A. M. The secretary of the State Commission will invite all members of the delegation in Congress to be present, and will also invite on behalf of this district all members of the State Commission and all viticultural associations and persons engaged in viticultural pursuits throughout the State to participate in the consultations. All members of the Grape-Growers' and Wine-Makers' Association are especially invited to be present. Respectfully yours,

CHARLES A. WETMORE,
Commissioner for the S. F. Viticultural District.

The invitation was accepted with the understanding that the members attend as individuals and not as representing the association.

Another Invitation.

The secretary read the following communication:

MENLO PARK, Aug. 15, 1887.

E. H. Rixford—DEAR SIR: The Santa Clara Viticultural Society has appointed a committee of its members to have a conference with our congressional delegation on Wednesday, the 24th inst., on the subject of congressional legislation. We would be glad to have the State organization, of which you are secretary, appoint a committee to attend. The meeting is not intended to be deliberative, but for information and exchange of ideas. I proposed extending this invitation personally at the meeting today, but find myself scarcely well enough to leave home.

JOHN T. DOYLE,
Chairman Committee.

The meeting accepted the invitation.

Adulterations.

Considerable time was given to the discussion of a proposed "pure grape wine" introduced by a gentleman from Ohio who was present. The project was found to be untenable by California wine-producers, as it was intended to cover the addition of spirits not derived from the grape—a thing which is incompatible with the California idea of pure wine. Finally the following resolutions offered by Mr. Wetmore were adopted:

Resolved, That a committee of five be appointed to prepare a report on the following subjects:

First—The nature and extent of the production and trade is spurious, compounded and adulterated wines or imitations of wine in the United States.

Second—The effects of such trade on the legitimate commerce in pure wines and upon the health of the consumers.

Third—The remedies that may be applied against these evils by national legislation.

Fourth—The remedies that may be applied by State Legislatures.

Fifth—The remedies that may be applied through popular action.

Resolved, That the committee shall consider any and all proposed measures relating to national legislation which shall be referred by this association, and shall report to a special meeting to be called by the president at some time before the 1st day of next December, and shall co-operate as far as practicable with the State Viticultural Commission and the National Viticultural Association.

The committee will be named later.

Coulure.

Prof. Hilgard addressed the association at length upon the prevalence of "coulure" in vineyards. The term implies imperfect or arrested development of the fruit, and he exhibited two specimens. The members each gave their experience with reference to this matter, making it appear that the difficulty arose from local causes, and was entirely beyond the control of the vineyardist. The matter will be treated by Prof. Hilgard in a future University Bulletin.

After the adoption of resolutions of respect to the memory of the late Senator Sargent, the association adjourned.

THE HAWAIIAN EXCURSION.—The letter published on our fourth page this week closes the interesting series, describing the visit of the Masonic party to the Islands, with which Mrs. Johnston has been favoring the Press and its patrons. Our correspondent brought home with her a number of photographic views, illustrative of the land and people visited, which she has kindly placed at our disposal; and we hope soon to reproduce a portion of them for the benefit and entertainment of our readers.

CALIFORNIA FRUIT FOR OREGON.—The steamship State of California, on her last trip up, took 300 tons of fruit, ship measurement. Captain Debnay says it was the largest amount that any steamer ever carried to Portland. Towns in all parts of Oregon, that a few years ago did not buy a case of California fruit, now order 40 and 50 boxes from every steamer.

The Fruit Product.

"The fruit season thus far," said Secretary Lelong, of the State Board of Horticulture, "has been eminently satisfactory to the fruitmen of this State. The trees have been in splendid condition generally, though in a few places the orchards have suffered severely from pests. These have created considerable damage where prompt remedies were not resorted to; yet the total destruction of fruit from pest has been inconsiderable when compared with the large production. I may say that every effort is being made by horticulturists generally to resist the spread of fruit pests. Every method suggested by reliable scientists and fruitmen is being thoroughly tested. Usually not much urging is required to induce the owners of pest-ridden orchards to try the latest discoveries, as they are only too willing to attempt the eradication of their insect enemies; in this way many new applications are being discovered.

Production of Fruits.

"The production of fruits will be greater this year than ever before. In the older fruit-growing sections of the State many of the old orchards are being replanted, and the new growths in those regions, as well as the more recent plantations, show vigorous bearing that speaks well for future production. I think that the next few years will witness an enormous fruit product, and this will be encouraged to an almost incalculable extent when it becomes more fully known to the farming community that with a largely increased output every year the prices grow more satisfactory. This is accounted for by the fact that better classes of fruits are grown, and these are in great demand by canners and for Eastern shipments. People in the Eastern States and in Europe, for that matter, realize that superior quantities of fruits are being raised in this State. Some years ago they did not know this, as dealers could not transport our horticultural products in their green state easily, or for a reasonable price. This is now being accomplished and a large market beyond the Rocky mountains opened up to our producers. It is now possible for people of limited means and living several thousand miles from us to eat our luscious fruits for a price not much beyond what is now paid here. Of course, in Europe, only persons of some means can purchase our fruits, and then principally in a canned state.

Shipments to Europe.

"I confidently believe that the time is not far distant when we will ship green fruits to Europe. Canners obtain a great deal of fruit for preserving and this makes our local market short, still the demand is met without much difficulty.

Increase in Dried Fruits.

"Another feature of the fruit business in this State is the vast quantity of fruits that are dried. No conception can be formed of the magnitude of these drying operations, which are yearly increasing. Fruits of all sorts that are bright and clean-dried bring better prices than when fresh, besides, they have the advantage of keeping for any length of time. Dr. Kimball of Haywards has just dried about 100 tons of apricots, nearly his entire crop, and all are in first-rate condition. The favorite method of drying is by the sun process, which is better and cheaper than any artificial method; but few fruit-driers have given the desired satisfaction. But little fruit is being crystallized, owing to the limited market for such sweets and the increased expense incident to its manufacture.

"In every respect the fruit interests of the State are prospering, and the outlook could hardly be brighter. If we can succeed in checking the ravages of the pests, this State is bound to become the orchard for the world."—*Morning Call*.

Partial Statistics of California Horticulture.

The Secretary of the State Board of Equalization has compiled the following viticultural statistics from the reports of the assessors of every county in the State:

Total number of acres in vines in Alameda county, 3451; Amador, 846; Butte, 247; Calaveras, 1440; Colusa, 506; Contra Costa, 3000; Del Norte, 4; El Dorado, 1570; Fresno, 10,185; Inyo, 95; Kern, 45; Lake, 985; Los Angeles, 17,000; Marin, 493; Mariposa, 500; Mendocino, 108; Merced, 514; Monterey, 500; Napa, 14,431; Nevada, 235; Placer, 2221; Sacramento, 8465; San Benito, 110; San Bernardino, 9165; San Joaquin, 1793; San Luis Obispo, 275; San Mateo, 625; Santa Barbara, 527; Santa Clara, 9423; Shasta, 147; Siskiyou, 4; Sonoma, 21,683; Stanislaus, 498; Sutter, 430; Tehama, 4972; Trinity, 20; Tulare, 1229; Tuolumne, 890; Ventura, 800; Yolo, 3191; Yuba, 165. Total, 121,440 acres.

The Trees in the State.

Entire number of fruit trees growing in Alameda county, 366,410; Alpine, 900; Amador, 89,710; Butte, 131,814; Calaveras, 931,620; Colusa, 79,818; Contra Costa, 141,619; Del Norte, 6018; El Dorado, 249,249; Fresno, 370,477; Humboldt, 40,321; Inyo, 14,440; Kern, 54,000; Lake, 85,548; Marin, 41,907; Mariposa, 11,157; Mendocino, 46,200; Merced, 51,175; Modoc, 20,227; Mono, 400; Monterey, 16,350; Napa, 287,265; Nevada, 122,238; Placer, 359,609; Sacramento, 484,045; San Benito, 68,100; San Bernardino, 100,015; San Diego, 91,148; San Joaquin, 123,471; San Luis Obispo, 83,

625; Santa Barbara, 19,742; Santa Clara, 1,365,735; Shasta, 81,587; Sierra, 4000; Siskiyou, 63,944; Sonoma, 656,367; Stanislaus, 38,000; Sutter, 144,546; Trinity, 12,252; Tulare, 427,000; Tuolumne, 15,000; Ventura, 325,000; Yolo, 1,254,464; Yuba, 116,554.

Owing to the neglect of the assessors in some of the counties to report upon the acreage in grapes for wine and table purposes, the list is not complete in that particular. Thus far 13,760 acres of table and 59,036 acres of wine grapes have been reported from over 40 counties.

Fairs to Come.

Sonoma Co. Agricultural Park Assoc., Santa Rosa, Aug. 22 to 27.
Fourth Dist.—Sonoma and Marin—Petaluma, Aug. 29 to Sept. 3.
Eighth Dist.—El Dorado—Placerville, Aug. 30 to Sept. 2.
Thirteenth Dist.—Sacramento, Yolo, Yuba and Sutter—Marysville, Aug. 30 to Sept. 2.
Mechanics' Institute, San Francisco, Sept. 1 to Oct. 8.
First Dist.—Alameda, Contra Costa and S. F., San Francisco, Sept. 5 to 10.
Third Dist.—Butte, Colusa and Tehama—Chico, Sept. 6 to 10.
Seventeenth Dist.—Nevada and Placer—Grass Valley, Sept. 6 to 10.
Shasta Co.—Redding, Sept. 7 to 9.
California State, Sacramento, Sept. 12 to 24.
Oregon State, Salem, Sept. 12 to 17.
Los Angeles Co. Pomological, Los Angeles, Sept. 12 to 17.
Nevada State, Reno, Sept. 21 to Oct. 1.
Second Dist.—San Joaquin, Stanislaus, Merced and Tuolumne—Stockton, Sept. 26 to Oct. 1.
Ninth Dist.—Humboldt and Del Norte—Rohnerville, Sept. 27 to 30.
Nineteenth Dist., Santa Barbara, Sept. 27 to 30.
Tenth Dist.—Siskiyou, Trinity and Shasta—Yreka, Sept. 28 to Oct. 1.
Santa Clara and San Mateo—San Jose, Oct. 3 to 10.
Sixth Dist.—Los Angeles, San Bernardino and Ventura—Los Angeles, Oct. 3 to 8.
Eleventh Dist.—Plumas, Lassen, Modoc and Sierra—Susanville, Oct. 3 to 8.
Seventh Dist.—Monterey and San Benito—Salinas, Oct. 4 to 8.
Twenty-Sixth Dist.—Amador and Calaveras—Ione, Oct. 5 to 7.
Portland Mechanics' Fair, Oct. 6 to 22.
North Pacific Domestic and Fat-Stock Assoc., Portland, Or., Oct. 9 to 17.
Fifteenth Dist.—Tulare and Kern—Visalia, Oct. 10 to 15.
Sixteenth Dist., San Luis Obispo, Oct. 12 to 15.
Twelfth Dist.—Lake and Mendocino—Ukiah, Oct. 11 to 15.
San Diego Co. Horticultural and Agricultural, Oct. 28 to 30.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 210 Market St., S. F.

FOR WEEK ENDING AUGUST 9, 1887.

368,130.—MAGAZINE GUN—Howard Carr, S. F.
367,786.—PIPE WRENCH—E. O. Carvin, Corvallis, Or.
368,074.—BALING PRESS—T. J. Corning, San Jose, Cal.
367,965.—BRAKE—Henry Dewey, Plainsburg, Cal.
367,899.—RELIEF PICTURE AND FRAME—J. W. Eckert, Oakland, Cal.
367,801.—GAS REGULATOR—A. Ford, S. F.
367,907.—FIRE ESCAPE—Ole Hansen, Walnut Grove, Cal.
367,909.—GEAR MECHANISM—Wm. Hanson, Calistoga, Cal.
367,975.—WINDMILL—M. V. Harper, North Yakima, W. T.
368,154.—DENTAL ENGINE BRACKET—W. A. Knowles, S. F.
367,918.—CENTRIFUGAL PUMP—I. P. Lambing, Ione, Cal.
367,919.—CENTRIFUGAL PUMP—I. P. Lambing, Ione, Cal.
368,007.—FUNNEL—Chas. Rehn, S. F.
368,019.—BEAM CONNECTION—Sims & Morris, S. F.
367,938.—PURIFYING BEVERAGES—Soms & Weiss, S. F.
368,117.—SHINGLE-SHAPING MACHINE—A. T. Stimmon, Eureka, Cal.
368,178.—DEVICE FOR CUTTING VEHICLE AXLES—O. Whitmore, Oakland, Cal.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

THE "AURORA," a family magazine born in this city with the year 1887, has completed its first volume and fairly entered upon the second. One of its features is that each number is complete in itself, there being no continued stories. Another is its cheapness, yearly subscriptions being but \$1.50 and single numbers 15 cents. The pages of the August number, which lies before us, embrace fiction and verse, essays on topics concerning culture, health and manners, sketches of travel, studies in biography, etc., presented in a style of typography that does not suffer in comparison with higher-priced periodicals. Bacon & Co., 508 Clay St., S. F., are the publishers.

WIFE—Now you have bought a cow, who will milk it? Husband—Oh, he says the calf does that. So we'll have all the milk we want.

ALL signs fail in dry times—except winks.

INTERESTING TOPICS.—The University Bulletin, which we publish on another page of this issue, treats of two very interesting topics. One is the quality of beets grown in Fresno county. As Professor Hilgard states, the subject involves several new and important considerations, both in the sugar value of the beets and the industry of sugar extraction. These facts, in connection with the remarks which we made in last week's RURAL, would indicate the probability of considerable life in the beet-sugar interest of the State. Another subject which interests people in the district north of the bay chiefly will be the observations on the Hessian fly. We trust that the information asked for will be secured from a number of growers in the fly-infested districts, so that a report giving a comprehensive discussion of the occurrence of the pest in California can be prepared. Fortunately, only a narrow region is now infested, and it is to be hoped that either natural unfitness of our climate or our methods of grain-growing may always keep the evil within narrow limits.

Inducements to Subscribers.

To favor subscribers to this paper, and to induce new patrons to try our publication, we will furnish, to those who pay fully one year in advance of date, IF REQUESTED the following articles (while this notice continues), at the very greatly reduced figures named at the right:

- 1.—The Agricultural Features of California, by Prof. Hilgard, 138 large pages, illustrated, cloth, with colored maps (full price \$1).....\$0.25
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- 23.—Architecture Simplified, 60 pages......05
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- 25.—Ropp's Easy Calculator, cloth, 80 pp......25
- 26.—How to Tell the Age of a Horse......06
- 27.—Percheron Stud Book French—bound in leather, 192 pages (full price, \$3).....1.00
- 28.—What Every One Should Know; a cyclopedia of valuable information; 510 pp.; cloth; (full price \$1)......50
- 29.—Knitting and Crochet, by Jennie June; 144 pp., 200 illustrations......25
- 30.—Needle Work, by Jennie June; 126 pp., 200 illustrations......25
- 31.—Ladies' Fancy Work, by Jennie June; 152 pp., 700 illustrations......25
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ORANGE GROWING IN CALIFORNIA.—By T. A. Garey, of Los Angeles. The most comprehensive treatise on the growth of this fruit. It contains full instructions for growing the trees, planting and care of orchards, etc.; 227 pages. Price, 75 cents.

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FRUIT GROWERS' CONVENTION REPORTS.—These annual conventions have resulted in bringing out the best and most useful information concerning the growth of different fruits in this State. The subjects discussed are of the most direct practical value and the facts laid down will prove helpful and suggestive to all in the fruit business. We have the reports of 1881, 1882, 1884, and 1885—the first for 10 cents, the others at 25 cents each.

THE AGRICULTURAL FEATURES OF CALIFORNIA.—By Prof. Hilgard, 138 large pages, bound in stiff cloth, with colored maps, \$1. This book is the best general review of California soils, climate and productions in existence.

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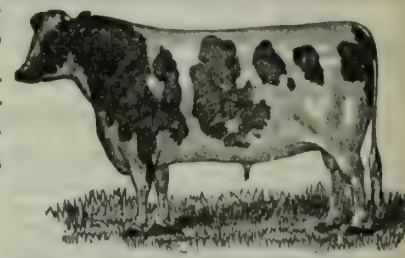
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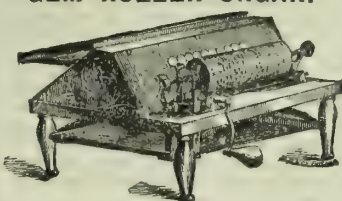
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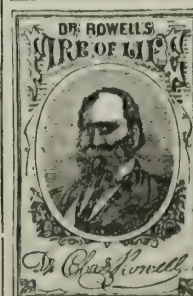
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S. F. MARKET REPORT

NOTE.—Our quotations are for Wednesday, not Saturday, the date the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, August 17, 1887.

The past week witnessed continued activity in fruits, with heavy receipts causing a glut in some varieties. Advices from the country report most of the farmers busy delivering wheat so as to take advantage of any movement that may occur. Eastern telegrams have reported a fairly steady market the past week in wheat, with an advance in corn. London cables have generally been discouraging—weak, easy with lower quotations, the fine harvest weather being against the market. To-day's cable is as follows:

LIVERPOOL, Aug. 17.—Wheat—Quiet but steady. California spot lots, 6s 6d to 6s 9d; cargoes off coast, slow; on passage, inactive; Mark Lane wheat, turn easier; French country markets, mostly turn cheaper; wheat and flour on passage to U. K., 1,948,000 qrs; wheat and flour in Paris, quiet.

Foreign Review.

LONDON, Aug. 15.—The *Mark Lane Express* in its weekly review of the British grain trade, says: With the exception of a few slight showers, the drought has not been broken. In the greater part of the kingdom, the days have been 15 degrees hotter and the nights are autumnal. Vegetation appears to be giving out. Wheat deliveries have been numerous and values continue to decline. If the weather keeps dry, lower rates appear to be inevitable. The sales of English wheat during the week were not reported. The average price in London for the week ending Tuesday was 34s on 504 quarters. The flour trade is depressed. Some new barleys have been offered. Their color has been good and their quality various. In foreign wheat there is no fresh feature; the values are gradually declining. The interest appears to be confined to the native crop, or rather the condition in which it can be delivered. The outcome of the wheat corner in San Francisco is not yet determined, and there is therefore an accumulation of California wheat in Liverpool which threatens trade. In off coast trade prices have declined 1s 1d to 1s 9d. Seven wheat cargoes arrived; 2 were sold, 4 withdrawn, 6 are waiting orders and 5 remained. Barley has declined. At to-day's market plenty of new wheat was offered at 1s shilling lower. Some kinds of foreign wheat were unchanged in prices, while others were sixpence to a shilling lower. American flour was sixpence cheaper; country flour was scarce and quiet. Grinding barleys were eightpence lower.

Crops at the East.

CHICAGO, Aug. 14.—The *Farmers' Review* says: Copious rains fell quite generally throughout the West last week, refreshing the parched pastures and invigorating the growing crops. The rains unfortunately came too late to materially benefit the corn, and had little effect for good except on late planted or low-lying fields. Much more rain will be required to put pastures in good fall condition and replenish the sources of stock water.

WASHINGTON, Aug. 14.—The following is from the weather and crop bulletin of the Signal Office for the week ending August 13: The drought previously reported in the corn belt in the central valleys has been followed by general rains, and the conditions existing this morning indicate that rain will continue in this section, but reports from Ohio, Indiana, Illinois, Missouri, Nebraska and Kansas, state that the rains come too late to cause any marked improvement in the already injured crops. The weather has been generally favorable for all crops in the States on the Atlantic Coast, from Georgia northward to New England, and reports from Mississippi, Arkansas and Alabama indicate that the weather for the past week has been favorable for the cotton crop, although the crop needs more rain in portions of Tennessee and Arkansas.

Eastern Wheat Markets

NEW YORK, Aug. 14.—The close was firm at 79c for Sept., 80½c for Oct., 80½c for Nov., and 83½c for May.

NEW YORK, Aug. 17.—12 M.—81½c for cash, 80½c for Sept., 81½c for Oct., and 82½c for Nov.

CHICAGO, Aug. 17.—1 P. M.—Wheat firm; cash, 68 1/2-16c; Sept., 69 1/2-16c; Oct., 71c.

California Fruit in New York.

NEW YORK, Aug. 12.—The sale of two carloads of California fruit to-day was a complete success. The attendance increases with every sale. Thirteen hundred packages were sold. Bartlett pears, \$3@3.75; Duchess and B. diel pears, \$2.62½@2.95; Gros pears, \$2.20; Hungarian pears, \$1.85@2.20; Columbia plums, 60¢@65¢; Orange Cling peaches, \$1.90; Early Crawford peaches, \$1.15@1.20. There was much decay in plums, but other fruit arrived in excellent condition.

NEW YORK, Aug. 14.—Canned Goods—The demand for all descriptions is satisfactory. California Bartlett pears, \$3 to \$3.25. Dried Fruits—Jobbing houses report an increased demand. The tone of the general market is steady; raisins are selling fairly in small quantities, though interest is shown chiefly for California and Valencia. California loose Muscatel, 2-crown, \$1.10 to \$1.20; 3-crown, \$1.35 to \$1.40; London, \$1.35. California dried apricots are in good demand, selling freely at 16¢@16½¢.

NEW YORK, Aug. 16.—The *Commercial Bulletin* says: Raisins are selling well in jobbing quantities. Currants are yet held at 5¢@6¢.

California Fruit at Chicago.

CHICAGO, Aug. 12.—Receipts of California fruit continue fair. The market is steady and firm, and shows a good demand, with little change in prices. Muscatel and Tokay grapes, \$2.75@3; Crawford, Orange, Cling and Susquehanna peaches, \$1.25@1.50; Bartlett pears, \$2.75@3; Beurre Hardy pears, \$2.12½@2.25; Gros pears, \$1.25@1.50; German pears, \$1.50@1.75. Egg plums, \$1.25@1.50.

Dried Fruits—Peaches are about the only line of fruit coming, and meet with very fair demand. Plums are waited for and there is quite a little demand. Pitted plums, evaporated, 10½¢@11¢; pitted

plums, sun-dried, 10¢@10½¢; apricots, evaporated, future delivery, 14½¢; do. cash, 15¢@15½¢; raisins, London layers, 20-lb boxes, \$1.40@1.50; do. loose Muscatel, \$1.25; do. Calif. layers, \$1.25.

CHICAGO, Aug. 16.—A carload of fruit arriving to-day from California consisted almost wholly of peaches and pears, which were in good shape and for which there is a very good demand, with prices steady. The following prices were received to-day for fruit in strictly first-class order, that in bad shape selling for considerably less: Late Crawford, Susquehanna and Orange Cling peaches, \$1.50@1.60; Bartlett pears, \$3@3.25; Beurre Hardy pears, \$2.25; Duchess pears, \$1.50@2; Tokay and Muscatel grapes, double crates, \$3.75@4; German prunes, \$1.25@1.60; Gros pears, \$1.25@1.50.

Dried Fruits—Apricots are almost the only kind of new fruit coming in and arrivals continue moderate. Plums are entirely out of the market. Raisins are becoming scarce and under a good demand prices have advanced. Apricots, evaporated, future delivery, 14½¢@15¢; do. cash, 15¢; raisins, London layers, 20-lb boxes, \$1.40@1.50; do. good Muscatel, \$1.35; do. California layers, \$1.35.

Eastern Hop Markets.

NEW YORK, Aug. 13.—The S. S. Eider, yesterday, brought the first new Bohemian hops, which are of a very fine quality. There is no apparent change in the attitude of buyers or sellers, and the market continues dull. Some 200 bales of fair quality, 1886 Pacifics, were placed at 13c, and others were said to have been offered as low as 12c. Coist crop of 1886—Best, 18c; common to good, 13¢@16¢; 1885—Good to prime, 8¢@10c.

Eastern Wool Markets.

BOSTON, Aug. 13.—Demands of manufacturers have been active this week and large sales of both foreign and domestic grades have been made, amounting to 3,618,100 lbs. The late decline in prices has induced buyers to take hold. There is a much better feeling in the market and dealers look for an active demand and large sales at present quotations. All kinds of wool are feeling the improvement. Sales embraced 231,000 lbs California spring at 18¢@21c, 55,000 lbs Oregon at 18¢@19c, and 547,000 lbs Territory at 17¢@24c. Total sales for the corresponding week last year were 2,993,400 lbs.

NEW YORK, Aug. 14.—The market continues dull, though buyers made no special objection to ruling rates. Among sales were 2500 lbs Eastern Oregon at 20¢@24c, 20,000 lbs Territory at 21¢@23c.

In the Philadelphia markets the demand continues moderate and the situation is unsatisfactory all around. Among sales are 13,000 lbs Territory fine at 19c, 6000 lbs Territory at 25c.

Local Markets.

BAGS—The market is irregular, with only a fair demand ruling at 6½¢ to 7½¢ cts.

BARLEY—Heavy receipts have depressed the market still further, although toward the close more inquiry is reported from speculators and consumers. The consumption in the State continues largely in excess of any former season. Call Board will resume business on Monday next.

BUTTER—The market is not only strong and higher, but has an advancing tendency under a good demand and strong holding.

CHEESE—The market continues to rule strong at full prices. The stock is not excessive for the season.

EGGS—The market for all kinds shows a slight advance. Strictly choice fresh laid are said to have been sold at over 30 cts., but this is disputed by the trade.

FLOUR—The market is steady at full prices.

WHEAT—No Call Board this week, consequently buyers and sellers are at a deadlock pending the resumption of business in futures, on next Monday. All kinds of rumors and reports are set afloat, but so far as can be ascertained are not reliable. Owing to the unsatisfactory condition of the market, large holders are not offering their wheat on the market.

[COMMUNICATED.]

Market Information.

Cereals.

The past week was dull, inactive, due to the peculiar situation in which both buyers and sellers find themselves. The Call Board transactions have regulated, to a certain extent, if not entirely, values for spot or cash wheat, and now operators are indisposed to doing anything, preferring to await developments when the directors of the Call Board authorize the resumption of business on Call. There is very little choice wheat offering for sale. Samples received called choice turn out to be only fair, or else having a large share of red grain in it. The grain appears to be more irregular this year than for several seasons past. Millers report considerable difficulty in getting choice milling wheat at \$1.75, although some fair was sold for less. Dealers say that the market is a deadlock; holders of No. 1 white shipping want \$1.70, while buyers will not bid so much. Large holders are storing and get \$1 advanced, believing that it is only a question of short time when short sellers will have to pay that price, if not more. It is claimed that fully ten ships were chartered the past week to load wheat for the United Kingdom. The charterers were John Rosenfeld and William Dresbach.

The London *Millers' Gazette* of July 25 says that the reports received from the country at the opening of this week stated that the wheat crop has made considerable further progress toward maturity, and that the harvest would probably commence in the first week of August, which is later than usual. It must, however, be added that with regard to the relative state of forwardness of the wheat crop, there is considerable variation in the reports received from the different districts; in some of them the crop is stated to be about as forward as usual, owing to the long spell of forcing weather we have had, while in other parts of the country the harvest promises to be several weeks in arrear of the ordinary time. There is reason to believe that the yield will, upon the whole, be very good, but in this respect there appears to be likewise very great disparities, according to the nature of the soil. The same remark is made in the reports from France, where the heat has been very prejudicial in some localities, however favorable it has been in others, so that nothing more than a fair or good average yield seems to be expected.

The prospects of the spring corn crops in the United Kingdom, as well as in France, are by no means satisfactory, owing to the drought; and it is feared that the potato crop will be very small in England, although in Scotland it is favorably spoken of. Early this morning, however, a considerable quantity of rain fell in the London district, which will be much appreciated. In Germany the wheat and rye crops give good promise in the most important districts of the empire, but spring corn, and more especially oats, are expected to be decidedly deficient in many parts of the country.

Revised estimates of the world's wheat crop are considerably below the estimates of a fortnight ago. It now looks as if there will be a shortage compared with last year, owing to the large decrease in the United States and India.

As the maturing corn crop is attracting considerable attention, and the reports of serious damage by drouth and extreme hot weather have been received from various sections of the country with sufficient freedom to greatly enlarge speculative trading, the following figures are presented, based on reports furnished by the Department of Agriculture. It should be understood that a full average corn crop in the United States represents 27 to 28 bu. per acre. The condition reported August, 1886, was 81 per cent, and the yield per acre was about 22 bu. On this basis a full average crop would be about 27.16 bu. per acre. The September report, however, made the condition 76.6 per cent, but returned the aggregate yield larger—1,665,441,000 bu., and the area planted 75,694,208 acres. This would make the average about 28.70 bu. for a full crop. Taking the average of these two statements, the yield of a full crop would be 27.93 bu. and would have made the aggregate crop of 1886, if it had been a full one, 2,114,133,000 bu. The Department of Agriculture reports an increase in the area for 1887 of 2,300,000 acres, or a total of 78,000,000 acres. At an average of 27.93 bu. per acre, a full aggregate crop would be 2,178,540,000 bu. But on the basis of the condition reported for August by the Department of Agriculture—80.7 per cent—the yield would be about 1,758,182,000 bu., or 420,358,000 bu. below a full average crop. Since the report of the Department, agricultural returns from the corn-growing States are still worse, so that it is not at all likely the total yield will be 1,500,000,000 bushels against about 1,750,000,000 bushels last year.

The local corn market has ruled strong throughout the week, in sympathy with higher prices at the East. The demand is steady.

Barley, under heavy receipts and a strong selling pressure, ruled in buyers' favor throughout the week. Considerable was purchased for shipment to the southern interior counties, where the consumption is largely increased. It is claimed that higher prices will obtain as soon as the Call Board resumes business. Advices from the East and also Canada report the crop not up to expectations both in yield and quality.

Oats are in free supply, with prices favoring buyers. The consumption, at the lower prices, is increasing.

Both rye and buckwheat are unchanged.

Fruits.

The market is still glutted with peaches, plums, pears and apricots, although the latter do not appear to be in such liberal supply as the other three. Much of the fruit coming in is too ripe for keeping, consequently they are forced on the market for the best prices obtainable. Canners are still buying. Prunes are quickly taken at quotations. Nectarines are hardening under light supplies. Choice apples find a ready market, but inferior are hard to sell even at the lower quotations. For berries the market is gradually hardening under lessened supplies and a continued good demand. Canners are still buying.

The daily papers quote lower prices for dried fruits, but as only figs, peaches and apricots have come in in sufficient quantity to allow quoting, it is hardly safe to fix prices for the others. Dried peaches and apricots are very strong and fetch high prices, for both home trade and shipping to the East. The supply at the East will be short this year, consequently they are eager buyers of California dried fruits.

In raisins there is nothing of special interest to note. The market is very stiff for future delivery under a good demand from the East, where California raisins are growing in favor owing to their superior keeping quality. One box of this year's make was received the past week, but no regular consignments are looked for, for several days yet.

Feedstuff.

Hay continues to come forward sparingly, causing a strong market to rule. It is now very generally conceded that the crop output is considerably below the consumptive requirements, provided a bad winter is had. Even with a moderately mild winter the supply will hardly meet the wants of consumers.

Brans and middlings under freer receipts have sold for less money, with, at the close, a weak tone. The demand is reported to be good, but not up to last year, owing to more ground and rolled barley being used. In other feedstuff no changes are reported.

Live-Stock.

Beef cattle, mutton sheep and live hogs are essentially unchanged, the market continuing in buyers' favor, under free offerings. Dressed hogs are weak at quotations. Last week's report covers this week's market advices. For calves the market continues to rule firm.

The following are the wholesale rates of slaughterers to butchers:

BEEF—Extra, 7c; first grade, grass fed, 6¢@6½¢ per lb.; second grade, 5½¢; third grade, 4½¢@5½¢.

LAMB—Ewes, 5½¢@6c; wethers, 6¢@6½¢.

MUTTON—Spring, 7¢@8c.

VEAL—Large, 6¢@7c; small, 6¢@8c.

PORK—Live hogs, 4½¢@4¾¢ for heavy and medium; hard dressed, 7¢@7½¢ per lb.; light, 4½¢@4¾¢; dressed, 7¢@7½¢; soft hogs, live, 3½¢@4c.

On foot, one-third less for grain or stall fed, and one-half less for stock running out.

Honey.

The market is very strong at another advance. The *Chicago American Bee Journal* of Aug. 10th says: We have several times cautioned those having any honey to sell to hold back for the advance in prices, which must surely come very soon. In reference to this matter, Mr. S. F. Newman of Norwalk, O., writes as follows: The honey crop in this

section is almost an entire failure. Probably about one-tenth of a crop has been gathered. There is no question as to the advance in price. It certainly will reach 20 cents in 60 days. What little hope there was for a fall crop is daily dwindling. The extremely hot and dry weather has "burnt up" almost everything, and all crops are suffering, and prices of every crop are advancing. Do not sell any honey until the end of September, is the best advice that can be given. Really, this year's crop of honey is but little, if any, more than will be required for winter stores for the bees, if used for that purpose. Prices should be doubled at least within two months.

Vegetables.

Potatoes continue to come in very freely. The crop in this State is larger than last year. The quality is also greatly improved. Prices, except extra choice, favor buyers.

Onions have ruled steady throughout the week. The demand is as heretofore reported.

Under freer receipts tomatoes weakened off, notwithstanding canners took quite freely of the more choice.

In other vegetables the market has shown few changes. Cucumbers, eggplants, etc., fluctuate according to the supply and the demand.

Miscellaneous.

The tonnage movement compares with last year at this date as follows:

On the way..... 297,690 313,749

In port, disengaged..... 77,153 56,167

In port, engaged..... 24,897 61,151

Totals..... 399,740 431,067

The above gives a carrying capacity as follows: 1887, 640,736 short tons; 1886, 676,014 short tons; showing a decrease compared with last year of 35,278 tons.

Wool is slow—no desirable grades to be had. Fine and medium fine wools would sell well.

Beans are firm for the more choice, which are in light stock, but poor grades are slow and easier.

In poultry there is nothing new to report, values continuing steady.

San Francisco, August 17, 1887.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Aug. 17, 1887.

BEANS AND PEAS

Bayo, chl..... 1 90 @ 2 50

Butter..... 1 75 @ 2 00

Peas..... 1 80 @ 2 00

Red..... 1 40 @ 1 55

Pluk..... 1 25 @ 1 50

Large White..... 1 90 @ 2 00

Small White..... 1 75 @ 2 00

Lima..... 1 75 @ 2 25

Wild Peas, blk eye 1 00 @ 1 05

do green..... 1 00 @ 1 12½

do Niles..... 1 25 @ —

BROOM CORN

Southern per ton 50 @ 75

Northern per ton 50 @ 75

CHICORY

California..... 52 @ 62

German..... 6 @ 7

DAIRY PRODUCE, ETC.

BUTTER

Cal fresh roll, B. 25 @ 28

do Fancy brands 25 @ 34

Fickle roll..... 20 @ 25

Firkin, new..... 18 @ 22

Eastern..... — @ —

CHICKEN

Obese, Cal, B. 10 @ 13

Eastern style..... 12½ @ 13½

do Cooking..... 12 @ 13

Cal, ranch, dos. 27 @ 30

do, stores..... 18 @ 22

Ducks..... — @ —

Oregon..... — @ —

Eastern..... 16 @ 18

FEED

Brans, ton..... 21 00 @ 22 50

Cornmeal..... 28 00 @ —

Gr'd Barley ton 22 50 @ 24 00

Hay..... 10 00 @ 16 50

Middlings..... 24 00 @ 26 00

Oil Cake Meal 26 50 @ 28 50

Straw, bale..... 60 @ 70

FLOUR

Extra, City Mills 4 95 @ 5 70

do Country Mills 4 45 @ 5 45

Superfine..... 3 70 @ 4 45

GRAIN, ETC.

Barley feed, chl. 1 02 @ 1 02½

do Brewing..... 1 10 @ 1 25

Chevalier..... 1 50 @ 1 65

do Coast..... — @ —

Buckwheat..... 1 00 @ 1 20

Corn, White..... 1 15 @ 1 25

Yellow..... 1 15 @ 1 25

Small Round..... 1 20 @ 1 30

Nebraska..... 1 07½ @ 1 15

Oats, milling..... 1 50 @ —

Choice feed..... 1 40 @ 1 45

do good..... 1 37½ @ 1 40

do fair..... 1 20 @ 1 30

do black..... — @ —

do Oregon..... — @ —

Eye..... 1 25 @ 1 50

Wheat milling..... 1 75 @ 1 80

do choice..... 1 65 @ 1 70

do fair to good 1 50 @ 1 55

Shipping choice 1 70 @ 1 75

do good..... 1 60 @ 1 65

do fair..... 1 40 @ 1 50

HIDES

Dry..... 14 @ 16

Wet salted..... 7½ @ 8½

HONEY, ETC.

Beeswax, B. 30 @ 22

Honey in comb 11½ @ 14

do fancy..... 14 @ 16

Extracted, light 5 @ 6

do dark 4 @ 5

HOPS

Oregon..... 17½ @ 22

California..... 15 @ 22

Cranberries.....10 00 @ 12 50	Prunes..... 6 @ 10
Currants ch..... 2 @ 12 1/2	do French..... 8 @ 12 1/2
Gooseberries lb..... 5 @ 10	Zante Currants..... 5 @ 10
Pigs, black bx..... 50 @ 1 00	RAISINS.
do white bx..... 40 @ 1 00	Dehesa Clus, fcy 2 40 @ 2 50
Grapes, white..... 25 @ 35	Imperial Cabin- et, fancy..... 1 75 @ -
do black..... 35 @ 60	Crown London Layers, fcy..... 1 50 @ -
do Rose Peru..... 40 @ 60	do Loose Mus- catels, fancy 1 40 @ -
do Muscat..... 40 @ 60	do Loose Mus- catels..... 1 35 @ -
do Tokays..... 40 @ 60	Cal. Valencia..... 1 25 @ -
Isabel..... 40 @ 60	do Layers..... 1 25 @ -
Wine, Zinfandel..... 40 @ 60	do Sultanas..... 1 25 @ -
do Mission..... 40 @ 60	do Fractions come 25, 50 and 75 cents higher for halves, quar- ters and eighths.
Limes, Mex..... 4 00 @ 7 50	VEGETABLES.
do Cal. box..... 40 @ 60	Artichokes, doz..... 1 @ -
Lemons, Cal., bx..... 6 00 @ 60	Asparagus 7 lb. bx..... 1 @ -
do Sicily, box..... 6 00 @ 60	do est'a choice..... 1 @ -
do Australian..... 50 @ 75	Okra, dry, lb..... 15 @ 20
Oranges, Com bx..... 40 @ 60	do green lb..... 1 50 @ 8
do Choice..... 40 @ 60	Pepperc, dry lb..... 10 @ -
do Navel..... 40 @ 60	do green, box..... 25 @ 50
do Panama..... 40 @ 60	Pumpkins pr ton..... 1 @ -
Peaches, bx..... 20 @ 50	Squash, Marrow fat, too..... 1 @ -
do back..... 20 @ 50	do Summer bx..... 40 @ 65
do choice..... 30 @ 50	String beans lb..... 1 1/2 @ 2
Pears, Bartlett, bx..... 30 @ 65	Tomatoes box..... 15 @ 25
Persimmons..... 30 @ 65	do choice..... 25 @ 50
Jap. bx..... 40 @ 60	Turnips ct..... 25 @ 60
Pineapples, doz. 4 00 @ 5 00	Beets, sk..... 30 @ 50
Plums lb..... 1 1/2 @ 2 1/2	Cabbage, 100 lbs..... 50 @ -
Pomegranates, b..... 2 @ 2 1/2	Beets, sk..... 35 @ -
Quinces bx..... 40 @ 60	Carrots, sk..... 35 @ 60
Raspberries ch..... 4 00 @ 7 00	Eggplant, 7 lb..... 1 1/2 @ 3
Strawberries ch. 3 50 @ 6 00	Garlic, lb..... 1 1/2 @ 3
Watermelons, 100..... 3 10 @ 7 50	Green Corn, cr..... 50 @ 75
DRY FRUIT	do sweet cr..... 75 @ 1 25
Apples, sliced, lb..... 12 @ 13 1/2	do large box..... 1 00 @ 1 50
do evaporated..... 13 @ 14	Green Peas, lb..... 2 @ 3 1/2
Apricots..... 11 @ 14	Sweet Peas lb..... 10 @ -
do evaporated..... 13 @ 13 1/2	Lima Beans lb..... 8 @ 20
Blackberries..... 28 @ 30	Mushrooms, lb..... 1 @ -
Citron..... 8 @ 10	Rhubarb bx..... 1 @ -
Dates..... 6 @ 7 1/2	
Figs, pressed..... 6 @ 7 1/2	

Our Agents.
OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.
JARED C. HOAG—California.
G. W. INGALLS—Arizona.
GEO. McDOWELL—Monterey Co.
W. J. FREEMAN—Nevada.
J. L. DOYLE—El Dorado Co.
WILLIAM POOL—Fresno Co.
R. G. HUSTON—Butte, Montana.
E. P. SMITH—Humboldt Co.
EDMUND WRIGHT—Tehama Co.
M. S. PRIME—Solano Co.
SILAS PRUDEN—Colusa Co.
B. R. McPHERSON—Santa Barbara Co.

A GOOD STOVE.—Having recently purchased an improved Glenwood range of Anderson & Tallon, Nos. 12 and 14 Market St., S. F., we delight in saying that it works to such a charm in our household that we are glad to mention this fact for the benefit of readers who may wish to make sure of getting a No. 1 article in purchasing a cookstove. It seems to be simple and very effective in operation.

PACIFIC COAST WEATHER FOR THE WEEK.																								
[Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.]																								
DATE.	Portland.				Red Bluff.				Sacramento.				S. Francisco.				Los Angeles.				San Diego.			
	Rain....	Temp....	Wind....	Weather.	Rain....	Temp....	Wind....	Weather.	Rain....	Temp....	Wind....	Weather.	Rain....	Temp....	Wind....	Weather.	Rain....	Temp....	Wind....	Weather.	Rain....	Temp....	Wind....	Weather.
Aug. 11-17.																								
Thursday.....	.00	63	S	Sy.	.01	60	W	Sy.	.00	72	Nw	Hy.	.00	62	W	Cl.	.00	80	W	Cl.	.00	70	Nw	Cl.
Friday.....	.12	70	SE	Sy.	.00	88	SE	Cl.	.00	80	SW	Hy.	.00	62	W	Cl.	.00	80	W	Cl.	.00	70	Nw	Cl.
Saturday.....	.00	62	Nw	Sy.	.00	86	S	Cl.	.00	78	SW	Hy.	.00	58	SW	Cy.	.00	82	W	Cl.	.00	68	Nw	Cl.
Sunday.....	.00	60	00	Sy.	.00	86	S	Cl.	.00	76	SW	Cl.	.00	59	W	Cl.	.00	80	W	Cl.	.00	70	Nw	Cl.
Monday.....	.00	66	Nw	Sy.	.00	88	S	Cl.	.00	80	S	Cl.	.00	58	W	Cl.	.00	78	W	Cl.	.00	68	Nw	Cl.
Tuesday.....	.00	72	Nw	Sy.	.00	90	S	Cl.	.00	78	SW	Cl.	.00	60	W	Cl.	.00	82	SW	Cl.	.00	66	Nw	Cl.
Wednesday.....	.00	60	S	Cy.	.00	84	SE	Cl.	.00	78	S	Cl.	.00	62	W	Cl.	.00	78	SW	Cl.	.00	68	Nw	Cl.
Total.....	.12				.01				.00				.00				.00				.00			

EXPLANATION.—Cl. for clear; Cy., cloudy; Fr., fair; Fy., foggy; — indicates too small to measure. Temperature Wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

Complimentary Samples.
Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and, as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription rate, \$3 a year. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

SOUTHERN COAL-FIELDS.—Good bituminous coal has been discovered in Tin Mine canyon, four miles from South Riverside. It is almost pure carbon, burns freely and leaves a clean ash. At a depth of ten feet the vein is three feet thick. In Santiago canyon, eight miles from Santa Ana, a vein nearly a mile in length and fully three feet in depth throughout is reported as cropping out.

THE California Kennel Club has been considering a proposition to hold an exhibition of dogs at Los Angeles, at the time of the October fair. It is reported that several parties have decided to make entries—embracing English and Irish setters, pointers, water spaniels and terriers—provided competent managers and judges be secured.

MAPLE SYRUP is the feature which Smith's Cash Store announces for this week. The prices quoted are exceedingly low, as are the prices usually at this establishment. Their country business has grown to enormous proportions since the people have learned the advantage of trading in the metropolis.

Important to Tree Planters.
One hundred and twenty-five thousand Fruit Trees for sale at a bargain, consisting of Apple, Pear, Peach, Apricot, soft and hard-shell Walnuts; also 2000 Fan-Leaf Palms. Sales will be made in lots, or the Nursery and stock will be sold on the most liberal terms as to price and payments, or will be exchanged for real estate. Inquire of J. M. Hixson, Real Estate Agent, 75 N. Spring street, Los Angeles, or address the proprietor, Milton Thomas, P. O. Box 304, Los Angeles, Cal.

Don't Fail to Write.
Should this paper be received by any subscriber who does not want it, or beyond the time he intends to pay for it, let him not fail to write us direct to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to anyone who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

Important Secret Divulged
Send 10 cents to the Capital Soap Co., Sacramento, and prove it.

Notice of Dissolution of Co-Partnership.

NOTICE IS HEREBY GIVEN THAT THE CO-PARTNERSHIP lately existing between John Bachelder and Leonard Coates, under the firm of Bachelder & Coates, of Napa, was dissolved on the 10th day of August, 1887, by mutual consent. Leonard Coates is authorized to collect all debts due the firm and assumes all their liabilities.
JOHN BACHELDER,
LEONARD COATES.
Napa, Cal., August 10, 1887.



GREAT REDUCTION
—IN—
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AXLE GREASE
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BACK FILES of the PACIFIC RURAL PRESS (unbound) can be had for \$3 per volume of six months. Per year (two volumes) \$5. Inserted in Dewey's patent binder, 50 cents additional per volume.

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TWO,
THREE,
FOUR
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FIVE
FURROW.

THREE SEASONS' experience has thoroughly demonstrated their adaptability to the various soils of California.
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ZIMMERMAN Fruit Evaporator.

Read Some of the Testimonials.

I have found the Machine (No. 3) very simple, and it does the work to perfection. Parties who have larger Driers of different makes say they cannot turn out superior fruit (apricots and peaches) to mine.
Vacaville, June 12, 1887. I. W. A. GILMORE

I found the Machine (No. 2) good, and can truly subscribe to all the merits claimed for it. I have sent apples to Santa Rosa and they sold as first-class.
Laguna, July 15, 1887. W. H. J. AITKEN.

Evaporator came safe to hand (No. 3). Have tried apricots with good success.
Stockton Nursery, July 15, 1887. E. C. CLEWES.

Before writing I wanted to test the Drier also on peaches, apples and pears. Am now doing so with the very best results. Upon the whole, I am greatly pleased with the Drier. (Rev. Dr.) W. ALEXANDER.
Batavia, July 29, 1887.

I am doing fine work with the Drier (No. 3). I bought it in company with Mr. A. J. Lay, and he, after trying it, takes it all. You can refer to me and I will try to sell more.
Glenwood, August 5, 1887. C. C. MARTIN.

I have been using a Zimmerman (No. 3) Evaporator on my apricots this season, and cheerfully attest the fact that its performance is fully up to its promise. Its simplicity is such that, although novices, we have succeeded in turning out admirable work, and its economy and facility are quite remarkable.
August 5, 1887. (Of Kittle & Co., S. F.) JAS. PALACHE.

Send for descriptive pamphlet to
JAMES LINFORTH, 120 Front St., S. F.

COMMON SENSE Steam Fruit Evaporator.

BACHELDER & COATES,
Manufacturers and Sole Owners for California.

A very superior, unbleached Dried Fruit produced at less than half the expense and in less than half the time claimed by any other drier.

APPLICABLE EITHER TO THE SMALLEST FAMILY OR THE LARGEST FRUIT GROWER.

Full particulars and samples of fruit on receipt of two-cent stamp.

These Driers are now in successful operation, and results prove our claims.

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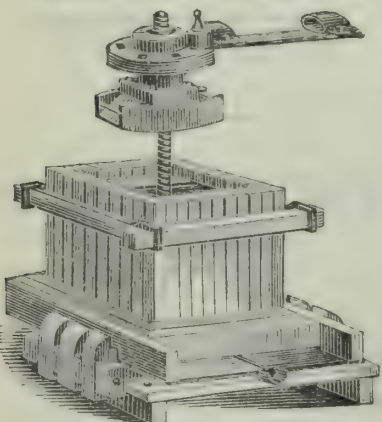
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ORANGE, LEMON & LIME TREES FOR THE SEASON OF 1888.

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These Trees are all first-class, 3 feet and upward in height and three-fourths of an inch and over in diameter at base of bud.

It will be necessary to give your order early to secure prompt delivery. Special prices given for carload lots. Write for prices or any information desired. Address

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We are prepared to take contracts to plant groves of these trees, and guarantee them to grow. We can also furnish Seedlings in any desired quantity, either Sweet or Sour, AT VERY LOW RATES.

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Which cures Chicken Diphtheritis, Roup, Mange of Animals, etc. It also heals all Scalds and Burns and other Sores and Wounds. It heals Stings of Mosquitoes, Bees, Wasps, Spiders, etc.

Recommended by the Agricultural Department of the University of California, and by other prominent parties. Send your address for circulars.

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TO FARMERS:
Keep your Trees in a
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One thorough application is sufficient for years.

This Liquid kills all insect and fungoid parasites. It does not injure the tree, but gives it new life and strength. The Grafting Compound protects wounds and other injuries of trees from the influence of the atmosphere, as it is a perfect substitute for the bark.

Farmers and Viticulturists, Attention!

FERTILIZE! FERTILIZE! NITROGENOUS SUPERPHOSPHATE.

UNIVERSITY OF CALIFORNIA, Nov. 3, 1886.

Dr. J. Koenig—Dear Sir: I have analyzed your sample of "Nitrogenous Superphosphate," with the following result:

Soluble Phosphoric Acid.....	12.90 per cent
Reverted Phosphoric Acid.....	.95 "
Insoluble Phosphoric Acid.....	2.83 "
Potash.....	2.23 "
Ammonia.....	1.87 "
Nitric Acid.....	2.95 "

The above amount of Nitric Acid is equal to 0.85 per cent Ammonia, therefore, total of Nitrogen calculated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vineyards, orchards, gardens, farms, and I recommend its use by the cultivators of the soil generally, in California. Yours truly, DR. E. A. SCHNEIDER.

University of California, College of Agriculture.

BERKELEY, Nov. 20, 1886.

Dr. J. Koenig, San Francisco—Dear Sir: I take pleasure in adding my testimony to that of Dr. Schneider as to the high quality of the "Nitrogenous Superphosphate" Fertilizer, analyzed by him at your request. It is a high-grade article, and as such returns the user a better money value than a low-grade

fertilizer. It is especially well adapted to use in California, on account of the predominance in it of Phosphoric Acid, which is generally in small supply in our soils. Yet it is desirable that "complete" fertilizers be used in our orchards and vineyards, and yours is of that character in furnishing Potash and Nitrogen as well. Very respectfully, E. W. HILGARD.

The value of this Fertilizer consists in the large percentage it contains of Phosphoric Acid—the chief element of all plant food—in combination with the necessary quantities of Potash and Ammonia, and the ease and cheapness with which it can be applied.

In ordinary soils the following quantities will be found sufficient: For Wheat, Barley, Corn and Oats, 300 to 350 pounds per acre. For Grass, Sugar Beets and Vegetables, 250 to 300 pounds per acre. For Vines, Fruit Trees, from 1/2 pound to 1 pound each. For Flower Gardens, Lawns, House Plants, etc., a light top dressing, applied at any time, will be found very beneficial.

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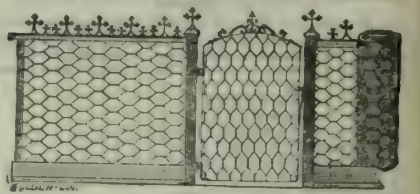
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For Sale by all druggists.

AMERICAN EXCHANGE HOTEL,

319 & 321 Sansome St., San Francisco.
One door from Bank of California.

The above well-known hotel offers superior accommodations to parties visiting the city.

The table is kept at top grade and the prices are within the reach of all.

RATES—\$1.00, \$1.25 and \$1.50 per day
Free Coach to and from the Hotel.
CHAS. & WM. MONTGOMERY, Prop'rs

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This Fire-proof Brick Building is centrally located, in the healthiest part of the city, only a half block from the Grand and Palace Hotels, and close to all Steamboat and Railroad Offices.

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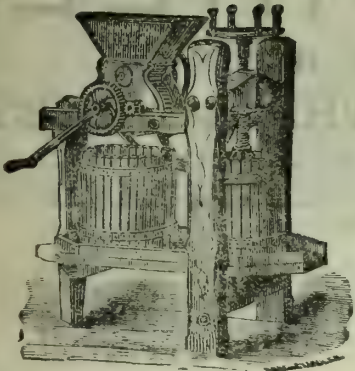
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Three Sizes—Senior, \$40; Medium, \$30;
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Best Cider Mill in the World.
Easiest Worked.
Strongest and Will Last Longer than
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The strainer board under the tubs allows a free passage for the cider from the tubs without obstruction of any kind. Our Mills are light, substantial, and handsomely finished.
The very extensive sale we have had for our Mills proves their popularity in all sections of the country, and we will guarantee them to grind as many apples in a given time and produce as much cider from a given quantity of apples as any other hand-power Mill in America, and do it with much less labor than any other Mill on the market.

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Machinery of all kinds furnished at shortest notice.

Heald's Patent Wine-making Machinery,
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Cellars. Irrigating and Drainage Pumps. Heald's
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party on receipt of 25 cents for mailing. Expert well drill-
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Using the Benoit Corrugated Rollers.

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VALUABLE IMPROVEMENTS HAVE BEEN
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This Mill has been in use on this Coast for 6 years,
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Four years in succession, and has met with general favor,
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Over 200 of them in use in California, Nevada & Oregon
It is the most economical and durable Feed Mill in use. I am sole manu-
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on wagons.

GRAINLAND,
BUTTE CO., CAL., June 9, 1887.
Mr. M. L. Mery—DEAR SIR: We have used one No. 2
Roller Barley Crusher now for eight years and have used
it steady during that time; have crushed 45 tons a day,
and the crusher is as good to-day as when it came out of
your shop. I am satisfied that it is the best mill made.
You may reconstruct this testimonial to the best advan-
tage for you and sign our names, for you cannot overrate
the merits of your mill.
F. E. REAM,
JOHN P. SUTTON.

DURHAM, May 21, 1887.
Mr. M. L. Mery—DEAR SIR: In reply to yours of the
19th, would say that I crushed from two to two and a
half tons per hour, but could crush three and a half tons
per hour if my elevators were large enough to carry the
barley from the machine. The No. 1 machine I used at
Gridley was run on a sack a minute, but if we got be-
hind we could run through five tons an hour, and do
good work. The machine I use here is a No. 2.
Yours,
WM. M. TAYLOR.

I thank the public for the kind patronage received thus far, and hope for a continuance of the same.

M. L. MERY,
CHICO IRON WORKS, CHICO, CAL.

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S. W. Corner Kearny and Montgomery Avenue, San Francisco.

Free Coach to and from the House.

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Regular Warehouse for S. F. Produce Exchange Call Board.

Storage Capacity for 75,000 Tons of Grain.

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Freight paid, fire insurance and loans effected, and proceeds forwarded free of commissions. Money advanced
at lowest rates on grain in warehouse, interest payable at end of loan. Storage season, ending June 1, 1887, at
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All applications for storage or other business addressed to CHAS. H. SINCLAIR, Superintendent.

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All kinds of Ladies' and Gents' Garments Cleaned and
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A complete suc-
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Send to us for circular, cuts, and prices of new hand-
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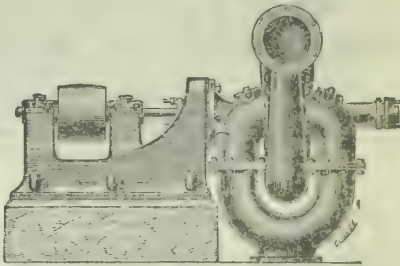
1. Perfect facilities for putting on the cloth, as the
bale, after being pressed, is fully exposed at the sides
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2. A good depth of box for a hand press (7 feet).
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6. A balanced follower that goes up without assist-
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7. A press which lets the follower swing entirely out
of the way when up so as to allow of easy feeding, and
which has no overhead beams in the way.
8. Perfect facilities for feeding, the top of the press
being even with the floor, so that the hops can be pushed
or slid into it.

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IRRIGATING
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WE ALSO CARRY IN STOCK THE LARGEST LINE OF

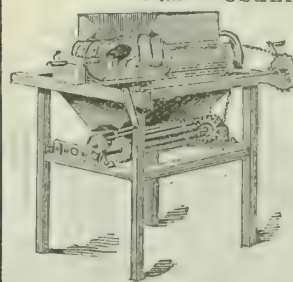
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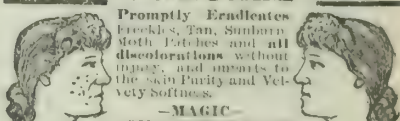
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After experi-
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In the market.
Those wishing
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Promptly Eradicates
Freckles, Tan, Sunburn,
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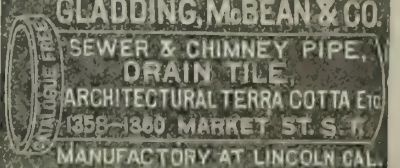
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Cured by the Celebrated
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MAGNETIC ELASTIC TRUSS
Original and ONLY GENUINE
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Lasts forever. I constantly relieve every
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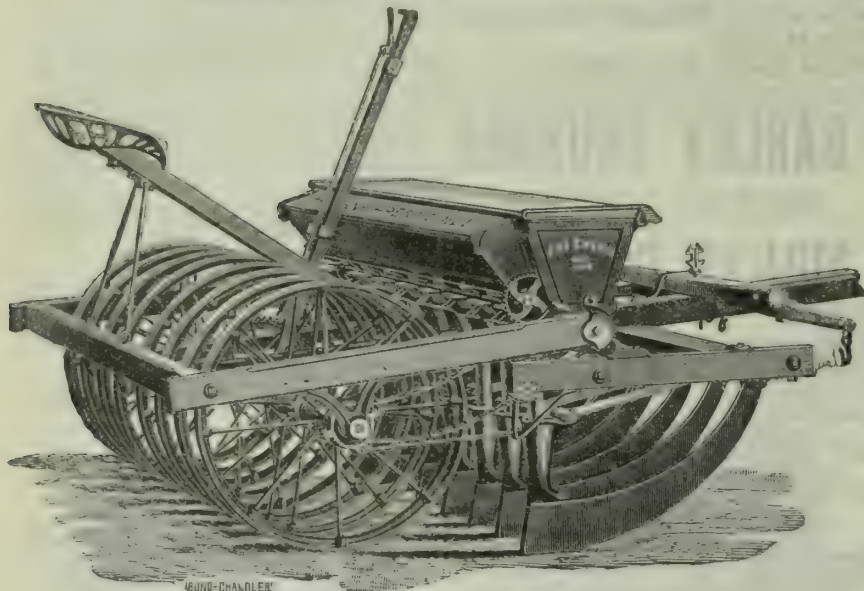
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THE ONLY DRILL MADE THAT WILL NOT CRACK THE GRAIN.

BEST DRILL IN THE MARKET!



POINTS OF SUPERIORITY.

1. It deposits the grain more evenly in the soil and as deep as required.
2. It secures a more thorough and even covering for the grain. The runners can be pressed in the ground the proper depth by the operator. The grain is carried to the bottom of the opening made by the runners. A wheel follows each runner of this drill and PRESSES the soil on the grain, PLANTING IT.
3. It presses or rolls the ground over the seed, where the ground ought to be rolled, leaving the space between the rows unrolled, as a protection to the growing crop.
4. All good seed planted grows. The soil is pressed on all the grain alike, moisture arises and germination ensues.
5. It takes less seed per acre. More of it grows. The stand is therefore more uniform.
6. It leaves a deeper and better defined trench or furrow over the seed. The plant is thus protected from winds, holds snow longer, stands more severe cold, and will winter better.
7. It is more easily operated, only requiring one hand and team. Is not obstructed by trash or subject to many delays and vexations attending the use of fluke drills in trashy ground.

Opens the ground for the reception of the seed with a runner, and covers it with a wheel, PLANTING IT. Does better work and takes less seed per acre than any other kind of drill. Can be worked in trashy and on ground where other kinds will not. Has the best adjustable force-feed in the market—a feed especially adapted to drilling.

Oats and Barley,
Wheat and Rye,
Flax and Millet.

WORKS TO PERFECTION!

Light Draft! Good Time! Best Work! No Clogging
or Choking Up! Ride or Drive!

LIST PRICE.

8 Runner 8 Inch.....	\$110 00
14 Runner 7 Inch.....	165 00
16 Runner 7½ Inch.....	200 00

8. It can be worked on trashy or rough ground where no fluke drill will work. The shape of the runners has been made a special study, and they will cut through or pass quickly over all trash or obstruction.
9. IT IS THE BEST, THEREFORE THE CHEAPEST. More than enough is saved in seeding 100 acres of wheat to reduce the price below that of other drills; besides, there is an annual yield in favor of its use of from two to eight bushels per acre.

TESTIMONIAL.

WALNUT GROVE, CAL., July 13, 1887.

MESSEURS. TRUMAN, ISHAM & HOOKER, San Francisco, Cal.—GENTLEMEN: I borrowed a Havana Press Drill from Mr. Jordan and drilled in 200 acres last April and May, after all other parties were through sowing, and my neighbors said it was too late. I had a better crop of barley than those who sowed broadcast in January and February. Had I sown broadcast I would have had no crop, but the Havana Press Drill put the grain down to moisture and I think it is the best way to put in grain.

B. R. PALMER.

Agents for DAVID BRADLEY'S CELEBRATED GARDEN CITY CLIPPER PLOWS. Send for Circulars and Description of our NEW SQUARE-CORNER GANG PLOW—Beats anything in existence. Agricultural Implements of every description. We have the Largest and Finest Carriage Repository on the Coast. Agents CALVIN TOOMEY TRUSS AXLE SULKIES—Best in the World. CARTS in Great Variety.

TRUMAN, ISHAM & HOOKER, San Francisco, Cal.

SAN FRANCISCO:
Junction Market, Pine and
Davis Streets.

BAKER & HAMILTON.

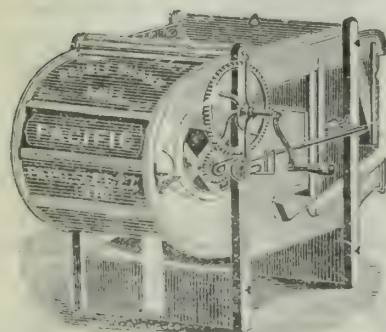
SACRAMENTO:
Nos. 9, 11, 13, and 15
J Street.

MANUFACTORY: Benicia Agricultural Works, Benicia, Cal.

EASTERN OFFICE: 88 Wall Street, New York.

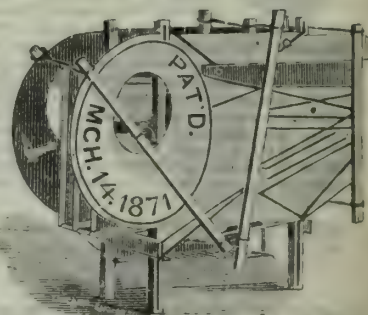
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Pacific Double-Shake Fanning Mill.

- No. 1, Capacity for 18 tons, or 600 bushels for 10 hours, weight, 149 lbs.....\$30 00
 No. 2, Capacity for 25 tons, or 1000 bushels for 10 hours, weight, 165 lbs..... 35 00
 No. 3, Capacity for 30 tons, or 1200 bushels for 10 hours, weight, 225 lbs..... 40 00
 No. 1 PACIFIC—This is the farm size, and has sufficient capacity for all ordinary farm work, which it will do in the most thorough manner.
 No. 2 PACIFIC—A small warehouse Mill, furnished with pulley, if desired. Any farmer having large quantities of grain or seed to clean, will find this Mill invaluable.
 No. 3 PACIFIC—A large and substantial warehouse Mill, having great capacity and doing excellent work. Width of sieve, 33½ inches.
 We have sold this Mill extensively, and it is universally acknowledged that it has no equal.
 A comparison of the "Pacific" with any other style will convince any one that it is stronger, better finished and more durable than any other mill.



It has no cross-sections nailed to the sides, but all (including the head or drum) fit into grooves, and the Mill is held firmly together by rods, which prevent it from getting "out of snare," as will happen sooner or later to all of the old styles. By taking out these rods, the Mill can be easily taken apart and put into compact form for shipping, as shown in Fig. 2, thus making a great saving in cost of freight. We are fully prepared to demonstrate that it is

The Best Working Mill Now In Use.

It is properly proportioned, being shorter and lower, in proportion to width, than any other Mill, which, in connection with the adjustment of the Wind-Board, brings the wind directly upon the under side of the sieves, and separates nearly all substances from the wheat before reaching the screen. It has two spouts, either of which can be used separately or in connection with the other, so that the grain can be perfectly graded, if desired. It is the only Mill to which is attached

Clarke's Patent Double-Shake,

The best contrivance ever used for cleaning Flaxseed, Timothy and other light seeds. It has a variety of shakes in addition to the "Double-Shake," and can be changed instantly from one motion to another, adapting it to grain in any condition, from the driest to the dampest.

DIRECTIONS FOR USING THE PACIFIC DOUBLE-SHAKE MILL.

- TO SEPARATE OATS FROM WHEAT.—Use upper and lower spout with screen in lower groove, screen grader in grooves leading into upper spout, and drop lower end of Handle as low as possible. Use light shake, turn moderately and steadily, and feed as fast as possible without running over any wheat. To take the wheat out at the head of the Mill, take out screen grader and upper spout, and use screen in second groove from bottom.
 TO TAKE COCKLE OUT OF WHEAT.—After taking out the oats, if there are any, take out the upper spout and screen grader; leave the wheat screen in lower groove, and use cockle screen in next groove above, with chess-board in the upper groove. Feed slowly and turn rapidly. If the grain is damp, use heavy shake; if dry, use light shake.
 TO SEPARATE CHAFF FROM WHEAT.—Take out all the sieves and upper spout, put chess-board in the upper groove, screen in lower groove; put rod in heavy shake and turn rapidly.
 TO CLEAN OATS.—Take out upper spout and screen grader; put oat sieve in upper groove, with screen in lower groove; use the heaviest shake and turn fast.
 TO CLEAN BARLEY.—Same directions as for cleaning oats, except to put barley sieve in next groove below the oat sieve.
 TO CHAFF FLAX, TIMOTHY OR CLOVER.—Put oat sieve in upper groove, screen in next groove below, chess-board in place of screen grader, timothy sieve in lower groove. Use the heavy shake.
 TO CLEAN FLAXSEED.—Use flax screen in upper groove, chess-board in next groove below, 14x14. Sieve in groove leading into upper spout. Timothy sieve in lower groove. Use double shake. Keep double shake irons well oiled.
 TO CLEAN TIMOTHY.—Use screen in upper groove, timothy sieve in next groove below chess-board in groove leading into upper spout. Use double shake.
 TO CLEAN CLOVER SEED.—Use 14x14 sieve in place of timothy sieve; other directions same as for cleaning timothy.

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TWENTY-PAGE EDITION.

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A Famous Holstein-Friesian.

We give on this page a portrait of Lena Wit Menlo, winner of the prize for dairy cows at the Santa Clara Valley Fair in San Jose last week. This cow has had a most excellent career as a prize-winner, making her mark first in her native land, for she won the first prize at the North Holland Cattle Show at Alkmaar, Holland, in 1885, giving at that show 22 quarts

of the cow shown in the engraving. Before that, however, the cow will be shown at the Golden Gate Fair in S. F., September 5th, and after that at the State Fair. These exhibitions and the early announcement of the sale will give all full opportunity to examine the animals.

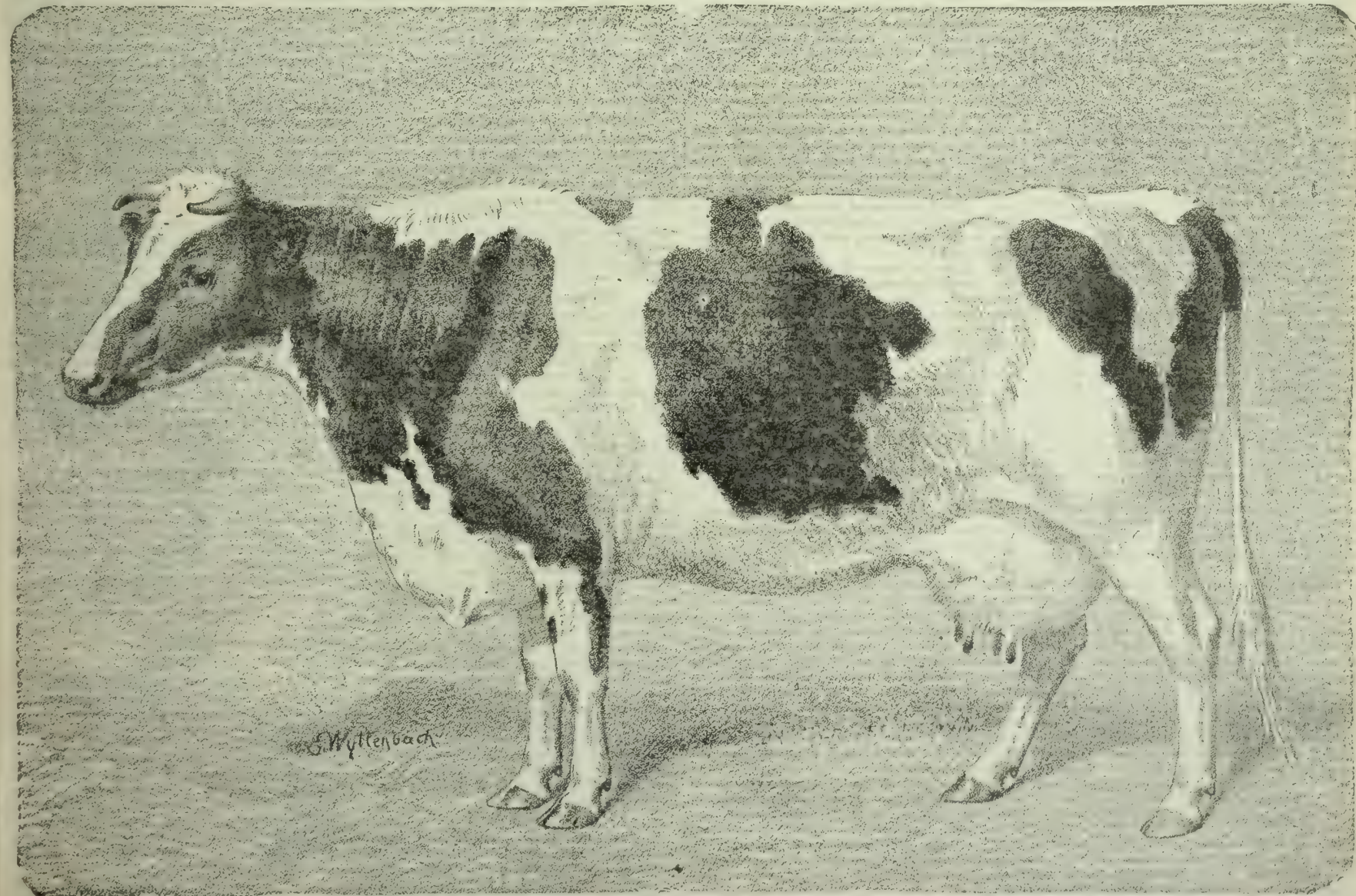
AD ASTRA.—Alvan Clark of Cambridge, Mass., who died the 19th instant at the

Is Sweet Clover Dangerous?

Melilot or "wild alfalfa" (*Medicago lupulina*) has been recommended in some of the papers as likely to prove a valuable forage plant; but it may be well to use it with some caution. Mr. E. Kelsey informs us that while driving from Merced awhile since, he put up at a place where his horses were fed on hay made from this plant, and the next day they became

all the temperate regions of the earth, it was early introduced to the Pacific Coast along with alfilerilla, mustard, sheep burs and many other plants. Being an annual and readily detected by its fragrance alone, it may easily be eradicated if it should be found injurious. We would like to learn what experiences any of our readers have had with it.

THE HOTEL IN THE YOSEMITE.—At a meeting



IMPORTED HOLSTEIN-FRIESIAN COW, LENA WIT MENLO, OWNED BY F. H. BURKE OF MENLO PARK, SAN MATEO COUNTY.

of milk at a milking. After this victory she was brought to the United States and was shown at several fairs, where she won the first award. Her milk record has gone on improving, for at Cincinnati, Ohio, she scored 78 pounds, and in California last February, as stated in the RURAL at the time, she gave 89 pounds (or about 10½ gallons) of milk in one day from dry feed alone.

Lena Wit Menlo is owned by F. H. Burke of Menlo Park, San Mateo county. Because of the sale of his land to Senator Stanford, Mr. Burke proposes to sell his Holsteins at public auction in Sacramento on September 21st, during the State Fair. This sale will include all his bulls and young stock, among which is a yearling heifer and a bull calf, both offspring

age of 83 years, was eminent among scientific men the world over as the maker of the most accurate and powerful telescopic lenses ever constructed. A portrait-painter in early life, he afterward became interested in astronomy and began the manufacture of telescopes. In this pursuit he developed such marvelous talents, and attained an excellence so extraordinary, that middle-age found him, with his two sons, devoted to the making of object-glasses. The finest instruments in European and American observatories owe their perfection to the optical learning and delicate workmanship of this firm, whose masterpiece is the 36 inch objective of the Lick telescope, now safely stored and soon to be placed in position upon Mt. Hamilton.

so stiff and averse to travel that he was compelled to lead them slowly homeward. He surmises that the trouble was due to poisonous properties in the "wild alfalfa" hay.

The plant affects low or moist and shady places by roadsides or in fence corners, rarely forming a large part of the crop in meadows and fields. Single plants in solitary situations will remain prostrate and spreading, but, associated with others, they become erect, often attaining two or three feet in height. Melilot closely resembles alfalfa, but its minute pea-like flowers are yellow, followed by small single-seeded pods in a long, slender spike, while the whole plant is delightfully and abundantly fragrant, giving origin to its common name—Melilot, meaning sweet lotus or pea. Found in

of the Yosemite Valley Commission, held in this city August 19th, bids for the lease of the Stoneman House were opened. The successful bidder was J. J. Cook, an experienced hotel manager, who offered \$1200 per year for a term of 10 years, and \$350 per year for the orchard, grazing, gardening and other privileges. The Commissioners are to receive the building from contractors, formally, about the 1st of October, and Mr. Cook expects to have it ready for the reception of guests the coming spring.

PROF. SPENCER F. BAIRD died at Woodhall, Mass., Aug. 18th. He was eminent as a writer on natural history, as an officer of the Smithsonian Institute and as U. S. Fish Commissioner.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

More About Puget Sound.

EDITORS PRESS:—I wrote you some time ago, setting forth how this region "struck a Californian" on first view. I have now been here nearly a year, and some additions may not be amiss.

The winter was characterized chiefly by softly rainy weather. It held up a day or two—it appeared to be like the little boy's tiresome preacher—it wasn't going to stop; it was only "swelling up again." There was little frost or freezing except at the specially "cold snaps." We had two instead of the customary one—a short one of about a week in December and a long one of near a month in February. On these occasions the wind piped cold and strong, with snow from over the snow-covered mountains at the northeast, and it froze, and froze! It would appear that it freezes at no other time. I tell them that on such occasions the tail end of a Dakota blizzard gets switched over this way.

From common report there was, in this winter, more of rainy weather and less of sunshine than usual, and the "cold snap" was excessive, in there being two instead of the customary one in January of some two weeks' duration. Added to this was the delay in the opening of spring. The farm work commonly begins with March; this year it was delayed six weeks.

We have very little rain this summer. They say there are commonly slight rains or showers about once a week. This summer they appear about a month apart. The weather is not warm enough for good growth in corn, tomatoes, etc., but potatoes and common vegetables flourish well. Grass under fair conditions makes strong growth. The excessive rain and cold last winter appear to affect the hay crop this year. Small bushes spring up freely and will fill all lands not well cropped yearly.

Fruits.

The wild fruits I have observed are the serviceberry, which resembles the Eastern "shadberry," but is not so fine; the salmonberry of fair quality; the black raspberry, not equal to the red; the dewberry, a low running blackberry; the strawberry and gooseberry, of inferior growth; a blueberry (they call it huckleberry) of inferior quality; and the thimbleberry, of no account at all.

In the gardens the tame red raspberry, strawberry, gooseberry, currant, blackberry, are fine, perhaps out rivaling those of any other country in growth and productiveness. The berry buds and blooms upon single strawberry plants are counted by the hundreds.

Apples grow finely. They have a kind of borer here that attacks the branches, and results are seen in dark patches of dead bark. It is cool for peaches, though some are raised. Cherries are not reliable for bearing. I think the same in a degree true of plums. The growth of wood is excessive. The present summer is, I judge, cooler than usual. The sun's rays are cut off a good deal by smoke, haze, or clouds.

The heavy dews are helpful to vegetable growth but deteriorate the quality of the hay. Judged by the appearance of stock last winter, to which farmers "fed plenty of hay," this feed here is not so nourishing as in drier and more dewless sections.

The mosquito pest is a severe one. The waters in the lowlands must cause them to multiply freely and "the plague is upon man and beast." The light winds, characteristic of this climate, avail little in blowing them away. Some sections suffer more than others and my hap appears to be to light upon one in which the insect abounds. The only relief I can see is in cutting away the excessive growth of grass, brush, and tree, and perhaps dropping a little kerosene into their breeding places. Before coming here I read many articles upon the country, but every writer failed to "punctuate" his production, as the full truth demanded, with mosquitoes.

The Land and the People.

My opinions respecting the high order of people settled here, the fertility of the soil, its rare adaptation to the growth of vegetables, small fruits, apples, grass, its prospective eminence as a stock country of small farmers, the healthiness of the climate, the immense amount of work required to fit lands for the plow, are only confirmed by a continued residence.

People are crowding in steadily. Old settlers are realizing it is better to part with a portion of their lands in order to better improve and stock what they have left. People are alive to the intellectual, moral and religious as well as material interests of the community. The country centering around Lynden appears to be the more desirable part of the county. There is no boom, but each month, as a rule, sees a new building added to the little cluster that forms our village. A good academical school adds to the attractions of the place. Religious services are held twice on the Sabbath. If a preacher is at hand, he occupies the time; if not, the people have singing and short addresses of their own. Some time in the future I may tell you more of what the people here are trying to do.

S. H.

Lynden, Whatcom Co., W. T.

Las Posas Lands, Ventura County.

EDITORS PRESS:—In the rich fields of the valley of the Las Posas, we find much land devoted to such field crops as beans, barley, corn and wheat, and from the slight experiments thus far made, it would seem that many kinds and varieties of fruit may here be raised to good advantage.

A few miles east of Springville, Messrs. Rice & Bell have a small orchard, and among other things, the Eureka lemon bearing at three years old. They have also the Washington Navel orange of same age in full bearing. Of peaches, two years from nursery, they have the Early Crawford, this year full of fruit, their apricots three years old bearing this, the second year. A Japan persimmon is doing very well. The Lawton blackberry here proves to be an enormous bearer, fruiting this, the second year. A white unnamed raspberry is, thus far, a success. Apples are on trial, set out three years ago, not yet bearing but growing thriftily, the Catawba and other grapes doing remarkably well and in good bearing this year.

Messrs. R. & B. had, this season, 450 acres in barley, the grain being very fine and full. They raise corn of excellent quality. The soil is a heavy loam and quite retentive of moisture.

Higher up the Las Posas, living in a canyon reaching northwardly from the Las Posas ranch into Las Posas mountains, about 12 miles north-east of Springville, we find our friend C. M. Drake, living a hale, hearty life, surrounded by the attractions of his ranch and home in a narrow valley almost envied by mountains, and enjoying the extreme felicities of wedded life.

Mr. D. has 2200 orchard trees two years old last winter from the setting, generally growing thriftily and some in bearing this season. Among those in bearing we notice some of his apples, and of these we will mention the Newtown pippin and Yellow Bellefleur. His nectarines are extraordinarily full, and for them present appearances would indicate a great success at this place. Apricots in good bearing this year and well distributed over the trees. Peaches bearing heavily this season. Prunes growing well but not yet fruiting. Grapes for raisins, one year old last spring, looking very well and from 20 to 30 bunches per vine.

We find growing here tomato plants now over four years old, showing, we may say, complete absence of frost. In 1886 these plants, in the ordinary process of bearing, ripening, etc., had fruit on them every day of the year. The first slope of the foothills west of the road, leading up alongside of orchard, is set to walnuts, and looking as if they would thrive and do well.

Mr. D. has an apiary of 250 colonies of bees. Last year they brought him, on the average, \$5 per colony. This year the bee-keeping, as a business, has been nearly a failure all over this country because of a want of the ordinary bee forage, the honey-yielding flowers being present in abundance, but the melliferous substance usually found in the flowers and necessary for honey-making being notably absent.

Ventura Co.

McD.

Notes From Mesa, Arizona.

EDITORS PRESS:—Having carefully read your valuable paper for over two years and not seeing anything from our rural town, I thought a few lines from here might not be uninteresting to some of your readers.

Our little village is located on the tablelands lying in the eastern part of Salt River valley, some 18 miles east of Phoenix. This thrifty town was founded nine years ago by about 15 hardy pioneers who came from Northern Utah, and after working hard for about ten months succeeded in getting a ditch, that would carry about 300 inches of water, completed for a distance of nine miles, to our present townsite. Since then our numbers have gradually increased, and by degrees we have enlarged our canal until it now carries over 4000 inches of as good water as any person need wish to drink or run upon the soil.

This place, which was then a barren desert, and counted by many of the older settlers irreclaimable, has for over six miles square been turned into fine orchards, beautiful vineyards, smiling fields and comfortable homes. The land yields to the cultivator ample returns for honest toil, and most of those pioneers are able to now sit under their own vine and fig tree and enjoy the fruits of their labors.

The principal crops that are raised here are peaches, grapes and alfalfa, which generally yield immense crops. Peaches and grapes commence bearing the second year from the bud and cutting. The fig thrives exceedingly well in this place, frequently bearing three good crops a year. Apples, pears, prunes and other varieties of fruit are cultivated to some extent, but not with as good results as the above.

The live-stock interest is also receiving its share of attention. We have several as fine horses here as any man need wish to look at. They are Norman-Percheron and other noted draft stock and Hambletonian and other roadsters; also of horned stock we have the Short-horn, Holstein and Jersey. We hope in the near future to have a class of stock that will equal, if not excel, any of our sister towns in the valley for draft, driving, beef or dairying.

SUBSCRIBER.

Mesa, Maricopa Co., Arizona.

FLORICULTURE.

Facts About Flowers.

(Written for the RURAL PRESS by FRANCES M. PAYSON.)

To Preserve Cut Flowers.

These may be kept fresh for a considerable time by keeping them moist, not the stems only, but the whole bouquet. In dry weather a nice way to do this, if one is the happy owner of a bell glass, is to set the vase containing the flowers in a flat dish of water and turn the bell glass over them. The evaporation of the water in the glass keeps them continually moist. Another and very simple method of prolonging the life of a bouquet where flowers are scarce is to sprinkle it lightly with water and put the stems into a vase of soap suds. Each morning take it out of the suds and lay it sideways in fresh water, sprinkling the top slightly, then replace in the suds and it will be as bright and fresh as ever. The suds should be changed every three or four days.

Another very good method is to put into the water in which they stand a little of the solution of carbonate of ammonia and a few drops of phosphate of soda. This has a wonderful effect in brightening their color and strengthening them. By cutting off a half-inch of the stem with a sharp knife every other day, they will keep fresh as long as their natural life would last if on the bush.

There is a method in use in Germany for the preservation of rosebuds which might be used very conveniently at times when lovely buds are wanted to bloom on just the right occasion. This consists in first covering the end of the freshly-cut stem with wax and then placing each one separately in a closed paper cap or cone, not allowing the petals to touch the paper. The cone is then coated with glue to exclude all air, dust and moisture, and when dry it is stood on its stem in a cool, dark place. When wanted for use the bud is removed from its cover, the waxed end of the stem cut, and the stem placed in fresh water, when the bud unfolds in a few hours.

To Restore Faded Flowers.

Although dead flowers are dead, still there are many (the stronger and thicker petaled kinds) which, if only badly faded, may be more or less restored by immersing their stems half-way in very hot water and allowing them to remain in it till it cools or they are freshened. The soaked portion of the stem should then be cut off and the flowers put into fresh water. All flowers cannot be restored in this way, but many kinds admit of it.

To Preserve Ferns Fresh.

Ferns, which usually wilt so quickly, may be kept fresh and green for several days if immersed each night in water and allowed to lie in it. I have seen the delicate wild maiden-hair, the most difficult of all kinds to keep fresh, by being treated in this way, worn every night for a week in a young lady's hair.

A Curious Experiment.

If one wishes to try a little surprise for one's friends or play an April-fool's joke, take a bottle of any color of aniline ink (though the red looks prettiest) and insert in it the stem of some white flower which is never seen blooming in that particular color. By watching, at the end of 10 minutes or so you will see the vivid color gradually creeping up all the little veins till they are in brilliant contrast to the rest of the flower. The longer it remains in the ink the deeper the color will grow. When the tint suits you, you should cut the end of the stem and insert in fresh water to freshen it.

Although I have frequently "fooled" others in this way, I was once caught myself, by seeing such an exquisite rose worn by a gentleman, that, being a great rose-lover, I overcame my bashfulness and begged to know the name. It was of a most exquisite salmon tint—a yellow Marechal Niel colored with red aniline!

A friend of mine was once offered \$50 by a florist for the original plant from which a pale-pink pansy (the color so long sought in pansies) had been taken.

Flowers in Paraffine.

Fresh-cut flowers free from moisture, of the kinds which have the most substance, make pretty specimens if dipped in melted paraffine and quickly withdrawn. The paraffine should only be hot enough to maintain its fluidity, and the flowers should be dipped one at a time, holding them by the stem and moving them about to get rid of air bubbles and allow the liquid to touch every part.

A New Way to Mail Flowers.

It is sometimes desirable to send cut flowers by mail for some distance, either to a sick friend or (as Californians love to do) to the East, that those who love them may get a glimpse of our lovely flowers.

I have had flowers sent, a few at a time very nicely, clear to Illinois, in hot summer weather, by taking large potatoes, cutting them in half and hollowing them out till they were merely shells a half-inch thick or so. Take what flowers you wish to send (not the most delicate and perishable), freshen them in water and inclose in the two halves of the potato, firmly tying and wrapping it.

I have seen whole bouquets sent in this way, as a potato weighs little, and a half-dozen cost but little to mail. The wise way to treat the

flowers sent in this way is to immerse them entirely in water or use the bell-glass method of preserving, as they will, although perfectly fresh on arrival, wilt rapidly in the hot, dry air.

Mailing a Bouquet.

Bouquets may be mailed for a short distance by dampening them all over first and then inserting in a box (either of strong pasteboard or thin wood), stems upward, the stems being inserted in a false top which fits tightly into the box and has a hole to admit the stems. Above this false top the stems may be secured either by wire or string, so that the bouquet remains immovable, and the cover then fastened on. In this way, for a short distance, a bunch of cut flowers may be sent quite safely.

Mailing Cuttings and Plants.

Most cuttings will admit of being cut several days before using, and may therefore be mailed some distance with impunity. Rose cuttings will, if soaked thoroughly before using, and clipped freshly at the ends, bear a week of waiting before they are planted. Geraniums are all the better for a few days' drying out and may be mailed, if trimmed back closely first, without any previous soaking in water. As a usual thing, however, cuttings, after being closely trimmed, should be soaked for an hour or two and then securely wrapped in cloth and paper. No further precaution is necessary, except a thorough soaking in fresh water at the end of their journey before planting. To mail plants safely a long distance requires a wooden box, not pasteboard (a cigar-box does very well for a few), and packing tightly, so that the plants may not shake around or their roots be disturbed. Where the weight is not too great, wrap the roots in a tight, wet ball of earth and tie securely in a cloth. I have sent a small package of plants very securely, blossoms and all, for a journey of a day or so, merely tying the roots tightly in this manner, wrapping thickly in newspaper half-way to the tops of the plants, and then covering the whole with a last of tough, thick brown paper, such as is used in making paper boxes for holding papers in offices. This I rolled around them tightly, folding neatly at the bottom, and bringing it up over the top, an inch or so higher than the plants, pinning on the other side and cutting on each side a narrow slit to admit air. Having been thoroughly tied, marked "plants" and sent in the mail, the package arrived in perfect condition, every leaf fresh and not a blossom withered.

Home-Made Waxed Paper.

If you find it necessary to use (as many think it indispensable) waxed paper and have none at hand, you may make it with little difficulty by taking a stove griddle just warm enough to melt beeswax, laying over it a thin paper (tissue is best) and rubbing it with a piece of beeswax until every part has a thin film upon it. For packing moss, the thin moss which grows on stones does very well if wetted and squeezed dry. As a last resort, cotton treated like the moss will do reasonably well. If you have fears of your twine breaking, wax it. Never allow your box to go half full. This is a necessary precaution, and when neglected is often the cause of failure in their safe transportation.

Lengthening Hyacinth Stems.

Any one who has grown hyacinths in the house knows how often they will put out flower buds when the stem is but an inch or so long. A good way to force a longer growth of stem is to cover the plant with a paper cone, thick enough and so secured at the bottom as to exclude all light below, but with the top of the cone cut away enough to admit a little light at the top. The nature of plants being to grow toward the light, the hyacinth will strive upward with the desired result.

Paper Pots.

Good pots for small house plants may be made in an emergency of the stiff paper referred to above. Take a strip ten inches long by four wide and lap over and pin the ends. Double flat and crease, and then fold again just between these first creases and crease again to form the four corners. Take the scissors and slash up the bottom of each crease for an inch, turning up the four cut pieces and pinning over to form a bottom. These pots are always to be had for the making, and last quite a little while, and may be then thrown away without a feeling of wastefulness.

Grafting Dahlias.

Dahlias may be quite readily grafted by the following simple process. For this purpose the worthless tubers which are nearly always found hanging loosely from the stem are as good as any. These never sprout and are otherwise good for nothing. Make a cutting from a growing plant which includes two buds, one close to the bottom and one near the top, the leaf-stalk being taken off close to the bottom bud, and the cutting shaved away slightly on the sides close to it. Have the cutting shaved square at the bottom. Take a tuber or cut off one pointed end. On one side cut an indentation just the size to admit the end of the cutting for a quarter of its length. Insert the cutting bud outward and plant. If properly done, the result will be a healthy, vigorous plant.

Good Labels for Plants.

A label which will resist the weather is easily made by merely taking thin slips of wood, writing the name in ordinary ink upon it, and immersing in linseed-oil varnish until they are thoroughly permeated by it. Once being dried

perfectly in the open air, they become as hard as metal, resist water for a long time and are better than any metal strips.

A Novel Hanging Basket.

A pretty and entirely inexpensive hanging basket may be made by taking a large-sized carrot, cutting it off at the point to two-thirds its original length, scraping out the inside until it is merely a shell of one-half an inch in thickness, and filling it with water. When suspended by cords inserted and hung in the sun, it soon begins to shoot out at the butt, and sends its feathery green foliage curling up around it, for nothing, of course, will grow downward. The contrast of orange and green is very pretty, and the foliage itself is most beautiful.

Growing Peas in Water.

Another pretty and inexpensive way of having greenery in one's room is the old way of growing peas in water. Take a tumbler, tie a bit of netting over the top, and lay on it some peas (or beans of the running sorts), allowing them rarely to touch the water. In a few days they will have swelled and sent out their first tiny leaf and rootlet, and soon the entire tumbler will be filled with roots and the green vine filled with blossoms will wind its spiral way up the nearest support. This is a great delight to children, seeing the roots actually grow before them, and to an invalid it is almost as much pleasure.

Taking Impressions of Leaves.

By following these directions an impression of the most delicate leaves may be made, with their most minute veins and hair.

Take a sheet of closely woven paper and oil it well with sweet oil. After it has stood for a minute or so and soaked through, rub off the superfluous oil with a piece of paper, and let it hang in the air to dry. When the oil is pretty well in, take a lighted candle and move the paper over it, touching the flame till it is smoked perfectly black. Lay your plant accurately on the smoked paper, put a clean paper over and rub it carefully in every part. Then take your leaf up gently, being particular to keep it just in its order, and lay it on the paper which is to receive the impression. Put a piece of blotting paper over it, and rub it thoroughly. You will have a perfect likeness of your leaf like the finest engraving. You may use your oiled paper a number of times.

THE STOCK YARD.

Hints on Importing Live-Stock.

EDITORS PRESS:—Although there are a large number of importers of cattle who well understand the subject, there are others who do not import animals on a large scale, lose them by a want of knowledge of simple matters relating to the treatment of them on shipboard and subsequently. Purchasers of Clydesdale and other tallions are too anxious to get those that are fat and sleek—out of hard condition—forgetting or perhaps not aware of the fact that these horses, in that particular state, are very unfit to undergo the trials of a sea voyage, the result being that a very large percentage lie ere they have been on the ocean three or four days. It must be evident to any one that these plethoric animals are very liable to an attack of inflammation, and as a matter of fact a large number of stallions succumb to pneumonia generally about midway in the Atlantic, but of course that greatly depends upon circumstances, rough weather, general treatment, etc.

American buyers—I refer to those who go personally to buy a single animal—generally proceed to some well-known dealer who has a number of stallions. If this salesman has a good reputation as being more honest than most horse-dealers, perhaps he does well to go to such a man, especially if he—the buyer—is not a “horseman;” but, on the other hand, should be a man well versed in horse matters, then he might with advantage proceed to a good farmer, from whom he would be likely to procure a stallion at much less price than from the horse-dealer. And this is a practical point upon which I would wish to lay much stress, viz., that dealers generally do their utmost to attend animals for sale, and farmers frequently sell their stallions right off the plow. It needs little reasoning to show which horses are in the most natural condition and best fit to “rough” upon the ocean. It is a well-known fact to practical men that herein lies the reason that so many valuable equine lives are lost and committed to the waves.

In my own experience I can point to a great number of cases proving this common-sense argument. If a horse is suffering from a simple cold or ordinary attack of distemper prior to shipment, he should remain on shore until recovery. It is a good practice to provide oneself with an ordinary hypodermic veterinary syringe, so that, should there be any symptoms of excitement or tendency to fever during the voyage, the owner may administer a dose of morphia under the skin. This is quite a simple operation, and any veterinarian or druggist would prepare the liquid and direct as to its use. I am acquainted with a man who has adopted this device during a fit of nervousness in his stallion, and he attributes—I think rightly—to this treatment the safe passage of his horse. The idea of stopping up all the

crevices through which air may come as soon as the animal begins to “blow” is a great mistake. He should be allowed all the pure air he can get.

There are some people, even on board ship, when a valuable horse is sick, who are extremely anxious to offer advice upon the subject, about which they know little. It will be found that their remedies and suggestions vary greatly; some may even recommend charms. But there is little doubt that it is best for the perplexed owner to visit the ship's surgeon, if there is one, and he will probably be willing to become, for the time, a veterinarian.

When horses are landed on this continent they are often shut up and fed with too much grain. It should be remembered that stallions in Europe and well-conducted stables in this country are generally exercised, and often, as I have said, put to ordinary work with the other farm horses. There can be no greater folly than to pamper them. Plenty of exercise, good food and general natural conditions will make strong and hardy horses.

ROBERT J. DAWSON,
225 Geary St., S. F. Veterinary Surgeon.

POULTRY YARD.

Los Angeles Poultry Notes.

A writer for the Los Angeles Mirror gives the following running notes on poultry topics:

Egg-Eating.

Egg-eating is a vice of not very frequent occurrence among well-kept poultry. Every one knows how greedily egg-shells will be devoured by hens. They are fond of the inner lining and the shell. It is well enough to feed laying hens with the empty shells that come from the kitchen. The lime will furnish material for future shells; but they should always be crushed and mixed with the soft food. If thrown out carelessly the eating of them may be only the first lesson of a vicious course. The shell-eater may quickly become an egg-eater. One vigorous thrust of the beak into a perfect egg in the nest, and the mischief is done. This is nectar. Other fowls approach for a taste; and they will all appreciate the food, cackling in loud tones, calling it a superior tonic, easy to take.

Another accident which causes fowls to get in this bad habit is the dropping of an occasional egg from the roost. It may become broken by the fall, and when daylight comes, the eyes of the fowls are open to the fact that an egg contains sweet meat, and they get a notion into their heads that was never there before. But

The Cause of Egg-Eating

In the nest that operates most frequently is the deposit of thin-shelled eggs. A scant supply of lime and a long period of laying will result in this condition, even when fowls are quite healthy. A neglect to supply lime in the form of bone or seashells is sometimes the primary cause of egg-eating, but there is an occasional instance of thin-shelled eggs that is owing to some disease or deformity in the oviduct, where the shell is formed by secretion. The fowl may be, to all appearances, perfectly healthy, and have a full supply of lime, but one side of each egg she lays will be flattened and the shell on the flat side very thin. Of course, if her eggs are not moved from the nest as soon as laid, there will sooner or later occur breaking, with its sure consequences. If eggs are gathered often, this evil may be avoided, but we have seen a fowl, the layer of such imperfect eggs, turn round immediately after laying and partake of a warm breakfast. The fancier who has a flock of valuable fowls may well keep watch and ascertain for a certainty which fowl lays thin-shelled eggs, and remove her at once, for her usefulness is at an end, so far as egg-production is concerned. She must be short-lived, else unprofitable. There are

Precautions and Preventives

That have been recommended and practiced with success, thus avoiding this vicious habit. The nests should be so made and arranged that the eggs will not be in full light and in plain sight. If the next box is open only on one side, and the entrance is turned away from the light and approached through a partially darkened passageway, the fowls will not enter it ordinarily except when ready to deposit an egg. It is also advisable to keep in each nest a false egg made of plaster, wood or porcelain; also a nest full scattered about the pen on the ground. They will sometimes pick at these, and will shortly ascertain that they do not make any headway with the decoys, and be convinced that eggs do not contain anything that may be appropriated. That makes a good feature in their education, for when they have given up the attempt to break artificial eggs they will not try their beaks on real ones, especially if they are found in a partially darkened and secluded nest.

Many writers recommend a nest so contrived that when an egg is laid it rolls away out of sight. Others advise blowing the meat out of an egg and filling the shell with mustard or cayenne pepper. The former plan will of course work all right, though we know by experience that the latter will not. However, if care is taken to provide plenty of shell material, very little trouble need be apprehended from egg-eating hens.

Germes.

While there has been no limit to the age at which a hen will quit laying, it has been pretty

well established that after three years it is best to sell. Each year it is advisable to breed as many pullets as hens, and keep nothing in your flocks that is unprofitable, and have the stock strong and vigorous.

All fowls kept by a farmer after they are two years old are kept at a loss, so far as money is concerned. When a whole flock is allowed to run without killing off the old ones and replacing them by pullets, disease is sure to attack them. They become liable to roup, swell-head, etc., after they become aged. If an egg has been set on, even for a few hours, the size of the germ is increased, and if left in the nest of a setting hen for 24 hours small blood-vessels may be seen forming a beautiful zone around it. It should not be imagined that the yolk is a mere unorganized liquid. It is composed, like the white, of concentric layers, which may be seen when it is boiled hard, and from the germ a tube runs to a central hollow cavity that is also to be noticed when an egg, boiled hard, is cut across.

As the seasons go by, we find many new hands embarking in the poultry business for pleasure or profit.

Fowls in confinement require a variety of food to prosper. They require a mixture of green food with grain, as much as horses or cattle do. Too much solid food, where there is not proper exercise, tends to fatten. When hens take on fat they usually fall off laying. Yarded fowls do not need the same hearty food as birds at liberty. Light, nutritious and easily digested food is required by fowls in confinement. Never allow them to make whole corn a staple diet.

Fresh Meat

Two or three times a week is necessary for fowls in confinement, and in summer especially, when they are deprived of insect food.

Poultry Experience in San Luis Obispo.

Cassius Martin gives the San Luis Obispo Tribune a sketch of his experience with fowls, as follows:

“Will the chicken business pay in San Luis Obispo county?” is a question frequently asked, and as I have been in that business for 15 years I think I am in position to answer the question. Briefly, then, let me demonstrate my proposition. In the first place, some people claim, especially new-comers, that chickens cannot be raised profitably on this coast. They allege that too many die young to make the industry profitable. Such may be the case, but the fault does not lie with the country by any means, but from the ignorance of the people engaged in the business.

My long experience here has clearly proven that chickens are more easily taken care of and can be more successfully raised than in the Eastern States, and I propose to tell you the reason. We get better prices here. I have sold hundreds of dozens of eggs in the Western States for eight cents per dozen, and have sometimes sold as low as five cents in Kansas and Iowa. But farmers there agree that to sell eggs at the latter price doesn't pay for the wear and tear of the hen. And that is just what we think here when the price gets down to 10 cents. But it is a very rare thing that eggs are ever quoted as low as that. We generally average about 20 cents the year around. Eggs are now selling for 25 cents per dozen, and when it is taken into consideration that this is the month of August, it will give one a fair idea of the profits in the business.

As for chickens, I used to sell them back in “the States” for 10 cents apiece, and the same would bring 25 cents here. And while we are talking about prices, it may be pertinent right here to insert an account kept strictly by myself of all chickens and eggs sold in the year 1886, with the cost of feed, etc., for 90 hens:

Eggs sold (586 dozen).....	\$ 95 15
Chickens sold (94).....	24 75
Total.....	\$119 90
Cost of feed.....	52 45

Net profit.....	\$67 45
Used for family (lowest calculation).....	90 00

The above shows a clear profit of a dollar per hen, and if anything, I have underestimated it. The profits for this year are still more encouraging. For the seven months—January 1st to July 31st—the account stands for about 120 hens:

Chickens sold.....	\$ 21 40
Eggs sold.....	86 85

Total.....	\$108 25
Feed.....	24 55

Net.....	\$83 70
Eggs and chickens for family use.....	16 30

\$100 00

I think that if a hen is properly treated, she will yield \$1 per year in eggs, or chickens here in California, but I do not presume to say that if a man can make \$100 off of 100 hens, it naturally follows that he can make \$1000 with 1000 hens, for I don't think he can. Your place will carry or keep, say from 100 to 300 hens nicely, and if you try to raise more, you overstock, and your profits diminish accordingly.

I will conclude my letter with a short reference to the kind of feed my experience has taught me is the best. Wheat, then, is my first choice, corn next, barley, etc. I also use considerable milk, meat, Chili pepper, cabbage

and other vegetables, and also hay. Some may sneer at the idea of a hen eating hay, but if you don't believe it, just turn 100 hens loose on your stack-yard, and you will find they will make away with more than a horse. They will also eat up all the grass within a radius of 50 yards from the roost.

FORESTRY.

Grazing vs. Fire.

EDITORS PRESS:—I see that the Board of Forestry was in session a short time ago. I think that some of their plans are very good, but some of their ideas are wrong. Some think that the sheep and goats do more harm than the fire to the young growth of timber. I have lived in California nearly 37 years, and have lived here over 29 years; and where it was nearly open land when I came here, the tan-bark oak and young fir timber is so thick you can scarcely get through it right in the sheep range. And then, sheep and goats won't eat redwood.

Here in Ukiah, where the first settlers cut the redwood down 28 or 29 years ago, they have sprouted and are now as high as 75 or 100 feet, and there are quite a number of redwood thickets in the hills west of town. If the fire had been kept out, there would have been a nice grove of timber now, but the fire runs through these mountains every few years and kills all the small timber. If it were not for the fire, the redwood would grow very fast, for when a redwood is cut down, unless it is too old a tree, it will sprout up again and the sprouts grow very fast; but how the fire is to be kept out is one of the things that will be hard to tell.

Thomas Magee of San Francisco proposes the enactment of a law to prevent sheep from running on Government land. Such a law would inflict great hardship on the sheepmen in this county. I think it will result in a great many lawsuits. There are but few sheep ranges in this part of the country from which the sheep do not run on some Government land. The land is not worth entering, for a great portion of the hills in this country are covered with chemical, and it is not worth anything except for goats; they will do well on it, but it pulls out the mohair so that they do not shear much, and there is not much profit in the goat business.

They say Government does not get any taxes for the land. Well, it does for the sheep and goats, and that is better than nothing.

Ukiah, Aug. 8, 1887.

J. F. TODD.

Suggestions as to Fires.

A correspondent of the Chronicle writing from Shasta, where terrible fires have occurred during the present month, gives the following notes as the results of interviews with old residents:

Forest fires in the mountains are becoming every year less frequent but far more destructive. This is owing first, to the law against kindling them; and secondly, to the dense and rapidly accumulating growth of underbrush and forest debris. Early settlers found many of the mountain ridges almost bare of undergrowth or shrubbery and covered with fair-sized trees, valuable for wood and timber and high grass. This, it is claimed, was owing to the efforts of the Indians, who kept the country burned over to enable them to readily find the game upon which they depended. Since settlement by whites, the accessible timber has, to a great extent, been removed about settlements, the grass kept down by stock, and fires prevented, and the hills and ridges have become thickly covered with a worthless undergrowth, in many districts impenetrable to man or beast, which rapidly accumulates, and which is a source of constant danger. Much of this mountain territory cannot be utilized except for a stock range, and will not, for many years at least, be cleared.

The sentiment among old residents and mountaineers is that these districts should be regularly and systematically fired and burned over in the early summer months, when the fire can be easily guided and controlled, and this done often enough to prevent an accumulation of undergrowth sufficient to destroy valuable timber by accidental fires. It is simply impossible to prevent forest fires—it is only a question of time when the accumulation of dead, dry brush and trash will be ignited.

Fire originates in the mountains in a hundred ways—from a match by the roadside, a cigar, a spark from a railroad engine, the carelessness or intentional neglect of Indians, hunters, prospectors or the numberless campers in the mountains during the summer. When started late in the season it is simply uncontrollable and results in a conflagration that sweeps the country, destroys immense tracts of valuable timber and imperils stock, property, lives and even towns. The common, sensible and growing sentiment is that a few harmless bonfires in May and June would prevent destructive and devastating conflagrations in July, August and September.

The law prohibiting forest fires should be amended so as to encourage firing certain tracts at stated times, when no damage would result to timber and when the fire could be controlled and managed about settlements.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Temescal Grange.

At the meeting last Saturday a member mentioned the receipt of a letter from Prof. Hilgard, in which he expressed grave doubts as to whether any experimental farms could be established in California for a year or two to come, for the reason that the Act of Congress promising \$15,000 a year to each State for such a purpose made no provision for funds. The coming session of Congress will be a short one, and the presidential campaign being at hand, it is apprehended that the necessary legislative action is not likely to be had very soon.

It is thought that the Granges and farmers all over the country should take the matter up, and by united effort spur their Congressmen to endeavor to secure complete legislation in this matter. It would seem that such insufficient legislation should be remedied as speedily as possible on the reassembling of Congress. Farmers should be no less active in pressing their rights than any other class. The attention of the State Grange should be called to this subject, and we hope that the Granges throughout the State will discuss the matter, so that representatives may be well prepared to act on the will of their constituents.

Brother Frink suggested that farmers should experiment more, and systematically and carefully report facts at the State Grange for publication with the annual proceedings. He once asked a number of farmers how much wheat they considered best to sow per acre, and the answers received varied from 50 to 100 pounds. He had found that 25 pounds was sufficient. There is hardly any telling as to the difference in returns from sowing a larger or a smaller amount in most cases, without weighing and carefully keeping account of the exact amount sowed and the exact amount harvested on ground of the same kind and tried at the same time. On the Sacramento river in 1864, 25 pounds of alfalfa per acre was usually sowed. He found that, with proper cultivation and careful sowing, one pound was sufficient; it produced the best 10 acres that he had.

Brother Kelsey said much depended on circumstances. Seed placed a little too deep or too shallow would not grow; consequently, it is only a portion of the seed sown that propagates. Perhaps one to three pounds is sufficient in most places. Some sow up to 40 pounds. In answer to Brother Frink, as to how much turnip seed he would sow to an acre, Brother Kelsey replied about four ounces.

Brother Frink declared that every alfalfa plant matured would occupy more than a foot of ground. When more plants are sowed, the stronger root out the weaker ones, until not more than one plant to each foot of ground remains.

Considerable discussion was had over the supply of water for Oakland and other cities in California.

Brother Renwick called attention to the fact that a farmer selling fruit raised on his own place had been warned by a policeman that such action was illegal. This question being considered very important, Bros. Frink, Payne and Kelsey were appointed a committee to investigate the Oakland city license laws and report on the matter at a future meeting.

The next meeting takes place on Saturday evening, September 3d, at which it is hoped there will be a full attendance.

Watsonville Grange Fair.

EDITORS PRESS:—For the last month the meetings of Watsonville Grange have been occupied with discussing the desirability of holding an agricultural fair at this end of Santa Cruz county.

In order to interest all, an open meeting was called. A goodly number of our people attended, and evinced a good deal of enthusiasm. Reports of committees previously appointed being favorable, it was unanimously voted to hold a fair September 15th to 17th, where all may see the largest pumpkins, the tallest wheat, the best apples, the sweetest plums and the biggest potatoes from this, one of the smallest but richest valleys in the State of California.

Contemporaneous with the fair is the establishment of a free reading-room, through the untiring efforts of the worthy ladies of the W. C. T. U.

Thus at last has beautiful Pajaro, the home of the vine, the olive, the apricot and the prune, awakened to the greatness of her possibilities. Watsonville, Aug. 21, 1887. A. P. R.

[We are pleased to see this move on the part of the members and friends of Watsonville Grange, and that so fine an agricultural district as they represent is to have its products displayed and its excellent capacities demonstrated. We are also obliged to the active and enterprising Brother who sends us the above information, and hope he will often favor us in like manner—for the sake of both our readers and his neighbors.—EDS. PRESS.]

Alkali Lands Again.

EDITORS PRESS:—Referring to my "Propositions Concerning Alkali Lands," in the RURAL PRESS of August 6th, I beg a further hearing. I have recently been shown a letter from a farmer in the Kern county artesian belt. The writer says that my communication had been read and commented on at a meeting of his Grange, and that he, with others in that section of the country, intended to try the experiment as I suggested.

Passing over some of his remarks, complimentary and otherwise, the general tenor of his letter impels me to come to the front with a most strenuous protest against experiments being made *partly* after my method, but more or less modified by circumstances or the fancies of the experimenter. I am willing enough to shoulder any failures that may result from my ideas being carried out, but I do not propose that those who, having worked *partially* on my plan, make failures, shall hereafter complain that my ideas are erroneous, as shown by the results of their experiments, and consequently condemn my theory.

The Kern county farmer referred to stated that he had no subsoil plow, but would do the best he could with the tools he had.

I protest loudly! Let him get a subsoil plow. I object to his trying my experiment until he has one. It costs but about \$15.

Then, again, he writes: "As for alfalfa, will put some in as suggested as near as we can with our tools, and if we do have to flood it, it will soon drain off the high places."

Again I loudly protest, both against doing the work as near as he can with the tools he has and against the possible flooding he treats so lightly, after all I have written in the first article on the extreme importance of *not* flooding! He writes that "the article is an able one and voices his sentiments exactly," and then coolly says he will try to come somewhere near carrying them out. This gentleman's name is not divulged to me, so I cannot make him a personal appeal; but as his Grange takes the RURAL, he may possibly read this. So I hereby beg him not to experiment with his alkali land at all, as he evidently has no conception of the importance of the main points of the theory. Having failed, he would assuredly curse the land, the country, the climate—everything but himself. Knowing that the experiment, tried as he would try it, must be a failure, I again beg him not to try it, for my sake, as it would certainly work injustice to me.

I also wish to call his attention to a point which he has evidently overlooked. Neither he nor his neighbors will see the results of their experiments before 1889; as for the successful working out of my theory, the summer-fallow of 1888 on wild soil turned up from a depth of 12 inches and a subsoiling of 12 inches still further down, is a prime necessity. So we do not care for any reports before a year and a half or two years hence. On some soils, if the land were properly plowed and unsoiled by the end of August present, a crop might be a success, if planted the coming winter or spring, but it must be soil of a naturally warm nature and one that has been dropped before, and *not* the land of our Kern county friend—if it be correctly described as being a clayey, putty-like soil—that needs the sun, air, and light on it for an entire summer.

Then I will assure my friend that not only will his land produce (even his greasewood land) but that it will seep for feet instead of inches—which he says is the most it will do now.

Let me repeat it! I do earnestly protest against my theory being tested in other people's ways. Do it *my* way, and prove me a fool if you can, and I will take my punishment like a man. RECLAIMER.

S. F., Aug. 23, 1887.

Resolutions of Respect.

The ensuing report of action taken in view of the death of Sister Ruth Barnes comes to us under the official seal of Santa Rosa Grange:

In Memoriam.

The Committee on Memorial and Resolutions beg leave to submit the following:

WHEREAS, The Great Master of the universe has seen fit to remove from our midst and from our Councils a beloved Sister; and

Whereas, We bow with submission and in meekness to the will of Him who "doeth all things well;" therefore

Resolved, That in the death of Sister Ruth Barnes Santa Rosa Grange has lost a true and faithful member, the Order a consistent Christian, and the community in which she lived a friend to all who tried to do right.

Resolved, That the charter of Santa Rosa Grange be draped in the usual bands of mourning, and that the members wear the badges for the period of 30 days.

Resolved, That these resolutions be spread on the minutes of this Grange and a copy be furnished the local press, the *California Patron* and the *PACIFIC RURAL PRESS* for publication.

MARY E. SAXTON,
MRS. E. A. ROGERS,
JOHN ADAMS,
Committee.

THE WORTHY MASTER AT GRASS VALLEY.—The *Tidings* says that on Saturday night, August 13th, Grass Valley Grange entertained State Master Johnston and lady in a good, old-fashioned manner, that delighted those person-

ages. All formality was dispensed with, cheery, heart-warming hospitality taking the place of cold conventionalisms. At the conclusion of the secret work, on which the State Master lectured, a banquet was served at which Simon-pure spring chickens played a leading role. The occasion was a very happy one.

Grange Work and Progress.

[Prepared Weekly by M. WHITEHEAD, National Lecturer.]

Judging from the reports that are coming in from the various signal stations all over the country, the "probabilities" plainly indicate, for the coming months of fall and winter, more activity in the Grange atmosphere than for a long time before. The "cold wave" has passed, the temperature is rising and a warm wave is rolling across the continent, widespread and so penetrating that even the most remote districts must feel its influence.

Offensive and yet defensive, aggressive and yet conservative, the Grange is moving grandly on, winning more and more the respect that age commands, and the success a good cause so well deserves. Let the faint hearts and those of little faith cheer up and take hold again. Let those who have followed after new and strange gods return to the faith of their fathers. Let the lost and stray sheep come once more into the fold. The Grange was *never* so successful as now; figures, words and deeds proclaim it. "Nothing succeeds like success."

If people who are so unfortunate as to live where the Grange is not a success will take the trouble to investigate the matter outside their immediate vicinity, they will soon become convinced that the Grange is not a failure, but one of the grandest successes of the times.—*Rural Vermonter*.

WHAT Patron but feels the enthusiasm of past years returning when he witnesses the uprising of our class in behalf of their calling, home and country? There are few Granges now dormant but are capable of reanimation, and it is merely a question as to time. Shall the few faithful ones in each dormant body do the necessary work promptly or wait for outside help? Is it not true that, if all our old workers would determine that every dormant Grange should be reorganized, the next six months would see nine-tenths of all these in successful working order? Deputies have an important duty to perform in this direction, and with them should start this movement. They are the ones to superintend the work. Much is being done, but more can be done by united effort.—*Grange Bulletin*.

THERE are other and most excellent farmers' associations, but the Grange has the high honor of being the oldest and longest tried. It has gone through its period of mushroom growth, with its consequent reaction and years of apathy, and has now taken on the development of mature years. In its adaptability to the largest number of farmers in all sections of the continent, the Grange is unrivaled.—*Farm and Home (Massachusetts)*.

REPORTS of new Granges, reorganizations, large accessions of new members, new halls being built, larger meetings, seaside, lakeside and picnic gatherings of Patrons and farmers, more and larger than ever before, the calls for lecturers, the more liberal space given to Grange news in local and other papers, all plainly prove the present advance of the Grange, and its growth in favor in all parts of the land.—*Farmers' Friend*.

SUGGESTIONS FOR THE GOOD OF THE ORDER.—Every Grange should have a press committee, who would carefully report for the local and agricultural papers all their meetings. Surely when there are discussions like those we have, an account of them would serve to prove that Grange meetings are not all forms and ceremonies, as some aver, and that they do not spend long evenings in foolishness as others say. Granges should try to recommend themselves to the public in every legitimate way.—*A Rhode Island Patron*.

PROGRESS.—One hundred and thirty-three new Granges organized in the United States this year. Forty-two more than in all of last year.

TURNER GRANGE, Oregon, has completed a new hall and received a class of eight new members.

THE annual cost of insurance in the Husbandman's Fire Insurance Co. of Vermont averages about \$1.66 per \$1000 of risk. The company began business in February, 1880, and has insured 871 policies, of which 604 are now in force, covering risks to the amount of \$777,050. The total expenses in the six years, including losses, have been \$8605.

"Their sound is gone out into all lands, And their words into the ends of the world."

MAGNOLIA GRANGE.—We learn from the *Auburn Republican* that the members of Magnolia Grange celebrated their twelfth anniversary at their hall across Bear river on the 9th instant. About 200 members and guests were present. Rev. Mr. Sherrard of Gold Hill read an essay, and addresses were made by Rev. C. L. Corwin and Senator Johnston, Master of the State Grange. Music and an elegant banquet completed the festivities.

MICROSCOPIC air and liquid bubbles exist in many crystals of minerals, no less than 4,000,000 having been estimated to have a place in a cube of quartz one-twenty-fifth of an inch square.

Joaquin Miller.

We had a call on Tuesday from Mr. Joaquin Miller, whom we mentioned last week as one of the delegates appointed by Gov. Bartlett to attend the Forestry Congress, which will be held next month at Springfield, Ill. Mr. Miller tells us that he returned to California to make it his permanent home and did not expect to cross the State line again, but his interest in forestry is so deep that he accepts with willingness the opportunity to consult with those who come together from all parts of the country with one grand idea, to preserve and multiply our tree growths. Mr. Miller has purchased a picturesque piece of hillside east of Fruitvale, near Oakland, land with jutting rocks and grass and plenty of living water, a place naturally so situated and conditioned that the tree-planter can work upon it effectively and produce most gratifying and picturesque results. Here he has reared his cathedral of unheavened rocks and planted his home, hoping to end his days in the balmy air and gazing upon the grand landscape which the elevation secures him. But with these desires Mr. Miller does not propose to withdraw from the busy throng. He has accepted the invitation to deliver the poem at the opening of the Mechanics' Institute Fair, and thereafter will go East to the Forestry Congress, and will also revisit the chief cities of the Atlantic Coast. A few weeks will, however, bring him again to the home of his choice in California.

Mr. Miller has been engaged as a regular contributor to the columns of the *Illustrated Weekly*, a new pictorial journal recently established in this city. The poem for the Mechanics' Fair opening exercises will appear in the issue of September 4th. His writings will present news, sentiment and comments upon topics affecting the best interests of mankind, and their style will, of course, be marked by the originality in thought and expression for which both Mr. Miller's prose and verse are proverbially inimitable.

Illness of the Governor.

Gov. Bartlett's health has been a source of anxiety to his friends for several months, and it is generally known that close attention to official duties had so reduced his strength that it became necessary for him to retire to Highland Springs for rest and recovery. He had rallied to some extent and was staying with a relative in Oakland, where last Monday night he was stricken with paralysis.

The stroke was so severe that for awhile his life was despaired of, but an unlooked-for change for the better soon became apparent, and as we go to press Wednesday afternoon, a dispatch, signed by the attending physician, Dr. C. Annette Buckel, says: "Governor Bartlett seems to be improving. The paralysis of the lips and face is slightly better; voice, more natural; pulse, 64; temperature, 99; respiration, more natural."

The present condition indicates an absorption of the blood-clot that caused the paralysis, and we hope that ere this reaches our readers there will be more encouragement to look for his recovery.

Gamblers at Odds.

The book-making and betting "sports" have fallen out at Monmouth Park, and the judges have refused to interfere, saying that they have no cognizance of the betting.

There is a proverb that when rogues fall out honest men get their dues, but we fail to see how it applies in this case, since no thoroughly honest man can have anything to do with the pools and wagers of the race-track.

As between the book-makers and the backers, we feel much like the frontierswoman who stood in the doorway of her cabin watching the knife and-claw tussle between her old man and Bruin, and clapped her hands as she cried out: "Go it, husband! Go it, bear! I don't care which licks."

The Fairs.

The Sonoma County Fair opened at Santa Rosa with high promise on Monday, and was, at last accounts, in prosperous course. We shall try to give an extended report in our next issue.

The Fourth, Eighth and Thirteenth District Fairs are to take place at Petaluma, Placerville and Marysville, respectively, the coming week.

The Mechanics' Institute Fair opens in this city next Thursday, September 1st, and will run until the 8th of October.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

GOOD GRAIN.—Haywards *Journal*, Aug. 20: The heaviest crops in this valley were around Mt. Eden and Haywards. The highest yield was 36 sacks to the acre, while a large number realized from 30 to 25 sacks and down to 20 sacks. As a sample, on Frank Dennis' place, the amount was 719 sacks from 20 acres. From 40 acres Mrs. Obermuller had 3030 sacks of barley, mostly chevalier. The crops of many others were above the average.

Butte.

GROWN UPON THE HILLS.—Chico *Enterprise*, Aug. 19: By Gibson's stage from Magalia today we received a box from the ranch of Mat and John Bader, containing Bartlett pears, winter apples and peaches. They are fine specimens of what can be done on the hills east of Chico, at 2400 feet elevation, and are a credit to the perseverance and industry of the Bader Bros., who were the first to appreciate the value of land in the foothills for agriculture, and purchased 160 acres which they cleared and put into hay, and on a part set out an orchard which now pays them good returns for all its cost.

THE CHICO CANNERY has nearly completed 200,000 cans, and 50,000 more will be added before the season closes, making a quarter of a million cans for this year's pack. Nearly all his lot has already been sold for the Eastern market, and had the capacity of the cannery been greater and the help sufficient, double that amount could have been put up. The orchards of the Rancho Chico supply nearly all the fruit, only plums and Bartlett pears having been brought in from outside orchards in small quantities. To handle all this fruit has required a very large force, and many needy families have been benefited, and a large amount of coin put in circulation among our merchants. The schoolgirls and boys have put in a profitable vacation, and probably learned habits of industry which will benefit them through life.

Calaveras.

JAPANESE EXPERIMENT FARM.—Valley Springs Cor. *Chronicle*: K. Inouye has bought 50 acres of improved land, with buildings, in this valley, stocked the property and brought two Japanese farmers to the ranch. He was interviewed the other day, but only stated that Japan considered it desirable to send out emigrants, and he intended to try the experiment and see if this would prove a good country for Japanese farmers to emigrate to. Mr. Inouye is an educated and intelligent man and influential among the Japanese. He says this is the first experiment by Japanese in farming in this country.

Contra Costa.

OUT ALL WINTER.—Martinez *Item*: As an instance of the mildness of Contra Costa's climate, Thomas Kilgore of Ignacio Valley has placed on exhibition, at the Board of Trade rooms, a pumpkin of last season's growth, well developed, perfect and in as good preservation to-day as it was last fall. It has remained out in the weather, we are informed, all the time, only protected by being in the lee of a fence.

Fresno.

NEW NECTARINES.—Fresno *Republican*, Aug. 19: W. C. West, manager of the Fancher Creek Nursery, lately left a sample box of nectarines at this office. It contained specimens of the Violet Gros nectarine, a new importation from France. It is a magnificent fruit, closely resembling a white peach in appearance, but having a rich and extremely agreeable nectarine flavor. It is of large size, and will rank among our best nectarines when introduced. There were also specimens of a new seedling propagated at this nursery. It is colored like the Lord Napier, but its flavor is more like that of the New White. They are both creditable specimens of this excellent fruit.

THE RAISIN PACK.—There has been a good deal of estimating done on the forthcoming raisin pack of Fresno. Last year the pack reached the figure of 252,000 boxes, and the increase of the bearing acreage is large. The lowest estimates are now from 300,000 to 400,000 boxes, and some place it still higher. An increase of 100,000 boxes would be doing well, and it is likely to exceed this.

Inyo.

PROMISING COLTS.—Bishop Creek *Register*, Aug. 18: This week Thos. McLeod purchased from Hor. Smith a 26 months-old colt. He is half Norman, coal black, and weighing 1198 pounds. The price paid was \$200. Wm. Rowan had a half-Norman colt in town, 26 months old, which weighed 1400 pounds. It was the property of Dugan & Blair. These are pretty hard to beat in the way of horseflesh.

ALEXANDER APPLES.—We were shown some apples yesterday from the orchard of J. W. Claussen of the Alexander variety. The largest measured 14½ inches in circumference, and 12 of them weighed 10 pounds and two ounces. Mr. Smith intends to send the fruit to San Jose—a good idea—and some of the same sort will be on exhibition at our fair this fall.

Kern.

A SAMPLE CORN-FIELD.—Bakersfield *Echo*: On P. D. Jewett's ranch, ½ of a mile north of town, is a crop of maturing corn that speaks truths concerning this valley, hardly credible to

those unacquainted with the strength of soil and favorable weather to be found in the upper San Joaquin. During the winter months barley was sown, from which a heavy crop of hay was harvested in May. The ground was then plowed and on the 10th of June was planted to corn. At this writing the stalks of corn, now only about six weeks from the planting of the seed, average 14 feet in height—many of them are 18 feet high—and bear three or four ears each. There is nothing extraordinary about this field; we cite it as an instance of what is accomplished all over this part of the State, where water for irrigation is at hand.

Los Angeles.

EDITORS PRESS.—The weather has again turned warm, with an absence of fog, which is a great favor to the fruit-driers; but the hay-baling will have to suffer. Two large land sales have been reported in our valley. The land will be subdivided and put on the market for this winter's immigration. This is a move that we hail with joy, as our neighbors are too far apart. An oil refinery is also talked of as an enterprise of the near future, which will add to the industry and wealth of our already busy county, and help give employment to the thousands who are coming in.—D. J. O., *Spadra*, Aug. 27, 1887.

A UNIQUE HIVE.—Los Angeles Cor. *Chronicle*: Mexicans have been selling honey pretty extensively here for a short time past. It was very nice honey, and many people, after tasting it, bought small quantities from the swarthy vendors. To-day a reporter had the curiosity to investigate and found that this honey had been made by a nest of ground-bees in a coffin in a grave in the Catholic cemetery. The sexton was not aware that the honey-sellers had been mining for sweets in his territory.

Napa.

WHEAT AND BARLEY YIELD.—*Calistogan*: Eight and nine years ago the yield of wheat per acre in the Upper Napa valley decreased so much that many farmers became greatly discouraged, and turned their attention to other crops. Now, however, land is producing wheat very well again, but of course not so abundantly as it did 20 years ago. The increase is attributed mainly to the fact that land has been given a rest by growing grass, etc. The following are fair specimens of the wheat and barley yield here this year: J. R. Wright, 70 acres of wheat, 20 of barley; sacks of wheat and barley from the 90 acres, 1365. Ephraim Light, 10 acres barley; sacks, 250. David Rose, 38 acres wheat; sacks, 465.

Placer.

PLACER PEACHES.—*Republican*, Aug. 17: Last Saturday we received a box of non-irrigated peaches from Jack Lower, whose place is just below Auburn. They were freestones of the Rice variety and two layers filled a six-inch box. They averaged 11 inches, and one Orange cling measured 11½ inches in circumference. ... In J. F. Madden's store at Newcastle last Friday was a lot of fruit gathered from different ranches which was a whole fair by itself. In the display was a McDevitt cling peach, from Walter Connelly's ranch, which measured 131 inches in circumference and weighed 17 ounces. An Orange cling from M. Pranzo's place measured 12 inches and weighed 15 ounces. A Tingley peach from W. E. Ritchey's orchard measured 11½ inches. Three McDevitt peaches from Mr. Armes' place weighed two pounds and five ounces. Five Chili cling peaches from Peter Hallbom's orchard weighed a trifle over three pounds. ... Monday morning R. N. Scott brought to this office a brace of McDevitt clings which measured an even 12 inches in circumference. If any more big peaches come in, the *Republican* intends to start a cannery.

Sacramento.

FRUIT-BOXES IN DEMAND.—*Bee*, Aug. 19: The unprecedented fruit crop of this year, and the constant shipment of trainloads to the East, have produced the greatest activity at the box-factories in this city. Boxes of all sorts and sizes are turned out daily by thousands, and the demand far exceeds the supply. One of the proprietors of the Pioneer box-factory said that it was utterly impossible to fill all orders received. They have two mills, one constantly engaged in cutting lumber to proper sizes, while at the other the planing, nailing, etc., is carried on. These mills are run day and night, with an employe wherever one can be placed, and the payroll amounts to \$700 per week. The orders for boxes come from fruit merchants of this city, and from growers and shippers of all the surrounding counties. At the Capitol box-factory the reporter found the same rush and bustle. It seemed as if rough lumber were going in at one end of the mill and coming out transformed into boxes at the other. "We have all the work we can attend to," said foreman Crone, "and have advertised for additional help, that we may put on a night force. Why, there is one order, received two months ago, for 250,000 raisin-boxes, and we haven't been able to touch it. We have used 220,000 feet of lumber every month this season, and will far surpass that amount the present month."

WANTS HOP-PICKERS.—A. Menke of this county, the most extensive hop-grower in the world, has advertised for 400 white persons to pick hops. He does not bar out any nationality except Chinese. Arrangements have been made to open a boarding-house on the ranch, at which board may be had at \$3.50 or \$4 per week. Mr. Menke especially asks that families come out and engage in the work, which is light; children can engage in it as well as older

persons, and it would be something like a camping-out picnic. The weather will admit of comfortable living in tents and a family could make a nice little stake during the four or five weeks of hop-picking. The price offered—90 cents per hundred pounds—is all that can be afforded in the present condition of the market.

THE WHEAT CARRIED.—*Record-Union*: An idea of the amount of wheat that is being brought down from the upper Sacramento and Feather rivers may be gained from the fact that during the month of July 38 barge-loads came to the city, and up to yesterday noon, 26 had arrived so far this month. Two of these barges will carry 1000 tons each; others 800 or 900 tons, and some are smaller. Those from the Feather river, of which, however, there have been only one or two per week, will carry 500 tons or more. Averaging all the barges at 700 tons each, the total grain brought down would amount to 44,800 tons.

A WEE JERSEY.—*Record-Union*, Aug. 22: W. W. Connor, at K and 23d streets, owns a diminutive Jersey calf which is believed to be the smallest for its age known. Hundreds of people have called at Mr. Connor's premises to see it. It is now over three weeks old, has always been in excellent health, and is as frisky as any. It was measured last Saturday and found to be but 17½ inches in height, and two feet from the tip of its nose to the end of its back.

San Diego.

OLIVE OIL.—National City *Record*, Aug. 18: Frank A. Kimball shipped from his works this week quite a large quantity of bottled olive oil. Mr. Kimball and Elwood Cooper find the demand for pure olive oil so great that both manufactories cannot begin to keep up the supply.

POTATOES.—We have frequently been asked by new-comers: Will potatoes grow here? Everybody who has planted potatoes can testify that they will. The Italian ranchman Denario, on the Otay, has made a bushel of money growing potatoes. The other day a sample of what the Tia Juana will do was left at this office by R. C. Clark, and such potatoes, one of them would make a meal for the heaviest representative of the old sod that ever drove a spike on a railroad.

San Luis Obispo.

CRESTON CROPS.—Cor. *Tribune*: The big steamer-thresher of Moody & Co. is in the valley devouring the stacks of headed grain, and the way the crop is turning out makes the average rancher very happy. Not only are they getting an extra quality of grain, but the quantity is above all their calculations, and a good many extra sacks will have to be obtained. There has been a large quantity of hay baled in this section and there is a good demand. Hay is selling readily for \$12 per ton, with a fair prospect of an advance. Pasturage is good and abundant. Heper, Jackson & Co. have brought their large band of sheep from their ranch to this place to pasture. The band is said to number about 6000 head.

FROM THE HUASNA COUNTRY.—E. W. Black informs the *Tribune* that the Huasna is rejoicing in splendid yields of all kinds of grain. Trussell & Brown, from 300 acres, have harvested 5000 sacks of barley, and the Steele Bros., who ordered but 5000 sacks from San Francisco, found out, when it came to thrashing, that they were 3000 short. Eight thousand sacks of wheat from 400 acres is considered exceptional.

Sonoma.

HANSELL RASPBERRIES.—*Petaluma Courier*: Dorr Hakes has a 5½-acre raspberry patch near Valley Ford, from which he has picked and marketed 200 chests. The average price received was \$6 per chest, or \$1200 for the entire crop, equal to about \$245 per acre. The crop was picked by girls who live in the neighborhood, from 12 to 14 of them being constantly employed. They were paid according to the quantity picked. None of them, we are informed, make less than a dollar a day, and some expert pickers considerably more. His vines are of the Hansell variety and the fruit is large, of a deep-red color and fine flavor. They bear enormously and the crop lasts for several weeks.

PROLIFIC PLUMS.—*Record-Union*, Aug. 22: A cluster of plums grown upon I. N. Curtis' farm, one mile from Healdsburg, is quite a curiosity. The cluster consists of a limb from a Hungarian plum tree, the branch being about 20 inches long and the fruit grown thick in a solid mass about six inches in diameter, the entire length. The branch is almost as heavy as if it were one solid plum six inches in diameter and a foot and a half long.

Tulare.

VISALIA JOTTINGS.—*Times*, Aug. 18: Samuel Hall has purchased three head of Polled Angus cattle, with the idea of improving the breed of stock on his mountain ranch. ... L. Samuels of the Paradise store had on exhibition, Saturday, a muskmelon that weighed 46 pounds. ... Among the deliveries at the cannery this week there was box after box of peaches weighing from 12 to 16 ounces each. In 100 pounds of the fruit weighed there were only 130 peaches, and it was not a selected lot, either. ... The Visalia hog market is lively, two to five carloads being shipped to S. F. daily. The ruling price this week has been about four cents, with a slight advance for choice lots.

GETTING CATTLE FOR WORTHLESS CHECKS.—Tulare *Register*, Aug. 19: C. W. Welby has

been in this neighborhood buying cattle of the ranchers and paying in checks drawn on Crocker, Woolworth & Co., bankers, S. F. Yesterday he purchased stock from H. McNulty to the amount of \$1011, and from John Thompson, S. S. Slinkard and Cyrus Guthrie to the amount of \$800, for which he gave checks as usual, telling the gentlemen to telegraph to S. F., and satisfy themselves the money was there. This they did, and while awaiting an answer Welby loaded the stock into four cars and started with them for the bay. Late in the afternoon an answer was received from the S. F. bank, saying that Welby had been a depositor with them, but had exhausted his account. The amount involved was so large that the owners of the stock, while convinced that Welby did not intend to rob them, but was the victim of a mistake somewhere, did not feel it safe to take the risk of his paying them when he reached home and learned the condition of affairs, so they swore out a warrant charging him with obtaining the stock under false pretenses, and signing over their checks to Officer Tompkins, started him after Welby, who was stopped with the stock at Lathrop, by telegraph. Mr. Tompkins will accompany Welby to S. F., providing the case is as supposed, and bring back the money, otherwise he will bring back the man and stock.

Yolo.

MULE MARKET.—Woodland *Democrat*, Aug. 18: Wednesday morning two lots of mules were led by this office. The first contained two large spans, as noble-looking animals as one would wish to see. One span were dark iron-grays, and seemed proud of their lot in this world of trouble. They were bought of E. R. Lowe, and the price paid for the two spans was \$1000. The second lot of five was bought of Pace & Cramer. They were large, of dark colors and a credit to the parties who raised them, as well as to Yolo county. The price paid for the lot was \$1200. In a few minutes along came a span of bright bays, whose heads were so high that one had to look up to see the tops of their ears. They were four and five years of age, and a nobler span one seldom sees in any country. They had not been sold and were the property of Charles Woods.

CAPAY FRUIT.—J. Henry, who resides seven miles up Capay valley, brought this office samples of apples and peaches which speak well for that locality. The apples were extraordinarily large and well flavored, and were of the Duchess of Oldenburg variety. The peaches were of the China cling variety and were also of good size and well flavored.

NEVADA.

HAY.—Reno *Stockman*, Aug. 17: E. W. Crutcher, who has the largest and best hay ranch in Paradise valley, states that he will have an average crop of hay and grain this season. He has already about 1000 tons of hay in the stack. ... Native grasses are not doing as well as expected this year. There will consequently be a shortage in the native hay crop. ... Six tons of alfalfa to the acre, two cuttings, have been harvested by several Washoe valley farmers this season. Four tons will be about the average yield in this valley. ... Stockmen are purchasing alfalfa in large quantities for fall feeding. The ruling price is said to be \$6.25 a ton in the stack.

WILD CLOVER is said to be quite plenty in the river bottoms, and unless some action is taken by our farmers to eradicate it, it is liable to cause them considerable trouble. It grows to a height of from 11 to 12 feet, and is unfit for feed, the fibers and stalks hardening to the consistency of wood when cut. One stalk in a field will ruin it for the growing of grain or alfalfa, as it is a great seeder and rapid producer, and will, in a short time, kill off less hardy plants. Farmers should be on the lookout for it.

OREGON.

HOPS.—Telegram from Portland, Aug. 23: The first bale of Oregon hops for this season was shipped East to-day. It is from Lane county. It is impossible yet to give the figures on the output of this State. The yield is not quite so heavy as last year, but the acreage is larger, and it is thought that last year's figures, 12,000 bales, will be reached.

Admission Day Proclamation.

WHEREAS, It has become the custom to celebrate, each year, the anniversary of the admission of the State of California into the Union; and

WHEREAS, A large number of citizens have requested, in order that all persons may participate in the ceremonies and festivities common to such occasions, that such day be set aside as a legal holiday:

Now, therefore, I, Washington Bartlett, Governor of the State of California, by virtue of the authority in me invested by the Constitution and laws of this State, do hereby appoint and declare Friday, the ninth day of September, A. D. 1887, a legal holiday.

In witness whereof, I have hereunto set my hand and caused the seal of the State to be hereunto affixed this the 15th day of August, A. D. 1887.

WASHINGTON BARTLETT, Governor.

Attest: W. C. HENDRICKS,
Secretary of State.



A Farmer's Wife.

The farmer came in from the field one day,
His languid step and his weary way,
His banded brow and his sinewy hand,
All showing his work for the good of the land;
For he sows,
And he hoes,
And he mows,
All for the good of the land.

By the kitchen fire stood his patient wife,
Light of his home and joy of his life,
With face all aglow and busv hand,
Preparing the meal for her husband's band;
For she must boil,
And she must broil,
And she must toil,
All for the sake of the home.

Sun shines bright when the farmer goes out,
Birds sing sweet songs, lambs frisk about,
The brook babbles softly in the glen,
While he bravely works for the good of the men;
For he sows,
And he hoes,
And he mows,
All for the good of the land.

How briskly the wife steps about within—
The dishes to wash and the milk to skim,
The fire goes out and flies buzz about—
For dear ones at home her heart is kept stout;
There are pies to make,
There is bread to bake
And steps to take,
All for the sake of the home.

Then the day is o'er and the evening has come,
The creatures are fed and the milking is done;
He takes his rest 'neath the old shade tree,
From the toil of the land his thoughts are free;
Though he sows,
And he hoes,
And he mows,
He rests from the work of the land.

But the faithful wife, from sun to sun,
Takes the burden up that's never done;
There is no rest, there is no pay,
For the household good she must work away;
For to mend the frock,
And to knit the sock,
And the cradle to rock,
All for the good of the home.

When the autumn is here with chilling blasts,
The farmer gathers his crops at last;
His barns are full, his fields are bare,
For the good of the land he ne'er hath care;
While it blows
And it snows,
Till the winter goes,
He rests from the work of the land.

But the willing wife, till life's closing day,
Is the children's and the husband's stay;
From day to day she has done her best,
Until death alone can give her rest;
For after the test
Comes the rest,
With the blest,
In the farmer's heavenly home.

Uncle Nahum's Wedding.

Uncle Nahum Nixon was reading the paper in his back parlor. Nobody would think, to look at the simple surroundings of the unpretentious apartment, that Mr. Nahum Nixon was one of the wealthiest men in town. The carpet, it is true, was Axminster, but it had seen 22 good years of service, and was down to the very warp; the faded red curtains were of moreen, instead of silk damask; the old clock on the mantel was no Parisian affair of alabaster and gilt, but a substantial Connecticut timepiece that struck with a whirr, like a partridge springing out of her nest; the chairs of old-fashioned mahogany and haircloth stood upright against the wall; the portraits of Gen. Washington on horseback and the surrender of Cornwallis, ornamented the gay papered walls in frames of somber gilt, and the one elegance of the apartment was a preposterous bouquet of wax flowers under a cracked-glass shade.

But Uncle Nahum had remembered that furniture ever since he was a child, and he wouldn't have exchanged it for the fittings of a Parisian boudoir, or the choicest specimens of the modern Eastlake pattern. He was a rich man, that was quite enough for him.

"If you please, Mr. Nixon," said the trim maid-servant, "Mr. Marmaduke Bourne wants to see you, if you please, sir, if you are quite at leisure."

"Mr. Marmaduke Bourne, eh?" The old gentleman took off his spectacles and laid them upon the folded newspaper. "Ask him to come in, Polly."

And Mr. Marmaduke Bourne came in, a tall, fresh colored young fellow, with sparkling gray eyes and a straight Greek nose, that seemed as if it had been borrowed from some ancient statue of Apollo.

"Well, sir?" said Mr. Nixon.

"Well, sir?" counter-interrogated Mr. Bourne, "did you get my letter?"

"I got your letter," said Uncle Nahum. "So you want to marry my niece, Faith?"

"Yes, sir," valiantly acknowledged Mr. Marmaduke Bourne.

"Ah!" nodded Uncle Nahum. "But perhaps you don't understand all the facts of the case."

"The facts, sir?"

"I want my niece to marry Col. Ashland's son," slowly enunciated Uncle Nahum.

"But, sir, she don't love him."

"Pshaw!" snarled Uncle Nahum. "And if she don't marry him she will be a beggar; I will give her no money of mine. Now you understand matters. Marry her or not, as you please."

He took up the newspaper once more—a tacit intimation that the interview was at an end.

"Sir—" began Marmaduke.

"That will do," said Mr. Nixon.

"I only wish to—"

"That will do," thundered Mr. Nixon, and so Marmaduke went away.

Little Faith Nixon came downstairs presently, a blue-eyed blossom of a girl, with yellow hair growing low down on her forehead, and a very little mouth, exactly the shape to suggest the idea of kissing.

Uncle Nahum looked keenly up at her as she fluttered about the room, straightening a table-cloth there or patting down a fold here.

"Yes," said he, with a curious twitch of the muscles around his eyes, "he has been here."

"I—I did not ask any question, Uncle Nahum."

"No, but your eyes did," chuckled the old man. "He wants to marry you—the im-provident young donkey."

Faith came to her uncle's chair and laid her hand on his shoulder.

"That is not the worst of it, Uncle Nahum—I want to marry him."

"Humph!" snarled Mr. Nixon, in high contempt. "And what do you expect to live on, I should like to know?"

"We can both work," said Faith bravely.

"You're more likely to starve," said Mr. Nixon. "Mind, don't count on help from me. If you will get married, you do it at your own risk."

"Then you consent, Uncle Nahum?"

"No!" roared the old bachelor. "Nothing of the sort."

"But, Uncle Nahum, I should be wretched without Duke!" softly pleaded Faith.

"Fiddlesticks!" said the old man.

"And I'm sure he couldn't live without me."

"Trash!" grunted Mr. Nixon.

"And if you please, uncle," added Faith, "perhaps I'd better go to my friend Violet Smith's to make up my wedding things, since you disapprove so decidedly of my plans. She lives in New York, you know, and it will be convenient for shopping, and—"

"And for all other tomfooleries in general," rudely interrupted the old gentleman. "Yes, go to your Violet Smith's, but don't expect to come back here."

"No, uncle," said Faith, meekly. "But you'll let me thank you for all your kindness, and—"

"No, I won't!" said Uncle Nahum, so shortly that poor Faith fled upstairs in dismay, and had a quiet little cry, notwithstanding that she was so very, very happy.

For Uncle Nahum, brusque and crabbed though he was, was all the father she had ever known. But she packed her trunk and went to Violet Smith's in New York, which was all the pleasanter, in that Marmaduke Bourne had also betaken himself to this modern Gotham and gone to work studying law as if he meant to take Coke and Blackstone by storm. And Miss Violet Smith, who was a sentimental young lady, sympathized intensely, and the young couple were as unreasonably happy as many another couple has been before, and will again.

But one day Duke Bourne came in with a face full of tidings.

"Faith," said he, "have you heard the news?"

"What news?" asked Faith.

"Your uncle will get the start of us after all."

"What do you mean, Duke?"

"Why, he's going to be married."

"Uncle Nahum?" cried Faith, incredulously.

"Yes, Uncle. That accounts for his being so willing to get rid of us, eh, little one?"

"And who is the bride?" questioned Faith.

"Why, that's the mooted point yet. Nobody seems to know. Some say one and some say another; but the general impression seems to be that it is the rich widow who owns the brown-stone block on the corner."

"I'm sure I hope he will be happy," said Faith, with tremulous lips and eyes suffused with tears. "But—but I think he might have said something to us about it."

"People are not generally in a hurry to proclaim the fact that they are about to make fools of themselves," said Duke Bourne, bitterly.

"Why," cried Faith, laughing through her tears, "that is precisely what he said of us."

But the next day a letter from Uncle Nahum himself settled the matter. He wrote:

"There is to be a wedding at my house on the 17th, and I want you and Marmaduke to be there without fail."

"A wedding! At his house!" cried Faith.

"I supposed weddings were celebrated at the bride's residence."

"So they are, dear," said Miss Smith; "but your uncle was always so eccentric."

"What shall we do?" asked Faith.

"Why, go, of course," said Marmaduke Bourne, "to show that we bear no ill-will, if for no other reason."

The 17th of March arrived, a cold, blustering night, and the old red-brick house was all in a glimmer of light as the young betrothed pair drew up to the door. Uncle Nahum met them on the threshold, in his old-fashioned, swallow-tailed coat, with a huge white camellia in his buttonhole and a pair of surprisingly white kid gloves.

"Have you brought your white frock?" was his first question to his niece.

"No, uncle, I—"

"That won't do," said Uncle Nahum. "No one must come to my wedding without a marriage garment. It's lucky I provided one for you. Come upstairs now and change your dress."

"But uncle, a white silk!" cried Faith, looking in dismay at the glistening dress laid out for her use.

"What then? Isn't white silk the thing for a wedding? Put it on quick, and I'll send some one to bring you down in five minutes."

And so, with a doubting heart, Faith Nixon robed herself in the white dress, with its trimmings of vapory blonde and long trail.

"Where's your veil?" said Uncle Nahum, when he came himself, a few minutes later, to the door.

"Uncle, I can't wear a veil," pleaded Faith.

"But you must!" said Uncle Nahum; "nobody comes to my wedding without a veil," and he placed the wreath lightly on her head.

"But, Uncle Nahum, they will take me for the bride."

"Let 'em," said the old gentleman. "Take my arm. Now come downstairs, and I'll show you the bride. Here she is."

Lifting her bewildered eyes, Faith Nixon beheld her own figure reflected in a full-length mirror at the stairway.

"Here's the bride," chuckled Uncle Nahum, leading her up to Bourne, "and here's the groom," touching Bourne's shoulder. "And here's the parson, all ready and waiting. Now, reverend sir," to the clergyman, "marry 'em as fast as ever you can." And before either of the astonished young couple could remonstrate they were made man and wife.

"Duke," said the bride as soon as the ceremony was over, "did you know of this?"

"No, I didn't," said Mr. Bourne, with his arm very tight around his little wife's waist. "But I must say I approve very highly of the whole proceeding."

Uncle Nahum stood by, rubbing his hands, with his face wreathed in one prodigious smile.

"So you supposed it was I who was to be married, eh?" said he. "Not a bit of it, not a bit of it. I am too old a bird to be caught with such chaff as that. No, no, little Faith. Did you think I was going to turn my wee birdie out of her nest, after all the years she has been cherished there? No, no, I only wanted to assure myself that your fancy was a real fancy, and this young rascal here," smiting Bourne on the shoulder once more, "loved you for yourself alone, and not for the money which he thought the old man was going to leave you. And you're to live here, both of you, and we will be happy ever after. Strike up your harps and fiddles. Let's have a dance, let's all be merry together."

Uncle Nahum Nixon himself led off the bridal quadrille, dancing in the good old style of 50 years ago.

"I can't have a wedding every day," said Uncle Nahum, breathlessly, as he cut a last pigeon-wing, "and I mean to make the most of it."

A FEMALE HORSE TRAINER.—The Adin *Argus* publishes an article concerning Mrs. Pete Shafer, who formerly resided at Etna and whose wonderful equestrian feats made her famous throughout the county. She will be especially well remembered by Yreka, having conducted a horse-training school here. One of her achievements was to take the wild, unbroken animal that could be obtained, and in four hours drive it through the streets with a tin can tied to its tail. The *Argus* article is as follows: It is seldom that a woman is found who is as fearless and as good a "broncho" rider as any of the vaqueros, but Modoc has a resident, living near Happy Camp, who, in riding, can equal any vaquero or horse-trainer to be found. She is married and lives on a ranch with her husband, a Mr. Shafer. As their home is distant from any settlement, she has acquired the habit of riding astride. According to her story, she has been offered a large sum to ride in the San Francisco park, but says: "You don't catch me going down there to make a fool of myself." She is surely an exceptional woman, and is entertaining to persons who may stop while passing over the public road there. She has no scruples to plowing with a four-horse team while the men lie under the shade of a tree and enjoy an afternoon smoke. If out of meat she will take a gun, mount her horse and soon return with a venison. Mrs. Shafer at one time followed the millinery and dress-making business in Oregon before coming from that State to Modoc.—Yreka Union.

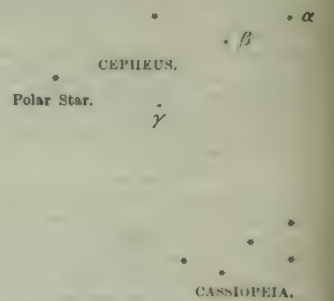
In filling out a death certificate, a Buffalo physician attested that the contributing cause of death was a croup cure made and sold by another doctor of the same city.

THAT is false liberty which brutalizes humanity.

A B C of Astronomy—No. 3.

[Written for the RURAL PRESS by ASTRON.]

The next circumpolar constellation which merits our attention is Cepheus. The following diagram will help you to locate it:



You will observe that the constellation consists principally of three stars, forming a segment of a large circle between Cassiopeia and the pole star. B in Cepheus is a double star of the third and eighth magnitudes. [The fixed stars are classified, according to their brightness, as stars of the first magnitude, the second magnitude, and so on. This classification is somewhat vague and arbitrary. The smallest stars which the naked eye of average power can distinguish are usually ranked as of the fifth magnitude—all below that are telescopic.—EDS. PRESS.]

The northern hemisphere is more favored than the southern with stars of the first magnitude; the former having 14, the latter only seven. The northern are named as follows:

1. Sirius in the Greater Dog (Canis Major).
2. Arcturus in Boötes.
3. Vega in Lyra.
4. Capella in Auriga.
5. Rigel in Orion.
6. Aldebaran in the Bull.
7. Betelgeuse in Orion.
8. Antares in the Scorpion.
9. Procyon in the Lesser Dog (Canis Minor).
10. Altair in the Eagle.
11. Spica in the Virgin.
12. Regulus in the Lion.
13. Fomalhaut in the Southern Fish.
14. Castor in the Twins (Gemini).

All the stars in the northern hemisphere will be visible at reasonable hours of the evening as the seasons advance, and will be very interesting objects for study.

We have been enabled to go on thus far in our investigation of the heavenly bodies without any instrumental assistance to the eye, but to make any real progress, we should have a telescope to assist us. This is absolutely necessary in observations of the moon, the planets and the double and variable stars. Where the expense of buying a good astronomical instrument is beyond the means of the individual reader of these lectures, I should recommend the formation of an astronomical club among the neighbors, if possible, and by their joint contributions, the purchase of a good "achromatic" of not less than 2½ inches aperture. With this instrument you would be able to do good astronomical work.

Parties who are not so fortunate as to get a telescope, however, will find it interesting to read what I may write on subjects requiring its use.

I will now go more fully into what astronomers technically call alignment, to enable us to find the position of the stars. The first to engage our attention will be Arcturus, a star of the first magnitude in the constellation of Boötes (No. 2 on our list, passing Sirius for the present). First find the Great Bear (see RURAL PRESS of June 25, 1887), and from the last star in its tail continue on a curve line for nearly twice the length of the tail, and you will come to a very brilliant star. This is Arcturus.

The second star is Vega in the constellation Lyra (No. 3 on the list). A line drawn through Phegda and Megrez in the Great Bear goes very near to Vega. This is a splendid star, and a very conspicuous object among the heavenly bodies. When once found it will ever afterward be easily recognized. At 9 o'clock in the evening, in the middle of August, it is almost directly overhead. Face the pole star at that hour and look straight upward for it—it outshines all its neighbors.

If you have a telescope sufficiently powerful you will find one of the small stars close by Vega to be what is called a double double; that is, with the low power you resolve the star into two, and each of these can, with a higher power, be resolved into doubles.

[Draco, the last of the groups about the pole, occupies the space between the Two Bears, Cepheus and Vega. It is too rambling and irregular for us to present it in diagram, but it can be traced on stellar maps or the celestial globe, some time when you have access to such conveniences.—EDS. PRESS.]

I recommend the student, by close observation, to become thoroughly conversant with the circumpolar constellations, so as to recognize them without difficulty. This will be of great help in his future studies.

No science manifests at once the littleness and greatness of man as does astronomy. I do not think I shall be far wrong in considering it the most ancient of the sciences. At its very outset it was wrenched from its true purpose to minister to a great superstition of early ages—the desire to predict future events, especially the fortunes of men. Thus commenced the

pseudo-science of astrology. For a long period astronomy was made the mere handmaid of astrology, and although the latter has now comparatively faded out, there are many, even at the present time, who believe our destiny is connected with the starry and planetary worlds. It prevailed among the nations of the East, Egyptians, Chaldeans, Hindus and Chinese, at the very dawn of history. The Jews became much addicted to it after their captivity. It spread into the west and to Rome about the beginning of the Christian era. Astrologers played an important part at Rome, where they were called Chaldeans and mathematicians, and though often banished by the Senate and Emperors, under pain of death, and otherwise persecuted, they continued to hold their ground. The Roman poet Manilius, author of an astronomical poem still extant, was addicted to astrology. And even Ptolemy, the astronomer, did not escape the infection which in his time had become well-nigh universal. It accords well with the predestinarian doctrines of Mohammedanism, and was accordingly cultivated with great ardor by the Arabs from the seventh to the thirteenth centuries. Some of the early Christian fathers argued against the doctrine; others received them in a modified form. In its public capacity the Catholic church several times condemned the system, but many zealous Catholics, even churchmen, have cultivated it. Cardinal d'Ailly, the eagle of the doctors of France (died 1420), is said to have calculated the horoscope of Jesus Christ, and maintained that the deluge may have been predicted by astrology. For centuries the most learned men continued devoted to this delusion. Regiomontanus, the famous mathematician, Cardan, even Tycho Brahe and Kepler, could not shake off the fascination. Kepler saw the weakness of astrology as a science, but could not bring himself to deny a certain connection between the position of the planets and the qualities of those born under them. The Copernican system gave the death-blow to astrology.

Woman's Love.

Oh, say not woman's love is bought
With vain and empty treasure.
Oh, say not woman's heart is caught
By every idle pleasure.
When first her gentle bosom knows
Love's flame, it wanders never;
Deep in her heart the passion glows;
She loves, and loves forever.
Oh, say not woman's false as fair,
That like the bee she ranges,
Still seeking flowers more sweet and rare,
As fickle fancy changes.
Oh, no! the love that first can warm
Will leave her bosom never;
No second passion e'er can charm,
She loves, and loves forever.

THE KNACK OF READING FAST ought to be more encouraged in schools. Aloud, for the benefit of others, the child should be taught to read as slowly as the intelligence of the particular audience in view may seem to require; but silently and for his own benefit, he should learn to read like lightning. I would set a class of reading a page or passage "to themselves," and whoever could prove, by giving an accurate account of the matter some time afterward, that he had read thoroughly, and still had come out ahead, should be (as the boys say) "the best fellow." Again, I notice that some people have to read any item or article in a paper "clear through" to see whether it is anything they want to read; and only to find, generally, that it isn't. One should learn to find out by the ear-marks in the twinkling of an eye. In doubtful cases this can commonly be tested by the end better than by the beginning. Of course there are many cases not in the least doubtful, where the heading, or the first sentence, assures you that this is one of those things that seem intensely interesting to newspaper writers, but are of no earthly interest to any other human intelligence.—*Atlantic*.

HINTS FOR THE SLEEPLESS.—Edward Everett Hale says: "Never go to bed in danger of being hungry. People are kept awake by hunger quite as much as by a bad conscience. Remembering that sleep is the essential force which starts the whole system, decline tea or coffee within the last six hours of going to bed. Avoid all mathematics or intricate study of any kind in the last six hours. This is the stuff dreams are made of, and hot heads and the nuisance of waking hours. Keep your conscience clear. Remember that because the work of life is infinite you cannot do the whole of it in any limited period of time, and therefore you may just as well leave off in one place as another."

A ONE LEGGED beggar in St. Louis became so urgent in his demands for aid that he was arrested. When the police searched him they found 15 tobacco bags in his pockets and sewed to his ragged clothes, and each contained some money. The total amount was over \$70.

EVERY day the value of newspaper advertising becomes more apparent. A few days ago a lost canary flew into the composing-room of the *Republican* at Darlington, Wis., while the compositor was setting up an advertisement for it.

"A BOY assassin hanged," read Mrs. Bascom from the newspaper. "Well," she remarked, "a assassin' boy is a great trial, but I don't think he ought to be hanged for it."

YOUNG FOLKS' COLUMN.

"Ellen Newson's Dilemma."

(Written for the RURAL PRESS by "THORN.")

Ellen Newson, a girl of 16 years, was leaning her brown head up against the window pane in her room. You could easily see that she was trying her way out of an obstacle, which I am afraid she could have easily helped.

"Now here is mother's birthday in a few days, and not a cent have I for a present," said she, taking out her purse. "If I only had a little more lace I might make an apron out of this satin, but not a cent to get lace or anything else," cried poor Ellen, tossing herself on her bed. "I suppose I will have to ask papa for a few dollars, and then he'll ask me to show him my account-book, and then not a cent will I get."

Mr. Newson was a strict business man, and whenever his children wanted more money than their week's allowance, they had to show their account-books.

"Oh! that lunch-bell, and now I had better stop my crying," said Ellen, jumping from the bed.

That afternoon Harold and Ruby, Ellen's younger sister and brother, asked her to go with them to buy their presents for mother.

"I believe I will buy that book of engravings that mother was looking at the other day at Mr. Buford's art store," said Harold.

"But it was \$9, Harold, and you have not enough money; so I will put my money with yours and then we can get it," said Ruby.

"Yes, Harold, you had better do as Ruby says; it will be a beautiful present," said their older sister.

So the beautiful book of engravings was bought, and put away for the time to come.

"I will try, anyway," Ellen Newson was once again in her room. Her face had a smile on now—not a frown as in the morning.

She had been reading her favorite story-paper, and as she glanced over the advertising page, her eyes rested on a paragraph which made her face beam with joy. The editors of the paper had offered \$50 for the best story written by girls. "Why not write about papa's adventure while crossing through Mexico?" Ellen said thoughtfully. "I'll try it, anyway. Fifty dollars is worth trying for, and then my other manuscript has been printed."

Ellen Newson wrote her story and waited every day for the postman, to see what news he might bring her. The only consolation she had were the three words which she constantly repeated: "It might be."

Saturday came, the day before mother's birthday. Ellen's cheeks glowed with excitement. Surely she would be notified to-day, for the advertisement said so.

At last the postman came.

"My darling children!" said Mrs. Newson, as her children kissed and hugged their mother Sunday morning. One package after another was opened. Ellen seemed ready to cry with joy. At last!

Mrs. Newson opened an envelope which contained a check for \$50 and a very kind note, telling Ellen how much of a success her story would be, written by Mr. Norton, the editor of the paper.

"My dear, dear child!" cried Mrs. Newson, caressing her daughter.

So Ellen was rewarded. She tried.
Island Home Farm.

A Story for Little Ones.

(Written for the RURAL PRESS by D. A.)

"Tell us a story, mamma," said little May.

"Yes," chimed in Dolly, "tell us a story."

"Well," said mamma, after thinking a moment, "when your Uncle Dick and I were children, we lived in Ohio, and I'll tell you what happened in the spring of the year, when there was high water. It happened that our grandfather's cat was over at our house, and one night, to our delight, she had six kittens. We thought, of course, grandfather would be delighted, so we thought we would go over and show them to him. So we divided them three apiece between us, and we went to show them to grandpa. He was sitting out on the porch reading when we came, and when he saw the kittens he said: 'Ugh! the nasty things—throw them in there,' meaning the pond. Well, we thought as it was grandfather we couldn't disobey, so we threw them in. And then we ran away, because we didn't like to see them drown. After awhile we came back to see if they were drowned. But no, there they were, swimming on the water. At that we began to cry and take off our shoes and stockings; and we waded in and caught them. We didn't dare to take them home, because we had such a lot of cats. Well, we knew where there was a hollow stump in the field, so we concluded that we'd keep them in that.

"I took my apron off and put it in the stump, and then we put the kittens in. Those kittens lived three days, and this is the way we kept them that long:

"One day a peddler came along and grandfather bought us each a tin dipper. We would go out in the fields and milk the cows till we had our tin dippers full, and then we'd hold

the kittens' mouths open and pour the milk down their throats.

"As I said, they only lived three days, when they died. I sacrificed every one of my doll's best dresses, white ones and all, to lay those kittens out, and I took a quilt that had taken me all winter to make to wrap them in."

"Did they ever ask you what became of your apron and doll's clothes?" asked May.

"Yes," said mamma, "but I didn't tell."
Lompoc, Cal.

A Scholar in Earnest.

EDITORS PRESS:—As your valuable paper devotes some space to the young people, I write you a few lines.

Of the 29 graduates from the Sacramento High School July 28th, there was one especially who well earned his diploma. Arthur D. Murphy of Brighton went through the three years' course of study, traveling about 7000 miles with his pony and open cart. His daily drive was 13 miles, through winter storms and hot summer sunshine, and he was absent only four days in three years until last July, when he was down with a fever for three weeks. He was, however, able to be present at the closing exercises and received his diploma. During the three years he was only one night away from his home. On Saturdays and during vacations he worked on the farm assisting his father. I have seen him almost daily going to and from school, and have never seen the baneful cigarette or cigar in his mouth. His parents may well feel proud of him.

He rode 7000 miles for his diploma, and he got it. Who can beat his record?

OBSERVER.

Brighton, Sacramento Co., Aug. 17, 1887.

GOOD HEALTH.

Dangers to Health.

When will danger to health from sophistication stop? The example of the baker at Philadelphia, who poisoned his two children and his customers last week by covering his buns with chromate of lead instead of saffron, will not deter others from thus tingeing their cakes. With diarrhoea germs in our water, plaster of Paris in our bread, tyrotoxin in our milk, pneumonia in our beef, trichina in our pork, cotton oil and lard in our butter, cholera in our melons, burned peas in our coffee, Prussian blue in our tea, it becomes a puzzle as to what to live on. But it is almost as perplexing to know what to wear. The flashy aniline dyed undergarments now fashionable are liable to dangerously poison any little scratch or abrasion of the skin; and now comes Mr. Joseph F. Geisler, official chemist to the New York Mercantile Exchange, with an interesting article in the current number of the *American Grocer* on poison found in the sweatband of hats, and suggesting investigation by medical authorities and the Board of Health. He has found the poisonous matter in his own hat, where a formation of sulphide of lead, used for coloration, appeared when the hat was accidentally exposed to an atmosphere containing sulphurated hydrogen. A careful analysis of the sweatband showed it to contain no less than .0566 grammes (.8585 grains) of lead per square inch, or 2.446 grammes (37.548 grains) for the entire sweatband. If you have headache or pimples on your face in the summer-time, perhaps "that's what's the matter."

MEDICAL ETHICS.—The criticisms passed on medical advertising by some members of the profession are, to say the least, exceedingly absurd. Why should not any one possessing special ability pursue a course of this kind so long as he does it in a perfectly honorable way? Why should light be placed under a bushel, or talent be hid in a napkin? Is it not just and right that those who are suffering the pangs of disease should know that there are those who can give them relief? Why should they be in the depths of misery and woe for lack of knowing where to apply? Are not the wants of suffering humanity of vastly more importance than a code of so-called ethics, created in the dark ages and still nursed by doctors who believe that their own success depends upon shrouding the practice of medicine in mystery? There is a democracy of learning and of taste nowadays as well as of politics; hence the time has now come when the old code of medical ethics, in this respect at least, should be abolished, and let the sick, far and near, know where their misery can be lightened, their happiness restored. Those who lack the ability to heal will go to the wall—"the fittest will surely survive."

A TEST FOR MALARIA.—A loving father who, at a summer resort last season, had left behind him four beautiful children, dead of diphtheria, said to me: "That hotel proprietor was as much a murderer as if he had shot my little ones." Yes, dear sir, but you, the guardian, ought to have been armed and equipped against such foes. An hour's intelligent examination of water supply and drainage at a proposed country home would in a large majority of cases prevent the risk of such catastrophe, and might be made before a landlord could object. Take in

the dressing-bag an ounce vial of saturated solution of permanganate of potash, which any druggist will prepare for a few cents, and put half a dozen drops into a tumbler of the drinking-water that is supplied. If it turns brown in an hour, it is, broadly speaking, unfit to drink; if not, it is not especially harmful. If a country hotel sewage system is confined to cess-pools within a hundred feet of the house, and near the water supply, take next train to a point farther on. These matters should force themselves on one's personal attention, quite as much as the undertaker's bills that occasionally follow their neglect.—*American Magazine*.

DOMESTIC ECONOMY.

CREAM PUFFS.—One cup hot water, one-half cup butter, boil together; while boiling stir in one cup sifted flour, remove from fire and stir to a smooth paste; when cool, add three unbeaten eggs, stirring five minutes. Drop in spoonfuls on buttered tins and bake in quick oven 25 minutes. For cream, take one cup milk, one-half cup sugar, one egg, three tablespoonfuls flour; cook thoroughly and flavor. When cream and puffs are cold, cut open puffs with sharp knife and fill with cream.

BROWN THICKENING FOR SOUP.—This is easily prepared, is always ready, and will keep a long time, beside which it gives a far richer flavor than any other way of using flour thickening. Put into a small saucepan half a pound of butter; when hot, stir into it half a pound of very dry flour; stir this over the fire till a pale brown, taking great care it does not burn. One large tablespoonful thickens a quart of soup.

RAISED DOUGHNUTS.—In the morning take one pint of warm milk, one cup of sugar, one-half cup of yeast, a little salt, and set a sponge, making it rather thick. At night, add one cup of sugar, one-half cup of lard and two eggs; knead up and let stand until morning. Then roll out thin, cut round and let stand on the molding-board till light. Fry in hot lard.

DRESSED TONGUE.—Take a corned tongue and boil tender; split it, stick in a few cloves, cut one onion, a little thyme, add some browned flour. Have the tongue covered with water, in which mix the ingredients; add three hard-boiled eggs chopped fine, and send to the table garnished with half-boiled eggs.

SALMON SALAD.—To a can of salmon take eight or ten stalks of celery; cut the celery into small pieces and mix with the salmon, which should also be picked into small bits; sprinkle over a little salt and a very little pepper and pour on some good vinegar. A small onion may be added if desired.

APPLE JELLY.—Use fair, sour apples. Slice them, skins, seeds and all, and simmer with one-half a cup of water, till well cooked and soft. Then strain through a cloth, add a pound of sugar to a pint of juice, boil a few moments, skimming till clear; then pour into glasses, and cover when cold.

SILVER CAKE.—One-half cupful of butter, one cupful of sugar, one-half cupful of sweet milk with whites of four eggs, 1½ cupfuls of flour, one teaspoonful of baking powder. Always beat the eggs separately and thoroughly and always rub sugar and butter to a cream.

COFFEE CAKE.—One cup sugar, one cup melted butter, one cup New Orleans molasses, one cup strong coffee, one egg, one teaspoonful baking powder, one teaspoonful ground cloves, one tablespoonful ground cinnamon, one-half pound each of raisins and currants, four cups sifted flour.

MOLASSES COOKIES.—One cup butter, two cups molasses, one teaspoonful cloves, one tablespoonful ginger, sufficient flour to make a stiff batter, not dough. Mold with the hands into small cakes, and bake in a steady rather than quick oven, as they are apt to burn.

COOKIES.—Two eggs, 1½ teacupfuls of sugar, one cupful of butter, one-half cupful sweet milk, two teaspoonfuls cream of tartar, one teaspoonful of soda, nutmeg to taste. Mix in enough flour to roll, cut into round cakes and bake in a quick oven.

WASHINGTON CAKE.—One pound of brown sugar, one pound of flour, one-half pound of butter, two pounds of stoned raisins, four eggs, two teaspoonfuls soda, dissolved in half-cup of hot water, one-half pint of molasses, two grated nutmegs.

BROWN BREAD.—Two-thirds of a cup of molasses, two cups sour milk, one cup sweet milk, two teaspoonfuls soda, one of salt, one cup flour, four cups cornmeal. Steam three hours and brown a few minutes in the oven.

DELICATE PIE.—Whites two eggs, four tablespoonfuls cream, one large spoonful flour, one cup white sugar, one cup cold water; flavor with lemon. Line a pie-plate with pastry, pour in the mixture and bake at once.

LEMON MARMALADE.—Take lemons, peel and extract the seed. Boil the lemons until soft, add the juice and pulp with a pound of sugar to a pound of lemon. Boil to thicken.

GRAHAM PUDDING.—Two cups of graham flour, one cup of molasses, one cup sweet milk, one cup of chopped raisins, two teaspoonfuls soda. Steam three hours.

SPONGE CAKE.—One cup of sugar and three eggs, beat well, add one cup of flour and one teaspoonful of baking powder; mix well and bake.



A. T. DEWEY. W. B. EWER.

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Take the Elevator, No. 12 Front St.

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SAN FRANCISCO:

Saturday, Aug. 27, 1887.

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See Advertising Columns.

The Week.

The voice of the boom is still heard in the land. Its sound is each day penetrating to more distant parts. There are features of the movement which one is quite apt to call unhealthy and fraught with evil rather than good to the interests of the State. So far as one is led to investment with no thought but to sell again, and with no reckoning of the intrinsic merit of the area secured, either for situation, environment or productive capacity, the action partakes more of the nature of gambling, and as such is not lastingly beneficial either to the individual or the community. But it is hard to tell where legitimate speculation ends and gambling begins. So far as a general increase in values of California real estate is concerned we think it is warranted by the percentage which well managed productive areas are now yielding their owners. From this general increase naturally will come special advances for eligible sites in or near towns, either for business or for homes, for it is plain that there is to be an incoming throng for settlement here far greater than we have yet known. This multitude of home-seekers will be destined in part to occupy and develop bare land in localities in which improvement has so far proved profitable. Hence we can see a very good reason for advance in the values both of country and town property and we are disposed to regard brisk move-

ment, at advances which do not seem excessive, as a healthy movement. We believe such increment is likely to endure and to produce permanent results. In many localities in this State values have been stationary for a decade, while in others there has been most wonderful advance. It is to be expected that ere long something like an equilibrium will be restored, and we are not disposed to croak at the boom. There will be cases in which people will get wild and illustrate anew the proverb about fools and their money; but such a parting would come in one way if not in another. Between a boom and a "deal" in stocks, the former is far the lesser evil.

Unparalleled Activity in Fruit.

The boom in real estate finds a counterpart in the activity in the fruit industry. Eastern shipments have proceeded with first three full trains a week, then five trains, with the regular passenger also overburdened with fruit cars. This week the movement has been a full fruit train every day. Though this outlet conveys a large amount of fruit, it is evident that it is hardly missed from the grand supplies of some fruits. We are beginning to feel the full effects of the great plantings of three and four years ago, and it seems that two trains a day are quite as necessary as was one train a day a short time ago. Pears, peaches and grapes are the main staples of shipment at present. Plums are the popular fruit at the East, and the disposition among planters this year will be an extension of the plum area. Of course this year's plum crop is short, which makes this feature of the Eastern demand the more marked.

The next line of activity which is disposing of the fruit is the canning business. Here, too, the capacity of the canneries and the labor supply are altogether unable to cope with the amount of fruit and the demand for it. Quite in contrast with the cautious operation of the canners two years ago, is the present condition which finds them obliged to refuse orders which pour in upon them in unexpected and unprecedented amount. All the canneries are running to the last can they can handle, and yet it is easy to see that California cannot put out enough this year to meet the demand. This demand comes mainly from the States east of the Mississippi, and the effect has been to raise the price of canned peaches about \$1 per case, and apricots half as much. The movement to Great Britain by ship is also very large, some estimating that this year's outgo by ships will reach something like 200,000 cases. This realizes much that has been anticipated for the last few years, and has been embodied in the phrase "the world for a market." We see already that the world is larger than we had counted, and already we are not able to satisfy it. It is plain that our canneries must be multiplied before another fruit harvest ripens. Several places which agitated the establishment of canneries this year and then let the projects fall through, can now clearly see that they let slip the chance to make considerable money, and distribute much more among the fruit-growers of their districts. Probably the lesson will be better learned for next year and the building and equipment of canneries will be begun early. These enterprises are, of course, limited by the available labor supply. The canneries of this city would have employed thousands more women and girls if they could have found them. The streets were patrolled by wagons with great signs, "1000 women wanted to cut fruit," etc., and yet the canneries could not secure the help they needed. Thousands of dollars were lost day after day because the fruit could not be handled. It will be urged that canneries should not be built when the labor supply is inadequate. We believe this question will regulate itself and that the labor supply will grow with the demand, but the canneries should be located so as to secure the help of women and children in the smaller towns and cities. It is ridiculous to haul all the fruit to great centers to have it canned. The outside canneries have done excellently this year, and, though pressed somewhat for help, they have secured a better supply in proportion to their needs than the city canneries have. Let every town with an orchard environment build and equip its cannery. Let the public schools delay their opening until the fruit is cared for. If this be done, the canned fruit product can be multiplied without much addition to the labor supply which is now

available if the enterprises are located so as to reach it.

But there is another line of activity, and that is found especially in and around the orchards. It is the recourse to drying. If the demand for dried apricots and peaches had not shown great proportions this season, the ground under the trees would now be carpeted with neglected fruit. The city trade would not pay the freight on it, the shipping could not make any impression on its volume, and the canners, as just noted, reached limits before a fraction of the fruit had been picked. Buyers came early for dried fruit and offered good prices. Some growers did not plan to dry until they had made good contracts for the product; others had confidence in the general situation, and every being large enough to handle a knife was pressed in to cut fruit. Relatives and friends on visits have caught the prevailing fever and have been slashing away at profitable prices. Families have come into the fruit regions to camp, while all hands and the cook have gone to work at the fruit. Thus, there has been amassed a large labor supply for fruit-drying, and as the lesson has been but barely learned this year, much greater things may be expected next year. Much has been learned, too, in methods of handling fruit for drying, and this will be brought forward in our columns from time to time. It is plain that we must have the multiplication of the most capacious artificial driers or evaporators. Capacity must be the object sought for by inventors and builders. Beyond these there must be the fullest use of sun heat, especially in those parts of the State not invaded by fog and dew. We have seen sun-dried apricots and peaches from such localities this year which were quite as good as any evaporated fruit could be. Such fruit has been spread out literally by the acre on individual orchards.

And yet in spite of the immensity of our output of dried fruits this year, it looks as though we should fall as far short of filling the demand as we are in the matter of canned fruit. Really the long-propheesied day of great things in California fruit is at hand. The question now seems to be not "what shall we do with it?" but "how can we get it ready?" This is the better and more hopeful question.

The World's Cattle.

Perhaps the most magnificent government publication on a special agricultural subject which has ever issued, is that we have just received from the Department of State at Washington. It is one of the series of Consular reports, and is entitled "Cattle and Dairy Farming." It is a large octavo of 855 pages, and includes 369 illustrations of the prevailing types of cattle in the various countries of the world and some other matters relating thereto, together with the latest foreign devices for cream separation and milk testing. This publication is the result of a request made of the Department of State by a number of leading live-stock men that the consular representatives of the Government be requested to inquire into the live-stock interests of the world, and that their replies be published for the instruction of those in the same line of industry in this country. The bulk of the weighty document is incapable of condensation or abstract, but the document itself should be issued as widely as possible to our live-stock men, for they can gain much valuable and suggestive information from it. These matters are the description of local breeds and methods of care and feeding, and other such details. One direction of inquiry was to what extent the live-stock products of this country could be exported to the various countries of the world, and in what form they would best suit the consuming population. Of this portion of the reports, Secretary Bayard, in his introductory letter, gives something of an outline. It is shown that as with our wheat so with our live-stock products, we must look to the United Kingdom for our chief market. To this same direction the meat and dairy producers of all the world seem to be bending their productive energies, for the Secretary shows that aside from our shipment of oleomargarine to Holland and a small amount of cured meats and dairy goods to Canada and the West Indies, our trade in cattle products is with the United Kingdom. The statistics given are for the year 1884; but these, so far as

shipments from this country are concerned, are not so late as we obtained last year from the Bureau of Statistics and gave in the *RURAL PRESS* of June 19, 1886. The total shipment of meat and meat products for the year ending at that date reached a value of \$85,000,000.

The report before us, however, gives an interesting table showing how the United States compares with other countries in contributing to the fresh-beef supply of Great Britain. It is as follows:

Whence Imported.	Quantity, Lbs.	Value.	Per Lb., Cts.
United States.....	90,904,128	\$10,724,579	11.8
Russia.....	3,551,184	352,107	9.9
Canada.....	2,643,872	320,531	12.1
Germany.....	711,648	89,409	12.5
Australia.....	308,448	32,843	10.6
France.....	104,272	17,593	16.8
Other Countries...	151,648	16,018	10.5
Total.....	98,375,200	11,553,080	11.7

This table shows that the United States in 1884 sent to Great Britain more than nine-tenths of the meat which she received from outside sources. Of course since then there has been an increase in the amounts contributed from some other countries, for we showed in the *RURAL* of August 21st that in 1885 the colonies sent a vast amount of meat, and South America also figured largely in the supply. Of course, as this trade is developing fast, a year's age in statistics makes a great difference.

The report contains a vast amount of information to which we shall take occasion to refer hereafter. Meantime we would advise our cattle-growing readers to ask the Congressman of their district to secure copies for them. As the document is so large, probably the edition was small and early applicants will be most fortunate.

The Locomotive at Santa Barbara.

The day for which Santa Barbara sitting by the sunlit sea has long been patiently waiting, has come at last. The new railway from Newhall northward along the coast was formally opened to Santa Barbara on Aug. 20th, by a jubilee celebration, which was most expressive in its enthusiasm, and most important as marking a new era in the history of the town. The scenes at the jubilee are described as beyond anything ever experienced. Throngs of people came from Ventura, Los Angeles, San Diego and San Francisco, and the city put on a holiday aspect, the buildings being all gaily decorated, the streets bright with flags and streamers and crowded with well-dressed people. The program of the occasion comprised a parade through the principal streets, speeches at Barton Mound, near the seashore, by distinguished citizens and visitors, and a grand lunch prepared and dispensed by the hospitable ladies of Santa Barbara.

The parade was the most notable outdoor feature of the occasion. There were in line the military, fire department, social and fraternal organizations, gaily dressed school children, Spanish cavalcade, trade displays and fruit and farm products. One hundred carriages were in line, with distinguished guests. Other parts of the parade were formed by the Mexican Veterans and picturesque cavalcade of well-mounted young men, several of whom were dressed in the full and gorgeous attire of a Mexican cavalier, from the sombrero, heavy with gold lace, to the gold-mounted sword and spurs of the same gorgeous description.

The leading spectacular feature was a representation of the advance of transportation that has occurred in Santa Barbara. First came an old-time Barbareno leading a pack-mule, followed by two others loaded as in former days with barrels and packages strapped on. A stage-coach of the "sixties" followed, and then came an immense picture of an express train of the present day. The exercises of the day concluded with a grand banquet at the Arlington in the evening.

These incidents mark the present exultation of the residents of Santa Barbara over their union with the railway system of the State. The after effects will be more quiet but not less marked in the progress and prosperity of the town. Santa Barbara will find her visitors multiplied, her values increased, her productions increased as the outlet for them is improved, and she will still retain the advantage of her water transportation, which will be a decided advantage in many ways. We congratulate our readers in Santa Barbara and vicinity upon the advancement of their affairs.

Fruit Notes in Vaca and Pleasant Valleys.

[Editorial Correspondence.]

We had the pleasure of a run through these famous valleys last week, just as the peach crop was at its height and the whole productive area was a scene of the most intense activity. We call our visit merely "a run through the valley," for our time was too limited to see all our friends or to closely examine the possessions of those whom we did see. We expect to take occasion for another visit soon. We also have a lot of interesting notes of a personal and historical character which we hope to have opportunity to weave into a sketch of this famous fruit district. At this time we shall write merely in a general way of what we saw, with an idea of noting some features of the country, showing something of the extent of the industry of the district, and above all the practical methods which are now being employed, for we conceive a dissemination of this information of the greatest immediate importance.

During our first night in the valley we were hospitably entertained by Mr. and Mrs. W. W. Smith, at their elegant residence, about two and one-half miles up the valley from Vacaville. The early morning found us out among the throngs of workers who were picking fruit for Eastern shipment. About 1000 packages of peaches and grapes went off the ranch during the day. At the same time the peach-cutters were busy and were quickly covering the drying floor—a piece of ground of about two acres sloping toward the sun, having been carefully cleaned of dead grass and dust. It was hard and clean, at the base of a steep hillside and a long distance from the main roads, and was well situated to get all the sun-heat and to escape the dust. It constituted a solar drier of vast proportions. As we saw it, it was of variegated hues, as the peaches spread were both of white and yellow sorts. Those who beheld it when the ground was densely covered with apricots describe it as a sheet of gold. The examination of Mr. Smith's trees gave us much pleasure. The fine growth, uniformity of training and abundant fruitage are most unmistakable testimony to the skill of the grower and the natural adaptation of the region to fruit.

After leaving Mr. Smith's our next stop was at the drier of Frank H. Buck, almost embowered among the peach trees, whose fruit was being evaporated as fast as the machinery could handle them. Mr. Buck has a drier of the Blowers design, but not with all the Blowers arrangements for distributing the heat. The building inclosing the drier is 16x36 feet with the brick furnace bisecting it, and on two sides of this furnace are five chambers or sections, each holding two tiers or trays. On the top of the building is an exhaust fan, which is found of great value, hastening the drying, and thus increasing the capacity of the drier. The fan is run by a portable engine situated outside the building. Near the drier Mr. Buck has a good building 36x44 feet, two stories. The lower floor is used for packing and cutting, and the upper floor for box-nailing, packing of dried fruit, etc. Around the buildings are broad verandas which add much to the sheltered working space. Mr. Buck finds he must utilize the sun as well as the drier to use up the vast amount of fruit which he has ripening. He has been handling an average of 20 tons a day of green fruit during the last six weeks. He is employing from 80 to 85 hands, and his busy season with different fruits will extend from June 15th to October 1st. The orchard area under his ownership and charge together, comprises 250 acres. It reaches across the floor of the valley from side to side and up and down the valley rather more than a mile.

Proceeding northward, we stopped a few moments at the ranch of L. L. Hatch, a pretty place notable to the visitor because of the age of some of the trees which are said to have been planted as early as 1855. One is a veteran Moorpark apricot, which has furnished many buds for the multiplication of its kind in the valley. The old tree shows its age, but is still productive, for Mr. Hatch told us that it had recently produced 25 boxes in a single year. We also stopped a moment at the place of W. H. Price, who was up to his eyes in work and seemed to be doing it very well. We made quite a stop at the Pioneer ranch, which was

early improved by M. R. Miller, and was purchased by the late G. M. Blake, who gave the place a most elegant outfit of buildings and other improvements. It is now owned by Mrs. G. M. Blake, whose policy is evidently still further development of the property, which is being done on a generous scale under the able supervision of Mr. T. M. Thomson, a pioneer horticulturist, whose work at the Suscol orchard and nurseries in the fifties will give him an enduring place in the history of California fruit-growing. Mrs. Blake's property comprises 320 acres, of which 140 acres is now in fruit and its area being rapidly extended. The property is one of the finest country-seats we know of.

Our next stop was at a hospitable home whose owner does not crave the fame which the itinerant scribe has to bestow, and he can safely decline it, for his place in the community is fixed by his sterling character, and his skill as a horticulturist is proclaimed by all his trees. If we had not promised not to do it, we should tell about a chestnut grafted on a live-oak five or six years ago, and which has grown to a height of ten feet from the graft, bearing plenty of burs which seldom fill; or a magnificent grove of figs planted 25 years ago, covering a stretch of ground 600 feet long and perhaps one-third as wide, the trees in some cases 80 feet high, the foliage completely covering the ground—a perfect canopy of green; of acre on acre of most symmetrical and uniform peach trees; of a young Winter Nelis pear orchard, brought into complete subjection by being al-

lowed to grow and are folding over down its western slope. Time would not permit us to visit all the places named, but we admired them from afar.

We took a ride with Mr. Thissell over a part of the new road from Pleasant Valley to Winters, going as far as the ranch of S. C. Wolfskill, for a visit to the old olive, date and fig plantations, made by J. R. Wolfskill and S. C. Wolfkill in the early days. The new road fills a long-felt want and enables the Pleasant Valley growers to reach their shipping point at Winters easily, and gives them entrance and egress during the rainy season, which was often interrupted over the old road. The road follows for a distance along the base of the hills on the eastern edge of the valley and the south shore of Putah creek and thence across the splendid uplands of the Wolfskill property. Where the road skirts the hills it gives a fine view of the rich ranches of the Putah region, beginning with the places of Seaman and Sackett, at the mouth of Putah canyon, and thence eastward the eye falls upon the grand farm of Professor W. T. Reid, while farther east are the places of V. Slade, Sackett & Allison, and Devilbiss, thus nearing the townsite of Winters, which unfortunately we had not time to visit. The new road seems to us a great acquisition to the whole section of the country, and will minister much to develop all the property on the south side of Putah creek.

Handling the Peach Crop.
Before retracing our way through Pleasant



THE CLYMAN PLUM—A NEW EARLY VARIETY.—See next page.

lowed to sow its wild oats in the shape of straggling branches, and then licked into good form by the pruner's knife; of the many picturesque beauties of the place, its vine-clad oaks, rose-bowered arbors, its oak-studded hillsides and orchards on natural terraces—heaven forgive us for promising not to mention any of these things!

The shades of night were gathering fast as we drove rapidly through the picturesque glen which forms the eastern arm of Pleasant valley, and it was dark when we alighted at the home of G. W. Thissell, well known by name at least to many readers of the RURAL. In the passage to Mr. Thissell's we sped by several excellent places which will be noted on our return southward. We were given a cordial welcome, and soon after daylight the next morning were clambering up among the orchards lying on the eastern side of the central ridge which runs north and south through the lower lands of Pleasant valley. This ridge is much lower than the mountains which form the eastern and western rims of the valley, and yet high enough to catch the earliest sun-heat, and thus enables Winters to claim the earliest peaches and apricots as belonging to its parish. It is indeed a warm and rich stretch of hillside, with Mr. Hinckley's sky-high orchard at its central highest point, and extending thence southward through the lands of the Thissells and Brincks and northward through the possessions of Messrs. Tucker and Sackett until it flattens out into the rich level lands of the Putah Creek region. Orchards flank this ridge on the east,

and Vaca valleys toward Vacaville, we digress to make room for some notes on the peach crop and the disposition which is being made of it. Almost the whole population of the valleys was engaged, in some capacity or other, in handling the peach crop. The yield of the trees was fairly immense this year, and the heavy fruitage of three and four-year-old trees, just coming to bearing, has multiplied all records heretofore made in the valley with the peach. If there had been any decent price for ripe peaches, the people would not have had opportunity to demonstrate their working capacity as they have this year. Drying was, however, the only way open for the profitable disposition of the crop, and fortunately the market opened this avenue, and while we were there dried-fruit buyers were thick, and 18 cents per pound for peeled peaches, both sun-dried and evaporated, was an ordinary price. So well do the sunlight and the dewless nights act upon the fruit that the sun-dried fruit is of the very highest character, and the warm ground on the slopes, or between the tree rows, is turning out hundreds of tons of dried peaches, which even a buyer can find no fault with.

The methods of peeling peaches this year show new and interesting points: The two methods in sharp contrast are machine peeling and lye peeling—the latter immensely preponderating. Opportunity is given for contrasting the two methods at the ranches of G. W. Thissell and W. J. Pleasants, both in Pleasant valley. Mr. Thissell relies wholly upon machine peeling, using the Scott machine with which his best peelers

peel 80 baskets a day, and one cutter handles as many as one peeler; thus two men prepare 80 baskets—peeling, pitting, and spreading on trays in a day. There are many ways of using the lye treatment, the minutiae of all of which we have not space to present. The material which prevails is the "Greenbank 98% caustic soda." Mr. Pleasants has just outside his cutting-house two farm kettles bricked in over one fire. A few feet from these under the roof are two vats, made like wooden horse-troughs, about 3 by 8 feet, standing near each other, and each supplied with water by a faucet. One man works each kettle, exposing the fruit to the lye, which is nearly boiling hot for about a minute, turning the perforated pail in which a basketful of fruit is placed, so that the peaches move about in the lye. Each then empties his dipping pail into a galvanized-iron pail perforated with half-inch holes which stands ready in the first vat of water. The man at this vat stirs the fruit around in the pail with a thick, round stick, rubbing the peaches against each other, and the lye-blackened skin disappears and shows the clear yellow of the peach. The pailful of fruit is then dumped into a second similar pail by which it is carried to the second vat and there ducked up and down in the water to rinse away the surplus lye, and then it is emptied into galvanized tubs about two feet in diameter filled with water. Around these tubs the cutters sit, taking the fruit from the water one by one as they cut. This process seems to give the fruit a most thorough rinsing, saves it from contact with the air and removes the slippery feeling which the lye gives the peach if not thoroughly washed. Mr. Pleasants' water supply is furnished from a tank filled by horsepower, and he seemed to have more water at command than any place we visited. The lye treatment evidently should be accompanied with plenty of water for refilling the rinsing vats, which soon become foul with lye and refuse. Complete rinsing and freedom from contact with the air, which is gained by keeping them in water till cut, helps to preserve the bright yellow of the peach. At Mr. Pleasants' place 35 hands, many of them boys, peeled, cut, spread and placed on the drying ground 20,240 pounds of green peaches in one day. Both Thissell and Pleasants use large trays 4 by 4 feet made of slats 3/4-inch thick and 1 1/2 inches wide, set close together, in preference to the 2 by 3-foot trays which are used by many parties. We have cited the two methods of peeling by Thissell and Pleasants as representatives. Others are doing much the same, and some are using both lye and machines.

J. A. Webster, who has an Acme steam drier, which he is working to his satisfaction, dips from boiling lye into boiling water, and thence into the cold-water vat. It is hard to get at the strength of the lye used, as the strength seems to vary, and more lye or more water is added according to the effect on the peach, which is tested by the dipper, who scrapes the surface of the peach with a small stick which he keeps handy for the purpose. It was common to start with lye, about one pound to the gallon of water, but since using the Greenbank alkali, some are starting the dip with one-half pound to the gallon.

In pitting clings there is also much diversity of method, or rather in the knife used. At John B. Carey's place we saw the spoon-shaped pitter being used with satisfaction; at J. W. Gates' and Henry Bassford's and elsewhere, the Tarlton knife, with its semi-circular blade fastened upon the cutting edge of the straight blade, was relied upon. There is also said to be a knife with a bow in the blade itself, being used with satisfaction. Different operators acquire great facility in the use of the different styles of knives. This is shown in the fact that the same price is paid for pitting clings as frees. Mr. Gates believes clings are the quicker handled. He has two men who spitted and pitted in one day 1500 pounds of clings culled out from fruit he delivers to the cannery.

The usual rate for pitting and splitting peeled peaches is 30 cents per hundred pounds and 25 cents for unpeeled peaches. One of the girls at Henry Bassford's place pitted and trayed 1150 pounds of peaches in a day; part

free, part clings. The girls are the best pitters in the valley, according to existing statistics.

Nectarines.

There are some most beautiful dried nectarines being prepared this year. At John B. Carey's we saw a bin holding about 3½ to 4 tons (estimated) of most beautiful, light amber-colored, translucent fruit. Henry Bassford has also produced a good many fine nectarines, believing a seedling originated by W. W. Smith to be the best drying nectarine he has.

Sulphuring.

So far as our observation goes, all are sulphuring the fruit—some more, some less. Nearly all use boxes which hold two tiers of trays, with a partition, so that one tier is sulphuring while the other is being filled. Nearly all have slots in which the trays slide like drawers in a bureau, but Henry Brinck had a new box with the cleats omitted, trusting to standing the trays upon each other. Several parties who are lye-peeling sulphur twice—first, before pitting or as soon as the peach comes from the rinse-vat, and then sulphur again after the fruit is on the trays.

More Anon.

At another time we will mention other directions of our wanderings and other places both in Pleasant and Vaca valleys which we visited. The subject is a fruitful one.

The Fair at San Jose.

The twentieth annual fair of the Santa Clara Valley Agricultural Society opened Monday, August 15th, under prosperous skies, and lasted through the week. The preparatory work had been well done by the officers of the Association, the grounds were in fine order, the weather was pleasant and the visitors many.

The live-stock entries in their number and variety surpassed those of any fair before given by this society. Applications far outran accommodations; so that the directors were forced to limit exhibitors to 15 stalls each—instead of allowing one party to fill 25 or 30, as in previous years. But this restriction tended to increase the variety and enhance the quality of stock entered. Among the cattle, Durhams, Herefords, Holsteins and Jerseys predominated, though there were a few Galloways, Devons and Ayrshires.

Col. Younger filled his entire space with the choicest of his famous Shorthorns, and took the sweepstakes for best bull of any breed, best cow of any breed, best herd for beef purposes and best herd of any breed.

P. Reardon also had 15 stalls of Durhams of different ages.

C. B. Polhemus had beautiful Jerseys—bulls, cows and calves—a handsome Holstein bull and some fine graded animals. J. S. Briggs exhibited a Jersey bull and cows.

S. W. Hanks' fat cow weighed 1900 pounds, and H. Abels' fat steer, "Duke of Milpitas," standing about five feet five inches, weighed 2800 pounds.

Frank H. Burke showed 11 stalls of thoroughbred Holsteins, some imported from Holland, but most of them raised at Menlo Park, which were adjudged the "best herd for dairy purposes." One fine bull tipped the scales at 2100 pounds.

Tyler Beach's 13 thoroughbred Ayrshires were admired for their elegant proportions.

Martin Carter's bull "D-fiance," cow and calf, were noble representatives of the Herefords. Wm. Quinn exhibited a few premium animals, Ayrshire and Shorthorn, and J. C. Martin showed fine graded cattle.

The display of horses, though not so numerous as the cattle, was praised highly. It included thoroughbred Normans and Clydesdales, and other draft animals, roadsters and horses of all work, while the stables on the ground held some of the finest racers in California. There were a large number of colts from Boyd's Grosvenor, all showing fine build and good trotting qualities. Mr. Boyd offered a special premium of \$75 for exhibits of the gets of his horse. The premiums on equine exhibits were as follows:

Best thoroughbred Norman mare, four years old, N. B. Edwards; stallion, one year old, same; stallion, four years old, Monte Carrol; same, one year old, Simon Mathews; four-year-old mare, C. C. Valpey.

Best Clydesdale mare, one year old, N. B. Edwards; best sucking colt, same breed, George P. Bull.

Best graded draft stallion, four years old, C. C. Valpey; same, three years old, Samuel Goldspring; same, two years old, George P. Bull; best graded draft mare, four years old, T. H. Burke.

Horses of all work—Best four-year-old mare, Ed. Younger; colt, J. R. Paul; stallion, four years old, T. W. Barstow; stallion, three years old, Thos. Massy; mare, three years old, Ed. Bonger.

Best matched span of horses, Joseph Kohlbecker of San Jose.

Best roadsters—Gelding, four years old, D. J. Porter; stallion, same age, E. S. Smith; mare, three years old, James P. Sargent; mare, two years old, Fred. M. Stern; stallion, three years old, D. W. Barstow; one-year-old stallion, E. Topham; two-year-old stallion, James Weatherhead; mare, four years old, Thomas Kennedy.

Special premiums for gets of Boyd's Grosvenor—

Best two year old, P. Malansen of Pioneer; one year old, P. C. Wattenlaugh of Livermore; sucking colt, E. Topham of Milpitas.

For best dam with three of her colts, E. Topham.

C. P. Bailey's pen of Angora goats were admired for the length and fineness of their fleeces. Edward Younger showed two pens of first-class Cotswold sheep, and H. C. Agnew had three pens of excellent merinos.

Among the swine, W. B. Rogers' Chester White pigs were remarkable for their uncommon size; Andrew Smith showed fine Berkshire hogs, and Tyler Beach, Essex and Berkshire.

E. H. Freeman, importer and breeder of poultry, made an admirable display of 20 coops, embracing Plymouth Rocks, Wyandottes, Brown and White Leghorns, Buff Laced Polish, Black-breasted Games, Partridge Cochins, Langshans and Light Brahmas. He told a representative of the PRESS that the interest in standard breeds of fowls is by no means waning, but rather on the increase. He had made some sales to the islands within the year. David Parker showed one coop of Langshan chicks, one of Light Brahmas and two of Buff Cochins—all large and handsome.

In the machinery department, John Christian's adjustable cultivators, an improved grape-stemmer and wine-press, and a number of Eastern and California-made vehicles attracted notice.

In spite of the real-estate furor in San Jose the races were largely attended, the greatest crowd having assembled on Thursday, when the lookers-on are said to have numbered fully 10,000, and Secretary Bragg remarked: "It's the biggest day we ever had." But the fact that two noble horses were driven to death upon the track—one by order of his owner, notwithstanding the counsel of his driver—to feed the crazy craving for excitement and gain on the part of "sports" and spectators, hardly increases the respect and esteem in which the "agricultural horse-trot" is already held by the humane and thoughtful.

In Horticultural Hall.

The trusses and rafters were nearly hidden by palm branches and other leafy adornments, in pleasing contrast with the light blue ceiling. The object most conspicuous on entering was a pyramid of potted plants surmounted by a large Japanese fan-palm. On the lower shelves were dwarf fan-palm, sage palm, dwarf bamboo, sequoia gigantea, banana, Japanese cut-leaf maple and other rarities. Beyond appeared the stage with a background of palm-leaves trimmed with ivy. Encircling the stage was a brilliant border of marigolds and roses, while on the sides were placed pedestals of moss. Amid this wealth of color there stood forth clearly a Maltese cross, and just beneath it an anchor. The meaning of these emblems, formed of flowers grown in the Garden City, was that the Santa Clara is the "star" of all valleys, and the proper haven in which the Easterner should "anchor." The center of the stage was devoted to an image of the goddess Pomona, made of different fruits and vegetables and framed in ivy, potatoes and apples. On the left of the hall was a rockery and waterfall, in imitation of some retired glen in the mountains. These and other decorations did great credit to the taste and diligence of the ladies to whom the work was intrusted.

Instead of the fan-shaped arrangement with single tables, which proved somewhat inconvenient last year, the tables were placed parallel to the walls and were of double width and length. Each section of the county had a space set apart for it. The first two tables on the right on entering the hall were assigned to Santa Clara and the Willows respectively. The next two to Campbells and Saratoga. Those on the left belonged to Berryessa, Mt. Pleasant and other places. In the center were the exhibits of Mrs. Watkins and John Rock. Most of the available space was taken by farmers and horticulturists, although several business houses had exhibits.

Among the innumerable displays we can notice only a few of the more striking and characteristic.

J. W. Bryan of Stevens Creek made a fine showing of egg plums, Hungarian prunes, Bartlett, Winter Nelis, Seckel and Easter Beurre pears, quinces, Newtown pippin and Jonathan apples, nectarines, almonds, Japanese persimmons, French prunes, Malvoise, Sweetwater, Grenache, Rose de Chasselas and Charbonneau grapes.

Batcher and Archibald of Santa Clara exhibited Columbia, Jefferson, Chabot (Japan) egg and Quackenbush plums, German, Gros, silver, French and Hungarian prunes, Bartlett, Howell, Sheldon, Easter Beurre, Keifer's Hybrid, Beurre Clairgeau and Winter Nelis pears and four varieties of fine seedling peaches.

Mrs. C. D. Horn of Santa Clara had a choice display of Washington, egg, Columbia, green-gage and Quackenbush plums, French and German prunes, blue figs and Foster peaches.

R. W. O. McLellan of Los Gatos showed Crawford peaches, Skinner seedling apples, Sweetwater grapes and six jars of choice preserved fruits of good size and variety.

A. Dennis of the Willows displayed Napoleon Bigarreau cherries picked August 15th.

R. E. Dent exhibited apricots, plums and prunes and Napoleon Bigarreau cherries. For the cherries off of 60 rods of land, Mr. Dent received \$690.53, being at the rate of \$1840 to the acre. He also received \$905.40 for the black Tartarian cherries taken from one acre.

Kelly Brothers showed Tokay, Vardal, Rose of Peru, Black Hamburg, and Muscat grapes,

Foster peaches, French prunes, Moorpark apricots, apricot peaches and a pyramid of plum and prune branches laden with fruit.

B. Campbell exhibited Quackenbush green-gage and egg plums, French prunes and Sweetwater grapes, Moorpark apricots, Snow peaches, Bartlett pears, California and English walnuts.

H. Campbell had a large variety of French and silver prunes, black walnuts, evaporated Moorpark apricots, and canned fruits in glass.

W. L. Morgan of the Willows showed Yellow Newtown pippin, Spitzenberg, Wine Sap, Yellow Bellflower, Winter Bellflower, Pearmain, Jonathan and Ben Davis apples.

L. D. Woodruff of the Curtner tract in the Willows exhibited mammoth Foster peaches, Moorpark apricots, Newtown pippins, Mary's Choice and Susquehanna peaches.

George L. McLaughlin of the same district had Susquehanna peaches, Hine's seedling apricot, a desirable variety of Crawford peaches, French prunes, almonds and Bellflower apples. Mrs. Aiken and Mrs. McBride showed Foster peaches, Hungarian and French prunes, Moorpark apricots, Washington plums, Gravenstein apples, Bartlett pears, and canned peaches and plums.

A number of persons brought samples of corn. One stalk, brought by J. W. Bryan, was 11½ feet high.

W. S. McMurtry of Los Gatos had a fine exhibit of oranges, some of them nearly four inches in diameter.

Mrs. W. J. Watkins made a very pretty display of her jellies.

We find ourselves obliged to refrain even from naming many of the meritorious exhibitors. The paintings by native artists, the addresses by C. M. Shortridge and M. H. Hyland, and other evening exercises, can barely be mentioned. And we must leave the Horticultural hall with all its wealth of foliage, flowers and fruit which so surprised and enchanted the throngs of Eastern visitors.

A New Early Plum.

The Clyman plum originated from a seed planted some 10 years ago, the tree having borne large and regular crops for the past five or six years.

Mr. Leonard Coates of Napa is propagating it, and introduces it for the first time this year. He has watched it for some time and recommends it as by far the best early shipping plum.

Mr. J. M. Bassford, Jr., of the early Vacaville belt thinks very highly of it, and says that there is more money in a good, early plum than anything else for the Eastern markets, and less risk in shipping.

The accompanying cut shows the exact size and shape of an average specimen. In color the "Clyman" is a mottled, reddish-purple, a freestone, and flesh firm and sweet. It therefore possesses in a marked degree the qualities essential to a good shipping fruit. Its chief value, however, is its earliness, ripening with the Cherry plum, which is a pretty fruit, but tender, juicy and insipid. The Clyman, as Mr. Bassford says, resembles an undersized "Peach" plum, but it ripens fully two weeks ahead of it.

THE VETERINARIAN.

Eye Disease in Stock.

EDITORS PRESS:—I notice in several papers from Nevada and elsewhere that a disease affecting the eyes of cattle is giving much trouble. In my practice I have also animals under my medical care that are suffering in the same way. The name of the ailment is "periodic ophthalmia," and is due to various causes.

Horses are generally predisposed to it; dark and unhealthy stables sometimes produce it, especially those buildings from which emanate ammoniacal gas from wine, etc. It occurs sometimes in one eye and then the other, and the inflammation causes the lids to swell, and in one case under my charge I am afraid that a scum is permanently forming over the eye ball (opacity of cornea). This inflammation and swelling will sometimes suddenly disappear and as unexpectedly return. Then again this disease occasionally occurs in animals at pasture, and when such is the case it is generally due to atmospheric and other causes. Casual observers have mistaken the periodic ophthalmia for that trouble caused in the eyes of cattle by insects, flies, etc. It does not affect them constitutionally, at any rate not very much; they do not fail in appetite. It is interesting to notice that when cattle are subject to this disease in the same vicinity and at the same time, people complain of an irritation in the eyes, and some of them attribute it to "something in the air." I see that a prominent dairyman says that nearly all the dairymen have the disease among their cows. This indicates that it is due to atmospheric causes. Some quick remedies are recommended, irritating an already irritated part, and adding fuel to fire. For instance, some men, in whom conceit exists, perhaps in excess of knowledge, advise the application of coarsely powdered glass, blown into the poor animal's eye!

Treatment.—If due to known causes, such as badly ventilated and dark stables, remove the cause. In most cases nature does not need

much assistance, sometimes none. In others it is necessary to bathe the eyes daily with warm water or milk and water, and subsequently applying soothing lotions. When the front part of the eye-ball (cornea) becomes opaque, it is necessary to apply a mild stimulant. But this should not be used until some time after the inflammation has disappeared and when it is evident that nature really needs assistance. In bad cases I find it necessary sometimes to tie the animal in such a way that he cannot rub the part against the stall. ROBERT J. DAWSON, 225 Geary St., S. F. Veterinary Surgeon.

THE VINEYARD.

Bleaching Sultana Raisins.

J. H. Wheeler, Chief Executive Viticultural Officer, has just issued a circular on the bleaching of Seedless Sultana raisins, which we give in full as follows:

The area planted to the Seedless Sultana grape in California was greatly augmented in 1881, 1882 and 1883, during which time it was in great favor with many. After 1884, the planting of this variety nearly ceased, and it is not at present a popular grape for either wine or raisins. The market is easily glutted with its raisins, and the wine has, with few exceptions, proved other than satisfactory. Prominent among other objections has been its tardiness in coming into bearing—generally this variety must have attained the age of at least five years before it sets a good crop. When once well in bearing, however, it is regular and very prolific—it has been known to produce as much as 15 tons per acre.

The extensive plantations of Sultanas made at first are now coming well into bearing, and the matter of preparing the raisins for market is one of considerable interest and inquiry.

Letters have come to me asking for full instructions as to the best methods of bleaching, drying and marketing the grapes.

The imported Sultana raisins come to our markets bleached; they are translucent and nearly colorless—more so than any I have yet seen prepared in California. These command better prices than the domestic Sultanas.

Bleaching and drying these raisins have been carried on here by a very few, and their experiments have been limited. Some good results have been obtained, and it is the experience which has grown out of these successes which I am here able to produce.

Mr. W. B. West of Stockton has been the early pioneer in the matter of Sultana raisins, having cultivated this grape for upward of 20 years. In drying them, he was first to employ bleaching, the details of which he had learned in Europe, and after a trial he communicated his experience to Messrs W. T. Coleman & Co., who have since furnished this, together with other information, to some of their customers.

Prominent among others who have prepared bleached Seedless Sultana raisins, are Jackson Bros., N. Wyckhoff and Wm. Forsyth.

I give, in the following directions for the work, the latest instructions produced by the commission-house of Wm. T. Coleman & Co., together with such changes and additions as have been suggested by Mr. W. B. West and Byron Jackson. These gentlemen have kindly assisted me in the matter:

Directions.

For the best results the grapes must not be picked until they are fully ripe. This is indicated in bunches not too much shaded, by the bright amber color of the skin, which, however, fails to appear in grapes hidden from the light and sun. A certain determination of full ripeness may be had by pressing the clear juice from the grapes thought to be ripe, on each of several successive days, at each pressing determining the sugar by means of a must scale, and when the amount of sugar shows no increase from day to day, the grapes are ripe. In making these tests, care must be taken that no bad bunches enter the samples, as whole bunches of Sultanas are sometimes found which never sweeten—these should be carefully excluded throughout the treatment.

More care is necessary in determining the perfect ripeness of the Sultana than is the case with the Muscats, as when at all green the large amount of acid so common to this variety renders them almost valueless. Even when drying, the bunches being large and dense, should be carefully examined to see that they are ripe throughout.

Before picking, everything should be in readiness for bleaching. The necessary preparations are as follows:

A kettle or kettles holding 20 gallons or more, proportioned to the amount of work to be performed, should be ready to heat up. The work of dipping the grapes into the lye solution may be done in the kettles if necessary, but for convenience it is best to have a wooden trough built at which a number of persons can work.

This trough should be provided with a sheet-iron bottom, and built over a brick fireplace, so that the heat of the solution may not be lowered by the dipping.

The lye solution used thus far in California has been made of concentrated lye dissolved in water just below the boiling point.

In Smyrna, however, the practice has been to use instead of concentrated lye, consisting in our market of impure and variable caustic soda, the potash lye obtained by leaching the

ashes produced by the burning grapevine brush. The superiority of the imported Sultanas would hence lead us to infer that potashes, which is the alkali obtained from ashes, or better still the pearlashes, which consists of purified potashes, could be substituted for concentrated lye to advantage. The last-named potash salt is dearer than any of the others, but the quantity consumed is so small that no hesitation should be had in substituting this clean and wholesome salt for the soda salt, so uncertain in composition and impure. Another advantage growing out of the use of pearlashes would be that of preserving the raisin in a soft, jelly-like condition, with a clear, glossy skin more inviting far than the dry, chip-like raisin sometimes produced by the over-drying of raisins dipped in caustic soda.

The proportions recommended and employed heretofore have been one pound of concentrated lye to five gallons of water. To make an equally caustic potash solution would require about 1½ pounds of pearlashes to five gallons of water. The price of pearlashes, which consists of pure carbonate of potash, varies from eight to ten cents per pound, according to quality.

Another indispensable provision is to secure facilities for rinsing the fruit in cold water immediately on its removal from the hot-lye solution. The best rinsing may be done in running water, but when this is not practicable, a barrel or tank may be used, care being taken to renew the water frequently, in order that it may not become so charged with the lye as to improperly perform the rinsing.

A dripping-rack may be had above the trough or tank, by placing cleats or strips across on which the trays may stand a few moments after removing from the bath. They should be well drained when removed from the rinsing water, otherwise a drop will form and dry up on the underside of the raisin, leaving a dark spot when cured.

To add to the soft, glossy appearance of the skin, a quantity of pure olive oil should be provided, which may be added to the dip on which it floats. The oil for this purpose should be pure. To insure purity, it is safest to use oil produced in California. Glycerine is highly recommended for the same purpose—some claim that it is superior to oil, and, being cheaper, may be used more freely.

The apparatus being in readiness and the grapes ripe, the lye should be put in solution and heated. The potashes being all dissolved, the oil or glycerine may be added at the rate of half a large spoonful now and then as it disappears on the grapes. If oil be used, the proper amount will give to the solution a distinct amber shade.

As little time as possible should elapse between the period of picking the grapes and that of dipping the same. A great deal depends on this, as any delay in getting the grapes into the lye will make the work more difficult and the result more uncertain.

Some recommend picking the grapes in baskets or buckets of perforated tin, in which, without transfer, they may be immersed in the dip. Mr. Jackson places the grapes on a tray made with a frame of iron which is covered with wire gauze with one-quarter inch mesh. The frame projects upward on the sides to prevent the fruit floating off when in the dip, and is made to receive, as a cover, the wooden tray on which the fruit goes to the drier. When dipped and rinsed, the wooden tray is placed over the dipping tray and two men transfer the fruit by turning over the two. This system, I believe, is superior to all others, and economizes time and labor in the curing.

The time which the grapes should continue in the dip will vary with the locality. In some districts they possess thick skins, thus requiring a longer submersion than when the skins are thin and delicate. From one to two minutes is the prescribed time—experience and observation are the best guides.

The dipping causes the skin of the grape to crack, at which time they are dipped enough and should be removed.

After dipping and a moment's draining over the trough, they should be rinsed thoroughly by immersing them in the pure water of the rinsing trough, after which drain well, long enough to allow all of the water to run off which will run off. After transferring as above, the drying may be conducted as for other raisins.

If the drying be conducted in the open air, and the heat of the climate will permit, the trays should be stacked immediately one above the other, up to a convenient height for handling. Sultanas dried thus in the shade will profit much more by the bleaching than if exposed to the direct rays of the sun. A building through which the draught draws strongly and warm is the best for open-air drying.

When the drying is complete the bunches should be gently rubbed over a sieve with fine meshes to remove the stems, which will then come off readily.

When thus finished the raisins should be packed in regular raisin-boxes, which, according to W. T. Coleman & Co.'s instructions, should contain just 25 pounds net weight. Use only one plain single paper wrapper around them all. Over the top face of the raisins, between them and the leaves of the paper wrapper, insert a piece of confectioner's wax paper; this done, your product is ready to enter the market in competition with those similarly prepared in Smyrna.

Besides adding to the appearance of the Sultanas raisin, this operation increases perceptibly

the weight of the finished product, greatly bettering it by the moisture-retaining power of the potash.

The process of bleaching, I am informed, adds 25 per cent to the selling price of the raisins. Messrs. W. T. Coleman & Co. put the profit a little lower than this. Such being the case, those drying Sultanas cannot afford to long avoid the simple addition of the bleaching process.

Bleaching as applied to Muscat raisins has never become popular in this country, nor is it certain that any common preference could be formed to make the process common. There are those who prefer bleached Muscats, and we already find quite a market. Their preparation is therefore worthy of the attention of some of our growers and curers of the Muscat.

The most beautiful large-seeded and high-priced raisins prepared in Smyrna are bleached as above and make a most inviting fruit. Well prepared, I believe they would form a novelty, which would prove profitable at least in limited quantities.

DEVELOPMENT MATTERS.

Address of the State Board of Trade.

The address to the public of the State Board of Trade, prepared by a committee in accordance with the authority granted at the last meeting of the Executive Committee, is as follows:

To the People of the State of California:—The coming season bids fair to be the most prosperous for the people of the Pacific Coast ever witnessed in the history of the State. The wave of prosperity which has swept over the southern counties has broken over the Tehachipi summit, and to-day is stirring the hitherto sluggish life-blood of Central and Northern California; the sharp advance in real estate prices, and the increased volume in sales, so noticeable at present in Santa Clara county, are cropping out in other localities, and if our people will but seize the present golden opportunity the tide bids fair to lead on to fortune.

What is wanted now by our people is a vigorous and energetic move all along the line to duplicate on a large scale the unparalleled prosperity which has blessed the southern part of the State—more than doubling the assessed valuation of the property of that section in one year's time. The prosperity which Southern California has enjoyed during the past two years can be ours if we will but help ourselves a little now that the golden opportunity has arrived.

In order that systematic work may be done in a business-like way, the State Board of Trade has been organized.

The first meeting was held in Oakland on the 15th day of July, at which meeting delegates were present from the principal cities and sections of the State, and the preliminary steps were taken toward perfecting the organization.

Organization of the State Board.

On the 23 day of August an adjourned meeting was held in Oakland, at which by-laws were adopted and A. T. Hatch of Suisun was elected president.

The by-laws provided that each Board of Trade, or other similar organization in the State, was to become a member of the State Board by paying an initiation fee and such monthly dues as might be fixed, by sending their delegates to the meetings of the State Board and selecting one of them as a member of the Executive Committee.

The third meeting was held in Oakland on Monday, August 15th, at which still further progress was made, and the work of the organization was thoroughly discussed.

After the meeting of the board there was a session of the Executive Committee, at which officers were elected and future work was partially outlined.

H. W. Byington of Santa Rosa was elected one of the vice-presidents, and the election of the others was postponed till the next meeting. J. M. Davies of Oakland was elected temporary secretary, and the Grangers' Bank of California was elected treasurer.

A Committee on Finance was appointed, consisting of A. T. Hatch of Suisun, E. B. Smith of Contra Costa county, and W. W. Camron of Oakland, whose duty it should be to take steps to raise the necessary funds to inaugurate the work in hand on a scale commensurate with its importance. Other committees were also appointed to look after different interests.

Displays in the East.

It was resolved to make a move at once toward having an extensive display of the resources of California at the Grand Army Encampment at St. Louis in September, and another display at an industrial exposition to be held in Boston, commencing the same month.

Acknowledging the well-known power of the press, the board resolved to secure, if possible, their active co-operation, and to this end the president and secretary were instructed to call a convention of the editors and publishers of the State to be held in the rooms of the Chamber of Commerce in San Francisco, at some time in the near future to be hereafter fixed, to consult together as to the best and most effective manner of advertising the resources of the State during the coming year. As in-

creased prosperity to the people means increased business patronage to the newspapers, it is hoped and believed that this call, when issued, will bring together representatives from every newspaper in California, and that much good may result therefrom.

The board voted to locate the permanent place of business in San Francisco, and a committee was appointed to secure suitable rooms in the very heart of the business center of that city to be occupied by the officers of the board, and in which a permanent exhibition of the productions of the State may be gathered for the benefit of the tourists and home-seekers from the East who visit our metropolis.

It is the intention of the State Board to advertise the productions of the State in every practical way possible. To this end pamphlets descriptive of various sections will be issued and scattered where they will do the most good, and arrangements will also be made for distributing large editions of established newspapers especially prepared for this work.

To Pay Expenses.

To do this work, money will be required. If we expect to succeed, money must be used liberally. If work cannot be done on a grand scale, it had better not be undertaken at all. If all who are interested will respond promptly, the financial work will not be a burden to any.

It is desirable that every Board of Trade in the State, and every organization of a similar character, shall join the State Board, pay the initiation fee and respond promptly to monthly dues. This will entitle such organization to three members of the State Board, including one member of the Executive Committee.

It is desirable that the heavy business men and large landowners shall contribute each a stated sum per month to the funds of the State board.

It is desirable that the press of the State take up this subject and give the movement a good hearty indorsement, in order that the work may be more easily and effectively accomplished.

If the response to this call is what it should be, one year from to-day Central and Northern California can record as rapid a gain in population and assessed wealth as the fortunate counties of Southern California are now so justly credited with.

It is the desire and purpose of the State Board to pay especial attention to building up all sections of the State, and particularly Central and Northern California; to assist in sending excursions from time to time from San Francisco to all parts of the interior, from Shasta to the far south. This series of excursions will be inaugurated as soon as the board is in working order.

Places Represented.

During the meetings thus far held representatives have been present from San Francisco, Oakland, Alameda, Livermore, Haywards, Niles, Sacramento, Marysville, Vallejo, Suisun, Vacaville, Red Bluff, San Rafael, Petaluma, Santa Rosa, San Mateo, Napa, Stockton, Lodi, and Fresno, thus showing the extensive interest taken in the work.

The next meeting of the Executive Committee will be held at the Board of Trade rooms, on Tenth street, near Broadway, in Oakland, on Monday, August 22d, at 11 A. M., at which time and place every local Board of Trade, or other similar organization in the State, should have an able representative, prepared to represent the voice of its constituents in a way that shall not be misunderstood, for the good of California.

In the meantime, we ask the people of the State to arise as one man and stand firmly by the State Board of Trade, and assist it to do a work that will add thousands to the census-roll and millions to our wealth.

By the Committee: A. T. HATCH, President.
J. M. DAVIES, Secretary.

Something About Booms.

EDITORS PRESS:—Several items in the RURAL of late in regard to the employment of white labor—women, boys and girls—in the orchards, canneries and packing-houses in the upper part of the State, have led me to the conclusion that you are on the eve of a genuine boom.

As a resident of Riverside for over 15 years, and a reader of the PRESS for some years previous to that, I feel that I can say something on booms which may interest some of your readers. Riverside may be termed the origination of the fruit-growing colony system, and all of the newer fruit-growing colonies or settlements have looked up to her more or less, copied her example and profited by her experience.

One thing is absolutely necessary in founding a new colony, and that is that the land selected be cut up into small tracts, and that each of these small tracts be capable of supporting a family in comfort. Cheap land is a detriment, as it enables speculators to buy up and monopolize large tracts to the injury of the whole. The most successful way at the present time is for a company or an individual to get possession of a large tract of suitable land in a good location. A good location can be dispensed with, however, for if other things be suitable, a prosperous colony will ultimately make a good location. Take Riverside as an example. When I first came to Riverside it took longer to get the RURAL PRESS from San Francisco than it now does to get a newspaper from

Chicago or New York, and sometimes in winter we would be cut off from the outer world for two or three weeks. Now everything has changed. We have one railroad with ten trains per day and another projected; also telegraph and telephone with street-car lines, none of which would have been in our valley but for the settlement made nearly 17 years ago.

But to resume—when suitable land has been secured, the projectors of the new settlement lay off a townsite with adjoining lands cut up into five and 10-acre tracts. Roads, streets and avenues are all laid out, graded sidewalks are added, and if trees are not planted, arrangements are made requiring the purchaser to plant some suitable kind of roadside tree. Then water is brought in and piped to every lot, thus doing away with unsightly ditches. A hotel is usually among the first buildings—generally put up by the company, and almost in advance of settlement. Then, if not on a line of railroad, one is pretty sure to follow shortly after. In consequence of so many improvements being made in advance, a nucleus is formed, and when the lands are put on the market the colony is started, a newspaper and postoffice are established and the settlement is under full headway. The fact of so many improvements being made previous to putting the lands on the market necessitates high prices for land, thus keeping out an undesirable class of settlers. The Eastern man of means, seeking a home with a congenial climate, finds everything ready made to his hand, and although he pays a good price, he finds that every improvement he makes, combined with his neighbors' improvements, enhances the value of his land, and in a short time he is on the way to a comfortable living.

In addition to what has been said about our methods, there is another thing which brings me back to the items in the PRESS which suggested this article, and that is in relation to the employment of Chinese. Up north you will find, as a rule, that the more Chinese are employed, the less desirable will be the neighborhood. In fact, self-respecting people will not voluntarily choose to live in proximity to Chinese. The average Eastern man may have his theories in regard to the Chinese before coming, but usually it does not take long on closer acquaintance to change his mind. In the early days of our settlement—and to day it is still much the same—every man worked in his orchard and the women cared for the flower-garden. Frequently one, or both, were in poor health before coming here, and the bright sunshine and the open air were all the medicine needed to bring round perfect health; but if it had been the custom to delegate these labors to Chinese, necessity would have prevented them from getting that exercise in the open air which nature demanded.

I know there are some in your part of the State who insist that they have a right to employ whom they please. This we deny, but will not argue the point now, though we will say that if you expect to share in the prosperity of the southern part of the State, you will have to discourage the employment of Chinese in all practical and rational ways. Self-interest will ultimately decide this question. If the 150,000 Chinese in this State could be replaced by white labor, it would involve an increase to our population of 300,000 or 400,000 white people. One more remark and I will close. It will be found that to insure the highest success, more or less irrigation will be required. It will pay in almost any part of the upper and central parts of the State to irrigate, and many crops cannot be as successfully grown without as with water. It may be that in many places not much is required for irrigation, but every one wants to have pure water under pressure piped to his house and flower-garden. Here is a suggestion to some of your large land-owners. "There's millions in it." To be sure, it takes money to do it, but in just such ways has the boom been started in Southern California, and so many fortunes made and the foundations for others laid. It is best, of course, to go slow and not expect too much. Begin by offering land at such prices that those who are driven off by high prices here will be glad to secure good homes elsewhere. Make things as pleasant as possible, so that they will not so much miss what they have left behind, and before you know it the new order of things will be started in Upper California. JAMES BOYD.

Riverside, Aug. 9, 1887.

The Boom at San Jose.

EDITORS PRESS:—As you are informed through the daily press, a genuine "boom" has struck the modest little city of San Jose. At last the fossils and mossbacks who for several years have been watching with envious eye the mammoth Southern boom, yet recoiling at the idea of risking a few dollars in advertising to the world the unlimited resources of the great Santa Clara valley, realize at last that the boom has come, and practically of its own accord.

For nearly two weeks the excitement has run high; the average price of good building lots has tripled, while land in all sections of the county has increased in value at an astonishing rate. Real-estate men refuse to talk with you on any other subject; speculators have swarmed in from the rural districts as well as from San Francisco and Los Angeles, and they can barely spare the time to eat their daily meals. The real-estate houses, which have rapidly increased in number during the past week, present

a sight never before seen in the Garden City. They are as crowded as a stock exchange from early morning to late at night; for several days they refused to disperse till after midnight. A crowd of private individuals who have made investments hang around the entrances buying and selling real estate without the formality of a third party. If you see two or more persons on the street engaged in private conversation, you may be sure they are talking real estate. "Thirty dollars a front foot," "Five hundred advance," "Balance in 30 days," are the expressions that greet you at every turn until they are so familiar that you cannot ignore the use of them yourself. To make a long matter short, everybody is talking real estate, thinking real estate and dreaming real estate.

The excitement began about two weeks ago, when a great furor was started in the office of Montgomery & Rea over Alameda and Stockton avenue lots. The new electric railroads which are soon to be in running order on these popular avenues, together with the situation of the university and the fine residences already there, had much to do with the starting of the excitement. At first lots were sold for \$10 and \$15 a front foot, then \$20, \$30 and \$40, and at present it would be extremely difficult to find any desirable lot fronting on one of these famous driveways that can be purchased for less than \$60 or \$70 a front foot.

After the first impulse the boom began to spread. From the university tract it extended to other parts of the city, and prices began to advance in every section at a rate never before known in these parts.

On the 9th inst. a syndicate, composed of the directors of the Garden City bank, purchased the Maddox property for \$60,000, reserving it for the site of a grand hotel; last Friday they were offered \$100,000 for it. Immediately real estate began to advance in that section at a wonderful rate; and at present almost every piece of property in the neighborhood has changed hands many times, every turn meaning an increase of from \$5 to \$7 a front foot.

And now the question is asked,

Is This Rapid Advance Genuine?

Is San Jose property really so valuable as these rates would indicate? How long the present excitement will last is, of course, a matter of speculation; but to the pioneer who is intimately acquainted with all parts of the State, the productiveness of the soil and the healthfulness of the climate, and who is familiar with the many advantages of this valley, it means a bona fide advance in property that is worth all it is bringing.

San Jose has improved wonderfully during the past year. A new electric road connecting the cities of San Jose and Santa Clara, in process of construction, together with a similar one to be built on Stockton avenue; a new city hall, to cost \$150,000, on which work has already begun; new iron bridges soon to span the Los Gatos and Guadalupe creeks; improved streets and sidewalks, a magnificent hotel soon to be erected—all these improvements, together with the many costly residences which are rapidly increasing in number, pretty drives that challenge comparison, numerous popular resorts within easy access, a climate unexcelled in the famous West, beautiful scenery surrounding on every hand, the largest telescope that this wonderful world has ever produced within the boundary of the county on the east, and the site of its grandest institution of learning on the west, the center of a great fruit and wine-producing district—all these facts add to her attractiveness as a home for luxury as well as a money-making center. The advance of San Jose has been slow, but it has been sure. Every step has been a determined one, and one that never retrogressed. It is safe to say that land in this valley will never again be as cheap as it is to day.

The fact that property in the Santa Clara valley has hitherto been held at too low a figure is beyond question, when it is compared with other sections in the productiveness of its soil, the healthfulness of its climate, the beauty of its surroundings and its advantageous situation, being but a few miles from the metropolis of the West. A university of high standing, excellent Catholic college, State Normal school, fine public-school system, besides the many private institutions of lesser fame, declare it without question an educational center. The numerous churches and beneficent societies speak for its moral tone, the character of its people, for its society.

So we may say in all confidence that San Jose and Santa Clara county have started on a new era, and, disregarding the present boom, it is bound to advance. It may not be an advance allied to that of some Southern districts; but it will grow, become more attractive and increase in population. Its institutions of learning, of which we are now proud, will increase in strength and usefulness; its pleasure resorts will be made more attractive, its drives more beautiful. Clinging to its reputation of "The Garden City," San Jose will become a place of costly residences and happy homes, a place where retired farmers, journalists, lawyers, merchants, and men of every profession and vocation, who wish to find a quiet home for the remainder of their days, may come and locate. Surely there is a grand future before San Jose and the valley in which it is located.

San Jose.

AN ENTHUSIAST.

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Farmers and consumers will find it to their interest to call and see us and be convinced.

T. A. LAUDER, Manager.



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Commercial Bank
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SUBLIMED SULPHUR,
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LUMP SULPHUR FOR ACID and POWDER WORKS.

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FOR SALE IN LOTS TO SUIT.

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Self-Regulating
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THE BEST.



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Positively Self-Regulating.

With no cone springs, or springs of any kind. No little rods, joints, levers, or anything of the kind to get out of order, as such things do. Mills in use 6 to 12 years in good order now, that have never cost one cent for repairs. All genuine Enterprise Mills for the Pacific Coast trade come only through this agency, and none, whether of the old or latest pattern, are genuine except those bearing the "Enterprise Co." stamp. Look out for this, as inferior mills are being offered with testimonials applied to them which were given for ours. Prices to suit the times. Full particulars free. Best Pumps, Feed Mills, etc., kept in stock. Address,

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MRS. F. E. SMITH,

Purchasing Agent,

Room 381, Pheasant Building, S. F.

Best of references. Send for circular. Call when in the city.

CALIFORNIA DRIER.

Patent No. 342,243.

Experimental Raisin Making by Artificial Drying.

NOW IN OPERATION.

N. W. Cor. Clay and Mason Streets, S. F.

FRUIT MARKETING.

New York Fruit Auction Described.

A special dispatch from the New York Bureau of the *Morning Call* gives the first description we have seen of scenes at a New York auction of California fruit. We quote as follows:

The auction-room is at the corner of Broad and Beaver streets, and in the upper story of a building in which more fruit is sold daily than in any other place in the United States. Climbing up several flights of stairs, the auction-room is reached. The special feature of attraction in this room, when your correspondent visited it, was a display of samples of a carload of California fruit which had arrived during the day and which fruit was sold soon after and within a few hours of its arrival. The principal display made was of peaches, pears, plums and grapes. The boxes or packages were placed on a frame-work, upheld by wooden "horses," which stood in front of the auctioneer's stand, and the display also extended around the side of the room to his right for a short distance. The fruit was large and very handsome, with the exception of the grapes, which last, to tell the exact fact, were nothing like what can be produced. It was, however, early for grapes. The varieties of grapes were Muscats and Rose of Peru. The peaches commanded general admiration for size and color, and so also did the pears, on the part of perhaps 150 buyers who gathered around to examine them. But the special admiration was for the plums.

Peaches and Pears.

The peaches and pears arrived very ripe. Some were considerably decayed and all gave evidence of complete ripeness, so that a speedy sale was desirable. The journey across a hot desert had ripened them very fast. But the plums, beautiful in color and fine in size, as they were certainly in flavor, called forth expressions of the warmest praise. The fruit was all packed in paper—that is, each peach, pear and plum was wrapped separately in a fine white tissue covering. These papers were cast aside as the fruit was brought to view for critical inspection. There being but one carload to dispose of on this occasion, the buyers were fewer than when the lots are larger. There was also a larger proportion of retailers present. Among the latter were many Italians. An unbroken line of dealers surrounded the samples from an hour or less before the sale up to the time for the auction to begin—11:30 A. M. One of the busiest men in the room was Mr. Day of Sgobel & Day, who arrived some time in advance of the auctioneer, accompanied by Mr. Blois, manager for the agents of the California Fruit Union. Mr. Day was provided with a California fruit catalogue, as indeed every person in the room was, and on this he made entries as he inspected. Before the sale there was ample time to inspect the surroundings.

The Auctioneer.

The auctioneer has a raised stand, with an arrangement much like a reading-desk in front of him. To the right and left of him are raised platforms extending a short distance. Over his head is a large bulletin board, on which are painted the conditions attending the sale of green fruit. Among these conditions are the following:

Cash—no allowance for anything (except the customary damage for brimstone, if any); fruit to be delivered to the purchasers at their places of business in this city upon payment of the regular cartage for the same, etc.; a deposit of 20 per cent in current funds, where required on account of the purchase.

The room is large and nearly square. Two sets of windows light it from the sides, and overhead are two huge skylights, which are raised and lowered by ropes, of which enough are attached to the walls to make quite a respectable showing of "rigging." The room is therefore light enough to show off all the beauties, as well as the imperfections, of the fruit offered by sample for sale. Of course, only sample boxes or "packages" are brought to the auction-room. The great skylights not only make the room lighter, but also play a very important part in ventilation and thereby in preserving the green fruit in warm weather, as may be imagined. The climate at less sultry seasons than the present is hinted at solidly by two large stoves, at present disconnected from chimneys, and which stand in the rear of the room. The benches on which the buyers are seated during the sale are arranged for the most part in rows in front of the auctioneer's desk, but there are also other seats at each side of his dais. Three hundred or more persons—perhaps 400—can be easily seated. The weather has streaked the walls of the auction-room, but at present little will probably be expended in the way of beautification, for the reason that the fruit auction business has grown so that a new building, to cost \$70,000, is now going up at the corner of State and Bridge streets. The new building will be opened this fall. It is directly opposite the office of Sgobel & Day. The present auction-room is only a short distance from the office of the agents.

Features of the Sale.

About 11:30 o'clock a dapper and pleasant-looking man, who is neither Brown nor Secomb, but who is to act as auctioneer on this occasion, appears, and at once proceeds to business.

He first sheds his coat and vest and dons a thin linen coat out of deference to the weather and the exertions which he is immediately to make. Having done this, and having looked over his catalogue, and also having made a rapid and probably exact estimate of the buyers assembled, for he has many years of experience, he mounts the rostrum, whistles through a tube to some one in a lower story, and then begins the sale without more ado. The most of those present as buyers have taken seats, but there is still a fringe of retailers, who evidently intend to buy the samples, and who stand near the packages, looking at the fruit critically. Warm weather ripens fruit and makes a market for it; also, it calls out its distinctive insignia—the straw hat. Most all the dealers have on straw hats, and they wipe the perspiration from their faces as they lean back, catalogue and pencil in hand, to bid and check. Mr. Day is on the platform close to the auctioneer, and checks on his catalogue. Mr. Blois sits at his left, ready to act as soon as the sale is concluded. He also "checks."

Fruit Connoisseurs.

It must at once occur to the casual onlooker that this gathering makes up the most critical jury possible on California fruit. It is entirely a business transaction, and they judge every package in the light of profit to themselves, the only question being just what it will bring—what they can get for it. They are not Californians, have no pride in advancing the fruit as a Californian product, and, of course, would just as soon sell fruit from any other section, if profit is found thereby. Therefore if the California fruit makes any headway in this auction-room before this jury it has the indorsement of the set of men best competent to judge as to its merits probably to be found east of the Sierras. That it is making headway and that this is manifested by the widening circle of buyers has been mentioned in preceding dispatches. Not only on the score of impartiality, but also on the ground of experience, will it be seen that these buyers are qualified to judge. They are not novices in handling fruit by any means, the majority, if not all, of those in the room having been "raised in the business" from boyhood. And as this audience, engaged on this business, possesses at this time and in this place a peculiar interest for Californians, your correspondent regrets that he had not an instantaneous photograph, that the shipper in California might see the scene for himself. The buyers are largely middle-aged men. They bid in what they want with little noise, following the nimble tongue of the auctioneer as he climbs the financial stair. The sale is over speedily. In ten minutes the carload has been sold; those who wanted the samples have secured them. This is therefore quick and certain work. The fruit has not had much opportunity since it arrived to come to harm before it has changed hands and become the property of others.

The Purchasers.

The purchaser is equally interested with the shipper in an expeditious service. As soon as the sale is over Manager Blois is on the move. He verifies the prices as he has checked them, and at once sends out a dispatch to the California Fruit Union, so that the prices received ought to be known in California soon after the auction—perhaps in an hour. The arrangements for the transfer of the fruit to the premises of the purchaser are systematic. The sale closes at about noon—a little earlier. By 1 o'clock the drays will have delivered a large part of the fruit. At night a good share of it will be on the tables of well-pleased New Yorkers, and California fruit will be brought into hundreds of homes, in fact.

Immediately after the California sale the sale of oranges, lemons, etc., begins. With more fruit and more buyers the scene is more animated, but the foregoing is a fair outline as it is from day to day. In the city markets choice Bartlett pears from California are \$1 a dozen. Native pears are coming in slowly and are poor. Native grapes are scarce and high. Delawares are 40 cents a pound and Niagaras 30 cents. Concord are more plentiful for 15 cents a pound. California green-gages, Gros prunes and yellow-egg plums are 35 cents a dozen. Best selected peaches are still those from California, and cost 60 cents and 75 cents a dozen. Best Delaware fruit is \$2.80 and \$3 a basket.

WOULDN'T LOSE A SINGLE COPY.—One of our subscribers in Los Angeles county, writing for a back number of the *RURAL PRESS* which had failed to reach him, says: "I calculate to have the papers bound in book-form at the end of the year, and don't want to lose a single copy. Think I have been benefited already ten dollars' worth by a recipe for prevention of damage to 'cots by June-bug.' We doubt not that many of our readers could give similar evidence—that even one article in the paper has sometimes been worth to them more than the price of several years' subscription."

OREGON AGRICULTURAL COLLEGE.—The corner-stone of the new building for the State Agricultural College was laid on the college farm near Corvallis, on the 17th inst., by the Grand Lodge of Masons of Oregon. Gov. Penney, Supt. McElroy, Judge Strahan of the Supreme Court, and a large number of distinguished citizens from other parts of the State were present.

THE Napa and Solano Agricultural Fair is to be held this year at Vallejo.

A Horticulturist in Arms.

EDITORS PRESS:—"Ye" horticulturist has buttoned on his uniform and joined his company, and is now in camp under camp regulations for a week, where instead of the shrill chattering the morning drum and cannon arouse from slumber. It is somewhat of a change, but rather enjoyable than otherwise. As is generally known, our camp is in the same field with the First U. S. Infantry Regiment, which is greatly to our advantage in many ways, principally in the knowledge we will gain of military usage. We came into camp the morning of the 14th, and break camp the 21st. The camp is pleasantly situated just out of town, far enough away from the beach to miss the cold chill of the sea breeze and fog, although the fog comes up regularly every evening at dark and stays until 10 o'clock next day, which makes it pretty cool at night and in the morning, but not so much so as it is nearer the coast.

August 20th.—The excitement of the camp and the many attractions in the vicinity of Santa Cruz has delayed the completion of this article. The week has passed very pleasantly to the Guardsmen. The big trees, bath-houses, natural bridge, lighthouse, fishing excursions, etc., have been all "taken in," as the common parlance has it. Among the notable features of the camp was the appearance of Brigadier-General Carey and staff, and the review on the 18th.

Camp-fires and receptions nightly are the usual features of the evenings. There is a very marked improvement in the parades of the Guards. The opportunities for army instructions were never better on any camp-ground ever occupied by the National Guards, and all have profited by it.

While the writer has been in camp he has not kept his eyes closed on the subject of fruit-growing, and has learned many things. In the first place, Santa Cruz needs a cannery (so the fruit-raisers tell me), but probably the high price of labor, sugar and tin may prevent one being built. The climate is so damp that sundrying is not very successful (so I am told), necessitating the use of driers, and many beginners not being able to invest this season, have suffered loss from lack of sale in the home market. It seems to me that a neighborhood could consolidate on a central drier and thereby save their fruit. It is always best to be prepared to dry; then if the canneries pay a living price, all right; if not, dry. The quality of the fruit as regards size is inferior to our Sacramento valley fruit, but it is of good flavor, and appears to keep well. The plum appears to do well, also the pear and apple, but peach and apricot are not so good. The apricot which is now in the market is very spotted, all I have seen. It seems so strange that our apricots (150 miles farther north) are all gone 4 weeks ago, and here they are just in market. I think the peach and apricot here would make a good article dried. The sooner every locality in the State learns what fruit will do the best and then handle it the best way for market, the better it will be for the localities and all concerned in the fruit industry. The resources of this State are vast and various, and the horticulturist will have plenty of use for his brains to overcome all obstacles and adapt himself to his surroundings and location.

To-morrow we break camp, and the following week will find us all at our usual vocations, but the pleasures of this camp will never be forgotten, and I opine that the souvenirs of the trip gathered from various places will fill a niche in the what-not as a reminder of the happy times in Camp Shehan. J. R. SPRINGER, Santa Cruz.

A CONTRIBUTION TO CALIFORNIA HISTORY.—An historical document of the first importance will appear in the September number of the *Overland Monthly*, finally settling the difficult point of the exact date of the discovery of gold in the tail-race of Sutter & Marshall's mill. It is a record by the only man present who made an entry in his diary on the day of the discovery. H. W. Bigler was a member of the Mormon Battalion that was enlisted to aid in the conquest of California, and came across the plains in '47. After the disbanding of the Battalion he remained in California, and was employed in building the famous mill at Coloma. His diary is of the greatest interest, as well as of the greatest value historically, and is now printed for the first time. It was copied by Bigler himself, and slightly revised in orthography and syntax by Mr. John S. Hittell.

TWINE-BINDER TRIAL IN FRANCE.—A dispatch to the *Chicago Times* from Paris, dated August 11th, is as follows:

The most important international contest of twine-binders ever held on the continent has just been concluded at Etregagny, near this city. The trial lasted several days, and was characterized by the utmost fairness on the part of the judges, who were representative agriculturists of France. The result was an award of the first prize to an American machine (the McCormick) over all competitors. All the principal English and American machines competed, including the Hornsby, the leading English twine-binder. A desperate effort was made by foreign machines to capture the prize, but the award of the judges was unanimous, giving the gold medal and 300 francs to the McCormick.

Important Reduction of Railway Rates.

A matter of great public interest, and which will render timely service in the development of the State, is a reduction of passenger fares, which there seems reason to believe will be general. The proposition was first made by Commissioner Abbott to the managers of the Southern Pacific system, and they agreed to a reduction of all 6-cent divisions on their lines to 5 cents, 5-cent divisions to 4 cents and 4-cent divisions to 3 cents. The following account of the reductions, with illustration of their effects, is given by the *Call*:

The reductions on the various divisions will be as follows: Stockton to Milton and Oakdale, 4 cents; Galt to Ione, 4 cents; Sacramento to Redding, via Marysville, 3 cents; Davis to Redding, via Willows, 3 cents; Redding to Coles, through the Sacramento canyon, 4 cents; Sacramento to Auburn, 3 cents; Auburn to Truckee, through snowsheds, where there is no local traffic, 5 cents; Lathrop to Sumner, 3 cents; Sumner to Newhall, 4 cents, via Tehachapi pass; Newhall to Santa Barbara, 3 cents; Newhall south to Banning, including all roads round Los Angeles, 3 cents; Banning to Yuma through the Colorado desert, where there is no local traffic, 5 cents; San Francisco to Sacramento via Lathrop, 3½ cents; via Benicia, 4 cents.

Northern Division.

Northern division—San Francisco to San Jose, Monterey and Templeton, 3 cents. This shows the entire system, excepting the line from Berenda to Raymond, a distance of 21 miles, on which the local traffic is insignificant. On this a rate of 10 cents per mile has been made, it being the highest within the State.

A list of some of the most important rates I have brought with me, continued Commissioner Abbott, will enable you to appreciate the extent of the reductions. They are as follows:

	Present Rates.	New Rates.
San Francisco to		
Truckee.....	\$9.55	\$8.30
Redding.....	9.05	7.50
Tehama.....	7.20	6.10
Los Angeles.....	21.70	15.00
Fresno.....	7.60	5.90
Goshen.....	9.00	6.90
Tulare.....	9.40	7.25
Sumner.....	11.90	9.10
Stockton.....	3.30	2.50
San Jose.....	1.75	1.25
Livermore.....	1.75	1.25
Marysville.....	5.10	4.60

The rates from Vallejo to Suisun and to Calistoga will also be 3 cents per mile.

From San Francisco to Sacramento the company will issue a special ticket via Benicia to Sacramento at \$2.50, the present rate being \$3.30.

Of the other railroad lines Commissioner Abbott said: "They were doubtless waiting to see what the Southern Pacific intended to do about the matter. After we have entirely finished with the big system we will proceed to work on the rates to Cloverdale and Santa Rosa, throughout the Donahue system, on the same basis. We will then proceed to Los Angeles, where the rates of the California Central will be adjusted. As far as the North Pacific Coast line is concerned we do not expect to have much to do, as I understand the rates there are exceptionally reasonable."

Topics for Correspondents.

An Asparagus Bed.

EDITORS PRESS:—Will some of the readers of the *PACIFIC RURAL PRESS* tell me if asparagus beds can be successfully made after the fall rains, and also where I can be likely to get good plants? Any hints on the cultivation of the same will be gladly received.—MRS. V. HOPE, Blokesburg, Humboldt Co.

Limes in Tehama County.

EDITORS PRESS:—One of your subscribers in Red Bluff would be pleased if some one who is able, would, through your columns, give his opinion of the climate of Tehama county for the culture of limes, with any other information that a novice would find useful.—E. W.

For Windmill Experts.

EDITORS PRESS:—I find many intelligent persons who think it is harder to pump water into the bottom of a tank with 10 feet deep of water in it than to bring the pipe up to the top of tank and let it run in. Please state if there is any difference.

2. State which way is most desirable in putting up a tank.

3. State whether it is the best way in piping a tank to draw the water from the service or supplying pipe direct or to run a separate pipe down from the tank.—H., Chico.

ANGORA GOATS.—C. P. Bailey of San Jose exhibited 12 head of fine Angora goats at the Santa Clara Valley Agricultural Fair which, in weight of fleece and fineness of texture, would compare favorably with the best imported stock. Four head were selected of this exhibit to fill an order from Col. Peters of Georgia, who is one of the oldest breeders and importers of the Angora goat in the United States. Col. Peters commenced this business in 1849, and has followed it with signal success since. In selecting this lot from Mr. Bailey from the California stock, which is an emphatic compliment to our climate and breeding, he had in view the increasing weight and length of mohair in his own flock.

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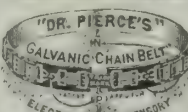
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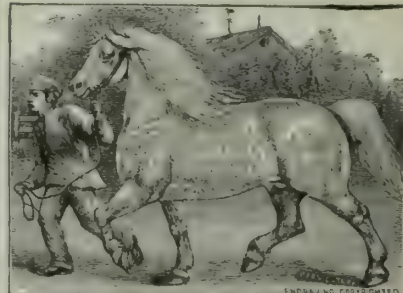
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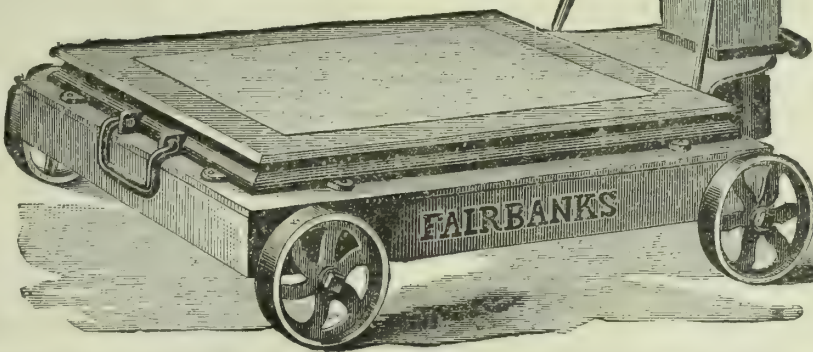
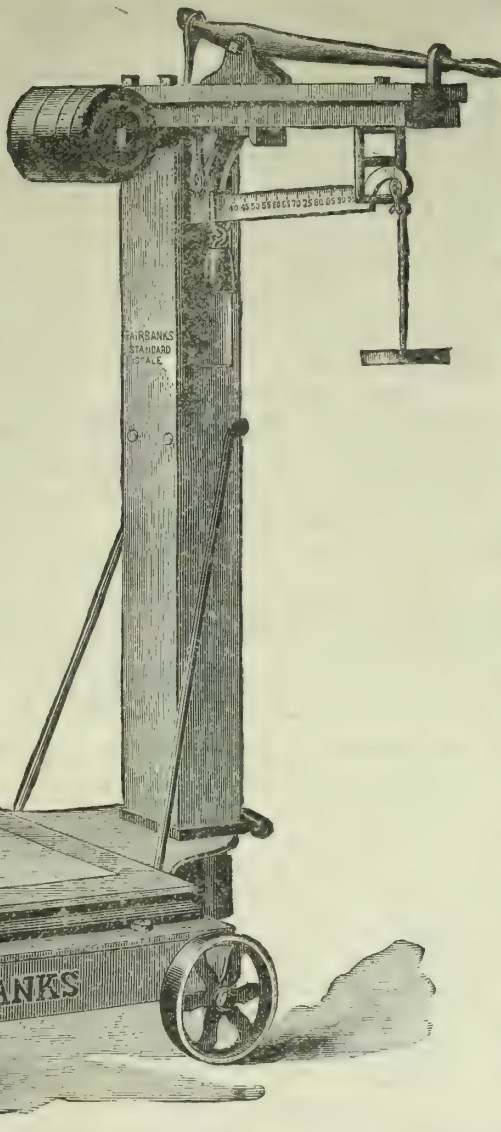
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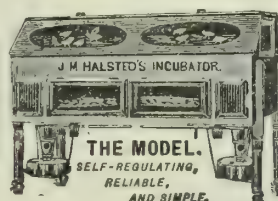
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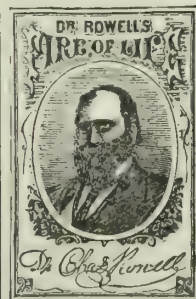


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S. F. MARKET REPORT

NOTE.—Our quotations are for Wednesday, not Saturday, the date the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, August 24, 1887.

The past week did not bring to farmers improved prices in any of the leading farm products. There is a boom in canned fruits, but then raw fruits are with few exceptions no better. Wheat has been inactive with the bears hammering prices down. At the East, wheat has been active at fairly steady prices, but in Europe the market has been against sellers.

Foreign Review.

LONDON, Aug. 22.—The *Mark Lane Express* in its weekly review of the British grain trade, says: The rainfall has checked the shipping and delivery of wheats, and consequently arrested the downward course of prices, although values in London and in some provincial markets have continued in favor of buyers. Estimates, based on the Government statement as to the acreage of crops for 1887, place the new yield of wheat at about 6,250,000 qrs., after deducting 6,000,000 qrs. for seed. The foreign wheat trade is devoid of feature. Russian and American samples are competing at the lowest rates.

Crops at the East.

CHICAGO, Aug. 21.—The following crop summary will appear in this week's issue of the *Farmers' Review*: Our reports do not indicate any material change in the condition of the corn crop in the different States as a result of the recent rains. Corn on high and dry lands was too far gone to be recuperated, but low-lying and late-planted fields have been somewhat delayed. There, however, is not a sufficient acreage to affect to any appreciable degree the general average of condition. Dakota alone reports a condition of the crop above the average yield. The wheat and oats report does not differ materially from the last reports.

Synopsis of the weather crop bulletin of the Signal Office during the week ending Aug. 20, has been slightly cooler than usual throughout the lake region and upper Mississippi and Missouri valleys. On the Pacific Coast the temperature differed but slightly from the normal. Well-distributed rains have occurred throughout the drouth regions, and reports this morning show that the rain continues in this section. The weather for the week has been favorable throughout the corn belt, recent rains having greatly improved the condition of crops, but owing to the lateness of rains in the principal corn-producing States the yield will probably be below the average.

Eastern Wheat Markets.

NEW YORK, Aug. 21.—Wheat closed steady at a shade above bottom prices. August, 79½¢; September, 80½¢; October, 81½¢; November, 82½¢; December, 84¢; January, 85½¢; and May, 89½¢.

CHICAGO, Aug. 24.—P. M.—Wheat easier; cash, 68 3/16¢; September, 69 1/16¢; October, 70 1/16¢.

California Fruit in New York.

NEW YORK, Aug. 22.—The sale of California fruit to-day was largely attended and all sound fruit did very well. Grapes and most of the peaches were in good order, but the pears were dead ripe and some had been blistered. Peaches brought 80¢@\$.25, according to quality and condition; pears, \$1.37 1/2 @\$.62 1/2, mostly too ripe and soft; Tokay grapes, \$3.35 a crate; Muscat grapes, \$1.87 1/2.

NEW YORK, Aug. 23.—About 2300 packages of California fruit sold at auction to-day. Owing to the arrival of the fruit train almost all the fruit had some decay. The prices, therefore, were lower than yesterday. Bartlett, Diel and Vicar pears sold at \$1.02 per box; Crawford and other peaches, 40¢@\$.1.05; plums, 85¢@\$.1.95; Muscat and Peru grapes, 60¢@\$.1.30.

Canned and Dried Fruit East.

NEW YORK, Aug. 22.—California raisins have been jobbing quite actively and bringing full prices. Two-crown, \$1.10@1.20; 3-crown, \$1.35@1.40; London, \$1.35.

A firm of this city which deals largely in California goods, sold more canned and more dried fruits last week than during the whole canning season last year. The advance in prices was not ascribed chiefly to the scarcity of labor, as indicated by dispatches from S. F., but to the lightness of the Eastern peach crop, as peaches and apricots were mostly affected. The firm refused an order to-day for ten carloads, or about 3250 cases of peaches, at a figure that would have been snapped up a week ago. At Baltimore, the prices of Eastern packed peaches in 3-lb cans is now from \$2.50 to \$2.70 per doz., as against \$1.50 to \$1.80 last year. The price in California is about \$2.35, against from \$1.90 to \$2 last year. The advance in apricots has been from \$1.40 to \$1.50 to about \$1.70. Prices of evaporated fruits have also risen largely. One order for peaches at 2 1/2¢ per lb was refused Saturday, though the usual price is 19 and 20¢. Apricots have advanced about 1¢ per lb. There has been considerable advance too in the prices of canned pears and plums.

California Fruit at Chicago.

CHICAGO, Aug. 19.—Receipts of Calif. fruit continue liberal. Several carloads arrived, one entirely of pears. The market shows a good demand. Pears are lower and other fruit is about steady. Michigan and New York have had a large crop of pears this season, which are now coming forward freely, and although dealers show a preference for California-grown, this output has caused lower prices. Bartlett pears were quoted at \$2.90@3; Beurre Hardy pears, \$2@2.25; Duchesse pears, \$1.50@1.75; Clairegrou pears, \$2@2.50; Orange Cling and late Crawford peaches, \$1.25@1.50; Muscat grapes, (double crates) \$3@3.25; Tokay, \$3.25@3.50; German and Gros pears and Quackenboss plums, \$1.25@1.50.

California dried fruits are firm. Apricots are the only description of new fruit coming in, and the arrivals of these are rather small, with good demand.

Raisins are scarce and firm. Apricots, evaporated, future delivery, 14 1/4¢@15¢; cash, 15¢@16¢. Raisins, London layers, 20-lb boxes, \$1.50; loose Muscatel, \$1.35; California layers, \$1.35.

CHICAGO, Aug. 23.—The market rules easy, especially for pears and peaches, which are lower. The following prices were quoted to-day for fruit in good condition: Muscat grapes (double crates), \$2.75@3; Tokay grapes, \$3@3.25; Clairegrou pears, \$2@2.25; Beurre Hardy pears, \$1.75@2; Bartlett pears, \$2.75@3; Orange Cling and late Crawford peaches, \$1.25@1.50; German and Gros pears, \$1.25@1.50.

California dried fruits are in fair request; offerings small; prices firm all around. Apricots, evaporated, future delivery, 14 1/4¢@15¢; do. cash, 15¢@16¢. Peaches, peeled, evaporated, 25¢@27¢; do. unpeeled, evaporated, 14¢@16¢; do. unpeeled, sun-dried, 10¢@12¢. Raisins, London layers, 20-lb boxes, \$1.50; loose Muscatel, \$1.35; Calif. layers, \$1.35.

Eastern Wool Markets.

BOSTON, Aug. 20.—The demand for wool has again been active, and sales amounting to 2,653,100 lbs have been reported. The tone of the market is rather stronger, but no higher prices are expected for the present. All grades are now selling well. Fine washed fleeces, which were first to experience the recent shading in prices, are now quite firm at quotations. Territory wools are in large supply, but moving off well, and new wools arriving from Montana and other sections are in excellent condition and meet approval. Among the sales of the week were 132,000 lbs Calif. spring and Oregon at 19¢, 80,000 lbs Calif. fall on private terms, and 54,700 lbs. Territory at 19¢@26¢.

NEW YORK, Aug. 21.—The market remains unchanged and sellers see no opportunity for higher rates. Among sales were 1000 lbs burry Calif. at 14¢.

The Philadelphia market shows no improvement; manufacturers buying only when concessions are made. Among sales were 1000 lbs scoured Calif. at 52 1/2¢, 3500 lbs do. at 60¢, 1000 lbs Montana medium at 25¢, 25,000 lbs Territory coarse at 17¢, and 11,000 lbs Territory medium at 22¢.

Eastern Hop Markets.

NEW YORK, Aug. 22.—Hops are in light demand. The English crop outlook is improved by recent rains. Coast crop of 1886, best, 16¢@18¢; good to common, 13¢@15¢; 1885, good to prime, 8¢@10¢.

CHICAGO, Aug. 23.—There is no change in hops. Old hops are scarce and no new goods have been placed on this market yet. Inquiry from brewers is limited and dealers are waiting to see what the prospect for a market on new hops will be; 1886 California range from 15¢@18¢; 1886 Washington Territory, 22¢@24¢.

Local Markets.

BAGS—There is an active movement in the market, with sales of 6,000,000 for delivery in June-July, next year, at 5 1/4¢ and 6 cts. The high price of the raw material in Calcutta is against low prices.

BARLEY—Heavy receipts have ruled throughout the week, but the market has not been materially affected. Call opened on Monday with barley weak and low, but it advanced on Tuesday. Today's sales were as follows:

Morning Session: Buyer 1887, old contract—200 tons, \$1.07 1/2; 100, \$1.06 1/2; 100, \$1.06 1/2. Seller 1887, old contract—100 tons, 93¢ per cbl. Afternoon Session: Buyer 1887, old contract—100 tons, \$1.05; 100, \$1.03 1/2. Seller 1887, old contract—100 tons, 93 1/2¢. Buyer season—100 tons, \$1.12 per cbl.

BUTTER—The market is soft and slightly lower under freer receipts of fresh rolls. The trade has been running more on pickled, owing to its relative cheapness.

CHEESE—The market is very strong, with a good demand ruling. The East is firm at a slight advance.

EGGS—Strictly choice fresh laid are scarce and command full prices. Other qualities are stronger.

FLOUR—On Friday last a further reduction of 10 cts per bbl. was made. The market is well supplied, with the demand, at the decline, improving.

WHEAT—Trading in the sample market is slow. The Call Board opened on last Monday. Trading each day was light, with the bears hammering prices down. The fight of dealers a few weeks ago was against the bulls, and it now looks as if the fight of farmers will have to be against the bears. Transactions on Call look very much like cross orders. To-day's recorded sales were as follows:

Morning Session: Spot—200 tons, \$1.40; 100, \$1.39. Seller 1887—100 tons, \$1.37 1/2; 100, \$1.37 1/2; 100, \$1.36 1/2; 100, \$1.35 1/2 per cbl. Afternoon Session: Spot—100 tons, \$1.36 1/2; 100, \$1.36; 100, \$1.34 1/2 per cbl.

[COMMUNICATED.]

Market Information.

Cereals.

The total exports of wheat from Australia to Great Britain during the first 7 months of 1887 were 2,688,000 bu., against 400,000 bu. for same time in 1886. The exports of flour, however, were only 6000 bbls, against 110 000 bbls in 1886.

With all the brilliant prospects in Europe and the falling off in the United States it is stated that the wheat crops of the United States, England, Russia and France, will exceed that of last year only 28,000,000 bu. This will only offset the deficiency in India.

The new crop of Canada barley is reported bright, and of good malting quality, but weight 3 to 5 lbs lighter per bu. than last year's crop.

Quantity of barley on passage to the United Kingdom, July 28, is estimated at 1,460,000 bu., against 410,000 bu. for the corresponding time last year.

In Germany, at last postal advice, the harvesting of rye was interrupted by rain; otherwise the weather has continued favorable. The rye crop, so far as harvested, has turned out satisfactorily; and wheat is said to promise even better results. As to oats and barley, reports vary. Potatoes will be a good crop.

Exports of wheat from India for the week ending August 13 were 180,000 bu., of which 100,000 bu. were forwarded to the United Kingdom and 80,000

bu. to the Continent. The total shipments from January 1 to August 13 were 23,880,000 bu., of which 11,760,000 bu. were to the United Kingdom and 12,120,000 bu. to the Continent.

Postal reports from Roumania say that splendid harvest weather has prevailed along the Danube, and much of the grain has been cut and few parcels delivered. The quality of the grain is said to be excellent, and a larger proportion than usual of heavy weight, as the weather has been so favorable—wheat weighing 59@64 lbs; rye, 55@60 lbs, and barley 45@53 lbs to the bu. The maize crop has been much improved by recent rains.

The Toledo Produce Exchange circular says: Baltimore correspondents and the State Agricultural Departments say that Pennsylvania, Maryland and Virginia wheat crops are very deficient, and that this is especially developed in thrashing. We do not believe a State in this Union will produce a full crop of wheat. Dakota is making great claims, but there is too much land for sale up there, and it is safer to rely on other statements. The Government makes the promise there 88, but gentlemen of repute, Dakota farmers, state that the Government estimate is much too high.

From *Dornbusch*, London, Aug. 5, we obtain the following: The trade remains quiet and observant, but distrust of the situation at home and abroad prevents the initiation of fresh business, while the closing of contracts now maturing will not inspire confidence or give buyers courage for the coming campaign. So far as breadstuffs are concerned, Europe is resting in the lap of plenty; good crop reports are the rule, and the wheat as it leaves the field is ready for the mill; thus at the outset native produce will get to the weather side of imported breadstuffs, and, as a natural consequence, take the wind out of the sails of the latter. Under these circumstances buyers of foreign grain are likely to act with unusual caution, which even a spell of wet weather would not wholly overcome.

On this coast there is nothing new to report. Farmers who have not sold are disposed to store, only selling enough to pay current expenses. The grade of the Washington Territory and Oregon wheat is above last year's; but in this State it is considerably below. Samples of wheat have been received which look plump and fine but have no bread-making power. Trading in our market was light last week, hardly enough to make quotations. No. 1 wheat shipping has sold readily to short sellers at \$1.50. It is claimed that very little of this grade can be had. Milling wheat has sold all the way from \$1.60 to \$1.75 per cbl; the latter figure was only obtainable for two parcels of extra choice gilt-edged well situated, and therefore cannot be quoted as a correct reflection of the market. Quite a number of vessels were taken the past week to load wheat for U. S. K.

Barley, under continued heavy receipts, ruled weak at low prices up to yesterday, when a higher range was established under a free speculative movement on Call. The consumption continues very large; if anything, it shows an increase over last month. The last vessel for Australia took out about 700 tons of chevalier. It is claimed that other purchases have been made for the same destination. Considerable brewing has been taken, chiefly for Eastern account.

For oats the market is weak at quotations, owing to excessive supplies and only a moderate demand. Owing to light crops at the West it is hardly likely Nebraska will send us oats this season.

Corn is stiff at full figures, notwithstanding free receipts. The supply of choice grades is light, but inferior grades are in overstock for the immediate future.

In both rye and buckwheat there is nothing new to report.

Feedstuff.

Both bran and middlings are easy at lower quotations. The supply appears to be increasing, with a stronger selling pressure reported. The consumption appears to be increasing.

Ground and rolled barley are in liberal supply, with prices steadier at the close. The consumption is free. Other feedstuffs are unchanged.

Hay, if choice, is wanted at extreme figures. The supply in the country is reported to be rapidly decreasing under free-buying orders from large consumers. In this city, dealers are reported to be fairly well stocked, but as stablemen are boarding more horses, stocks require almost constant replenishing.

Fruits.

There is some inquiry for raisins from the East, with sales reported to have been made for future delivery for shipment to Chicago and St. Louis, but no particulars are obtainable.

In dried fruits there is a very active demand, but dealers are asking more money, which at present buyers do not appear disposed to give. With the large consumptive demand from the East and an increasing call from England for certain varieties, it looks as if the market ought to do still better. The quantity dried this season is very heavy—apricots and peaches going from 10 to 15 times last year's output. The quality also shows a decided improvement.

The market for raw fruits the past week was glutted with overripe pears and peaches, not only necessitating low selling prices but also dumping to get rid of consignments. The canners received large quantities on early contracts, much of which they were forced to put on the market. On Monday last the market was fairly well cleaned up of all desirable parcels, causing a stiffening in prices which was followed by an advance for the more solid peaches, pears, plums, etc., the demand coming from both canners and the trade. Apricots are going out, as are blackberries and raspberries. Choice plums and prunes are wanted. Strawberries continue in good supply.

Grapes are in larger and improved variety. The heavy supplies of other fruits operate against them. The choice table varieties are freely taken for shipping up North, both by rail and steamer. Wine grapes are coming in and find a ready market.

Watermelons and canteloupes are in heavy stock. The demand is active.

Live-Stock.

Bullocks continue to rule weak under free selling. The low prices ruling this summer are a source of considerable surprise, and can only be accounted for by some large cattlemen breaking up their herds so as to sell land to the incoming immigration. Another thing, the past few winters have been mild and

therefore favorable for cattle. Mutton sheep are offering quite freely. Hogs are offering fairly well, enough coming in to keep prices down. In horses there is nothing new to report.

The following are the wholesale rates of slaughtering to butchers:

BEEF—Extra, 7¢@7 1/4¢; first grade, grass fed, 6 1/4¢@6 3/4¢ per lb.; second grade, 5 1/4¢@6¢; third grade, 4 1/4¢@5 1/4¢.

MUTTON—Ewes, 5 1/4¢@6¢; wethers, 6¢@6 1/4¢.

LAMB—Spring, 7¢@8¢.

VEAL—Large, 6¢@7¢; small, 6¢@8¢.

PORK—Live hogs, 4 1/4¢@4 3/4¢ for heavy and medium; hard dressed, 7¢@7 1/4¢ per lb; light, 4 1/4¢@4 3/4¢; dressed, 7¢@7 1/4¢; soft hogs, live, 3 1/4¢@4¢. On foot, one-third less for grain or stalled, and one-half less for stock running out.

Vegetables.

The better qualities of tomatoes are taken by canners, the short pack at the East causing them to run quite freely on tomatoes here. The market has shown considerable fluctuations.

Pickling onions and cucumbers found larger sales this season than ever before; probably this is due to the short crop of vegetables at the West.

In cucumbers and other seasonable vegetables the market fluctuates from day to day according to the supply and demand.

Choice potatoes have a firmer tone although not quotable higher. Poor potatoes are hard to sell. Sweet potatoes fluctuate from day to day.

Choice onions are in fair demand, but 'poor are hard to sell even at marked concessions in prices.

Miscellaneous.

Poultry ruled fairly steady throughout the week. Honey is wanted at a further advance. The market closed strong.

In hops, buyers are still trying to beat down the market. At the East, stocks are light, consumption large, with the crop outlook favorable for a larger output than last year's.

Fall wool coming in is poor in grade, dirty, seedy and burry, and altogether unfit for Eastern buyers, except at low prices. They range from 8 to 12 1/2¢, while for clean but burry a slight advance might be obtained. Choice fall will fetch 15 to 18¢, perhaps even slightly more.

The tonnage movement compares with last year at this date as follows:

	1887.	1886.
On the way.....	297,723	313,749
In port, disengaged.....	56,308	58,201
In port, engaged.....	35,006	68,652

Totals.....389,037 440,602

The above gives a carrying capacity as follows: 1887, 621,459 short tons; 1886, 704,963 short tons; showing a decrease compared with last year of 83,504 tons.

San Francisco, August 24, 1887.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

BEANS AND PEAS		WEDNESDAY, Aug. 24, 1887.	
Bayo, cbl.....	1 90 @ 2 50	Paper shell.....	19 @
Butter.....	1 75 @ 2 00	Brazil.....	11 1/2 @
Peas.....	1 80 @ 2 10	Pecans.....	9 @
Red.....	1 40 @ 1 55	Peanuts.....	4 1/2 @
Pink.....	1 25 @ 1 30	Pilcher.....	19 @ 11
Large White.....	1 90 @ 2 00	Hickory.....	7 @ 8

POTATOES	
Small White.....	1 75 @ 2 00
Large.....	1 75 @ 2 25
Early Rose.....	40 @ 1 20
Early York.....	40 @ 1 20
Early York.....	40 @ 1 20
Early York.....	40 @ 1 20

BROOM CORN	
Southern.....	50 @ 75
Northern.....	50 @ 75

CHICKEN	
California.....	50 @ 60
German.....	50 @ 60

DAIRY PRODUCE, ETC.	
Cal. fresh milk, lb.....	25 @ 27
do Fancy butts.....	30 @
Pickle roll.....	20 @ 25
Firkin, new.....	18 @ 22
Eastern.....	18 @

BUTTER	
Cal. fresh milk, lb.....	25 @ 27
do Fancy butts.....	30 @
Pickle roll.....	20 @ 25
Firkin, new.....	18 @ 22
Eastern.....	18 @

EGGS	
Cal. fresh milk, lb.....	25 @ 27
do Fancy butts.....	30 @
Pickle roll.....	20 @ 25
Firkin, new.....	18 @ 22
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Firkin, new.....	18 @ 22
Eastern.....	18 @

EGGS	
Cal. fresh milk, lb.....	25 @ 27
do Fancy butts.....	3

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

Apples, bx com.	30 @ 50	Wine, doz.	1 25	Wine, doz.	1 25
do choice.	50 @ 1 25	Wine, doz.	1 25	Wine, doz.	1 25
Apricots, lb.	1 @ 2	Wine, doz.	1 25	Wine, doz.	1 25
Bananas, bunch.	1 50 @ 3 00	Wine, doz.	1 25	Wine, doz.	1 25
Blackberries, ch.	4 10 @ 6 00	Wine, doz.	1 25	Wine, doz.	1 25
Cherries, white, bx	50 @ 1 00	Wine, doz.	1 25	Wine, doz.	1 25
do black, bx	50 @ 1 00	Wine, doz.	1 25	Wine, doz.	1 25
do Royal Ann.	50 @ 1 00	Wine, doz.	1 25	Wine, doz.	1 25
Cherry plums.	50 @ 1 00	Wine, doz.	1 25	Wine, doz.	1 25
Crabapples.	50 @ 1 00	Wine, doz.	1 25	Wine, doz.	1 25
Cranberries.	10 00 @ 12 50	Wine, doz.	1 25	Wine, doz.	1 25
Currants ch.	50 @ 1 00	Wine, doz.	1 25	Wine, doz.	1 25
Gooseberries lb.	50 @ 1 00	Wine, doz.	1 25	Wine, doz.	1 25
Figs, black, bx.	40 @ 50	Wine, doz.	1 25	Wine, doz.	1 25
do white, bx.	30 @ 50	Wine, doz.	1 25	Wine, doz.	1 25
Grapes, white.	25 @ 35	Wine, doz.	1 25	Wine, doz.	1 25
do black.	35 @ 60	Wine, doz.	1 25	Wine, doz.	1 25
do Rose Peru.	50 @ 65	Wine, doz.	1 25	Wine, doz.	1 25
do Muscat.	40 @ 60	Wine, doz.	1 25	Wine, doz.	1 25
do Tokays.	75 @ 1 00	Wine, doz.	1 25	Wine, doz.	1 25
Isabel.	50 @ 1 00	Wine, doz.	1 25	Wine, doz.	1 25
Wine, Zinfandel.	15 @ 20	Wine, doz.	1 25	Wine, doz.	1 25
do Mission.	15 @ 20	Wine, doz.	1 25	Wine, doz.	1 25
Limes, Mex.	10 00 @ 10 00	Wine, doz.	1 25	Wine, doz.	1 25
do Cal. box.	8 00 @ 8 00	Wine, doz.	1 25	Wine, doz.	1 25
Lemons, Cal. bx	8 00 @ 8 00	Wine, doz.	1 25	Wine, doz.	1 25
do Sicily, box.	8 00 @ 8 00	Wine, doz.	1 25	Wine, doz.	1 25
do Australian.	8 00 @ 8 00	Wine, doz.	1 25	Wine, doz.	1 25
Nectarines, box.	50 @ 75	Wine, doz.	1 25	Wine, doz.	1 25
Oranges, Com bx	50 @ 75	Wine, doz.	1 25	Wine, doz.	1 25
do Choice.	50 @ 75	Wine, doz.	1 25	Wine, doz.	1 25
do Navel.	50 @ 75	Wine, doz.	1 25	Wine, doz.	1 25
do Panama.	50 @ 75	Wine, doz.	1 25	Wine, doz.	1 25
Peaches, bx.	40 @ 60	Wine, doz.	1 25	Wine, doz.	1 25
do basket.	50 @ 75	Wine, doz.	1 25	Wine, doz.	1 25
Crawfords, bx	50 @ 75	Wine, doz.	1 25	Wine, doz.	1 25
do choice.	50 @ 75	Wine, doz.	1 25	Wine, doz.	1 25
Pears, bx.	30 @ 50	Wine, doz.	1 25	Wine, doz.	1 25
do choice.	50 @ 1 25	Wine, doz.	1 25	Wine, doz.	1 25
do Bartlett, bx	50 @ 1 25	Wine, doz.	1 25	Wine, doz.	1 25
Persimmons.	50 @ 1 25	Wine, doz.	1 25	Wine, doz.	1 25
Jap. bx.	50 @ 1 25	Wine, doz.	1 25	Wine, doz.	1 25
Pineapples, doz.	4 00 @ 5 00	Wine, doz.	1 25	Wine, doz.	1 25
Plums lb.	1 25 @ 1 25	Wine, doz.	1 25	Wine, doz.	1 25
Pomegranates, b	2 @ 2 25	Wine, doz.	1 25	Wine, doz.	1 25
Prunes lb.	2 @ 2 25	Wine, doz.	1 25	Wine, doz.	1 25
Quinces bx.	4 00 @ 7 00	Wine, doz.	1 25	Wine, doz.	1 25
Raspberries ch.	4 00 @ 7 00	Wine, doz.	1 25	Wine, doz.	1 25
Strawberries ch.	3 50 @ 6 00	Wine, doz.	1 25	Wine, doz.	1 25
Watermelons, 100	3 00 @ 7 50	Wine, doz.	1 25	Wine, doz.	1 25

Treatise on the Olive.

A new publication entitled "A Practical Treatise on Olive Culture, Oil-making and Olive-pickling," by Adolphe Flamant of Napa, has just been published by Louis Gregoire & Co. of this city. It is a very handsomely printed pamphlet of 76 pages and treats in a succinct manner of soils for the olive, propagation of the trees, general care of them, cost of a plantation, diseases of the olive tree, varieties of the fruit, with practical instructions for oil-making and olive-pickling. The author is himself an olive-grower of some years' standing in Napa county, and in addition to the facts thus learned, he manifests a wide acquaintance with the literature of the subject at home and abroad. The publication is very timely, as there is so much demand for the facts which Mr. Flamant sets forth. Copies can be had at this office for \$1 each.

HENSLEY'S ORCHARD CULTIVATOR.—Much interest was manifested in the orchard cultivator of C. M. Hensley, as exhibited at the San Jose Fair last week. The implement is so adjusted that the weight of the man is used to lift the teeth out of the ground when the lever is applied, and, being released, the teeth enter the soil again. This arrangement is very highly praised by practical orchardists who have seen it in operation. By an adjustment the implement is made into a side-hill cultivator of merit. This is considered of much importance in view of the fact that so much hillside is being put into orchard and vineyard.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

JARROLD C. HOAG—California.
G. W. INGLIS—Arizona.
Geo. McDowell—Monterey Co.
W. J. FARMAN—Nevada.
J. L. DOYLE—El Dorado Co.
WILLIAM POOL—Fresno Co.
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Should this paper be received by any subscriber who does not want it, or beyond the time he intends to pay for it, let him not fail to write us direct to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to anyone who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

A LITTLE WET.—Read about the Cutlery and Spoons from the Ackerman fire, now offered at half price by Smith's Cash Store, 115 Clay street. If our readers are about to order, they would do well to send to this house for full price list of family supplies.

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.]

	Portland.				Red Bluff.				Sacramento.				S.Francisco.				Los Angeles.				San Diego			
DATE.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.
Aug. 18-24.																								
Thursday.....	00	68	W	Cy.	00	90	SE	Cl.	00	80	Nw	Cl.	00	69	W	Cl.	00	84	W	Cl.	00	70	SW	Cl.
Friday.....	00	72	SE	Sy.	00	92	N	Cl.	00	84	Nw	Hy.	00	71	W	Cl.	00	83	W	Cl.	00	72	NE	Cy.
Saturday.....	00	70	Nw	Cl.	00	96	N	Cl.	00	86	Nw	Hy.	00	70	SW	Cl.	00	90	W	Cl.	00	76	Nw	Cl.
Sunday.....	00	72	Nw	Cl.	00	96	N	Cl.	00	88	Nw	Hy.	00	70	SW	Cl.	00	92	SW	Cl.	00	76	SW	Cl.
Monday.....	00	72	Nw	Sy.	00	98	N	Cl.	00	90	SW	Hy.	00	66	W	Cl.	00	96	SW	Cl.	00	70	SW	Cl.
Tuesday.....	00	68	Nw	Sy.	00	90	S	Cl.	00	80	SW	Cl.	00	66	SW	Cy.	00	82	W	Cl.	00	68	W	Cl.
Wednesday.....	00	62	NE	Sy.	00	90	S	Cl.	00	76	SW	Cl.	00	61	SW	Fr.	00	80	W	Cl.	00	66	W	Cl.
Total.....	00				00				00				00				00				00			

EXPLANATION.—Cl. for clear; Cy., cloudy; Fr., fair; Fy., foggy; — indicates too small to measure. Temperature. Wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 250 Market St., S. F.

FOR WEEK ENDING AUGUST 16, 1887.

368,447.—CHECKREIN ATTACHMENT—C. L. Bard, San Buenaventura, Cal.	368,316.—CONCENTRATOR—Frank Bitter, Slide, Cal.	368,507.—HORSESHOE—J. E. Bingham, Walla Walla, W. T.	368,322.—WHIFFLETREE HOOK—Geo. N. Briggs, Yount, Cal.	368,381.—NECK-YOKE SWIVEL—J. M. Coleman, New Castle, W. T.	368,282.—THILL COUPLING—D. M. Denehy, Acampo, Cal.	368,287.—GATE—Geo. W. Henshaw, Gridley, Cal.	368,218.—CUTTER-HEAD FOR STONE-DRESSING MACHINES—Marr & Spellman, Stockton, Cal.	368,354.—VACUUM DREDGE—Julio H. Rae, Dayton, Nev.	368,427.—HUNTING DECOY—Wm. Ryan, S. F.	368,432.—OPERATING HATCHWAY DOORS—C. P. Stanford, S. F.	368,556.—CHISEL-CUTTER FOR SASH AND BLINDS—Jos. Steele, S. F.	368,267.—TOBACCO-BOX COVER—E. Ziesche, S. F.
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NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

ALTMAN FRUIT-DRIER.—Mr. F. Altman of San Jose exhibited at the fair last week his fruit drier, which he has been experimenting with for a number of years. It was put in practical operation on a large scale with marked success. It is built in a circle and the drying shelves are moved around by a crank. The application of heat is arranged so that there is an even distribution to all parts of the cylinder and the moisture and carbonic acid gas is drawn out and passes off with the smoke from the fuel. Several experts who were present and examined it closely pronounced the operation superior to any practical test they had ever witnessed. The drier can be built of brick, wood or iron, and of any size that may be desired for small or large orchards. This new invention is worthy of careful attention from orchardists as an effective, cheap and superior drier. We will give an illustration, with a cut and more extended description, in the RURAL in a short time.

HEREFORD CATTLE.—Vaughan & Williams, agents for James Kay, England, have established themselves permanently on this coast. In the last seven years they have imported 7800 cattle and horses into the United States. The celebrated bull Novelist, that took the challenge cup at Longridge, England, in 1886, has just arrived and will be on exhibition at the State Fair.

Young and middle-aged men suffering from nervous debility, loss of memory, premature old age, as the result of bad habits, should send 10 cents in stamps for large illustrated treatise suggesting unfailing cure. Address World's Dispensary Medical Association, Buffalo, N. Y.

Coming Home to Die.

At a period of life when budding womanhood requires all her strength to meet the demands nature makes upon it, many a young woman returns home from the severe mental strain of school with a broken-down constitution, and her functions disarranged, to go to an early grave. If she had been wisely counseled and given the benefit of Dr. Pierce's "Favorite Prescription," her bodily development might have kept pace with her mental growth, and health and beauty would not have given way to decline and death.

Chronic nasal catarrh—guaranteed cure—Dr. Sage's Catarrh Remedy.

Imported Holstein Bull for Sale.

The imported Holstein Bull Jacob Wit's Conesus is offered for sale; price \$300. Payment will be taken, if so desired, in steers.

PEDIGREE—(H. H. B. vol. 8, No. 3457.) (Ear No. 836.) Calved March 14, 1884. Three-fourths black, strip in face, four small white spots at shoulders, three small white spots just above right foreleg, small black spot on gambrels, broad white over hips to flank, left side, small white spot on tail, left side.

SIRE—Jacob Wit (2662), Jacob 4th (N. H. B. 210), he by Jacob 2d (N. H. B. 56), he by Jacob (N. H. B. 20), he by Rooker, sire of Aaggie (sire). (For extension and milk record see pedigree of Sir Henry 2d of Aaggie attached.)

Jacob Wit's dam, Heiltje (N. H. B. 1006), a very choice, handsome cow.

DAM—Lize, gave as a three-year-old 61 6-5 lbs. of milk in one day. She is large, straight, square and handsome, with superior escutcheon milk veins and good hair and hide.

Bred by P. Stot, Jr., Twisk, North Holland.

Imported by Smiths & Powell, May, 1884.

For further particulars, apply to JOHN MEWHINNEY, POMO, CAL.

Important to Tree Planters.

One hundred and twenty-five thousand Fruit Trees for sale at a bargain, consisting of Apple, Pear, Peach, Apricot, soft and hard-shell Walnuts; also 2000 Fan-Leaf Palms. Sales will be made in lots, or the Nursery and stock will be sold on the most liberal terms as to price and payments, or will be exchanged for real estate. Inquire of J. M. Hixson, Real Estate Agent, 75 N. Spring street, Los Angeles, or address the proprietor, Milton Thomas, P. O. Box 304, Los Angeles, Cal.

Money Loaned

On Country Real Estate in large and small amounts at lowest rates, by A. Schuller, 106 Leidesdorff St., room 3.

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Of Every Description, such as BOOKS, PAMPHLETS, CARDS, BILLHEADS, CIRCULARS, &C., OR

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SQUIRREL AND GOPHER EXTERMINATOR!

IN 1-LB. AND 5-LB. CANS.

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There has been sent us from the Ackerman Fire a Wagonload of Cutlery slightly damaged by water, to dispose of at once at

HALF PRICE OR LESS!

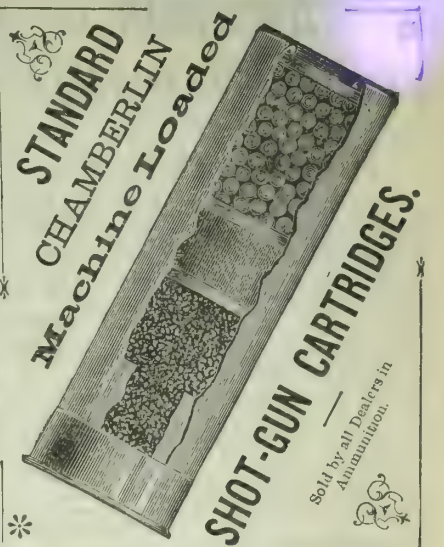
Butcher Knives, worth 25c.....	10c to \$ 15	Knives and Forks, per set 6 each, worth \$2.....	\$1 00
Butcher Knives, worth 35c.....	15	Knives and Forks, per set 6 each, worth \$2.50.....	1 25
Butcher Knives, worth 50c.....	20c to 25	Knives and Forks, per set 6 each, worth \$3.....	1 50
Knives and Forks, per set 6 each, worth \$1.50.....	75	Tea Spoons, common, per dozen.....	10

Very few of these are even slightly rusty, but the boxes are wet and the goods out of order, and have to be sold at once to make settlement. Quality and price guaranteed. Send now to

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HALL'S SARSAPARILLA

Cures all Diseases originating from a disordered state of the BLOOD or LIVER. Rheumatism, Neuralgia, Boils, Blotches, Pimples, Scrofula, Tumors, Salt Rheum and Mercurial Pains readily yield to its purifying properties. It leaves the Blood pure, the Liver and Kidneys healthy and the Complexion bright and clear.

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500 Scrap Pictures, Games, etc., and Book of Sample Cards two cents. STAR CARD CO., Station 15, Ohio

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Read Some of the Testimonials.

I have found the Machine (No. 3) very simple, and it does the work to perfection. Parties who have larger Driers of different makes say they cannot turn out superior fruit (apricots and peaches) to mine.
Vacaville, June 12, 1887. I. W. A. GILMORE.

I found the Machine (No. 2) good, and can truly subscribe to all the merits claimed for it. I have sent apples to Santa Rosa and they sold as first-class.
Laguna, July 15, 1887. W. H. J. AITKEN.

Evaporator came safe to hand (No. 3). Have tried apricots with good success.
Stockton Nursery, July 15, 1887. E. C. CLEWES.

Before writing I wanted to test the Drier also on peaches, apples and pears. Am now doing so with the very best results. Upon the whole, I am greatly pleased with the Drier.
(Rev. Dr.) W. ALEXANDER.
Batavia, July 29, 1887.

I am doing fine work with the Drier (No. 3). I bought it in company with Mr. A. J. Lay, and he, after trying it, takes it all. You can refer to me and I will try to sell more.
C. C. MARTIN.
Glenwood, August 5, 1887.

I have been using a Zimmerman (No. 3) Evaporator on my apricots this season, and cheerfully attest the fact that its performance is fully up to its promise. Its simplicity is such that, although novices, we have succeeded in turning out admirable work, and its economy and facility are quite remarkable.
JAS. PALACHE,
August 9, 1887. (Of Kittle & Co., S. F.)
Send for descriptive pamphlet to

JAMES LINFORTH, 120 Front St., S. F.

Farmers and Viticulturists, Attention!

FERTILIZE! FERTILIZE!

NITROGENOUS SUPERPHOSPHATE.

UNIVERSITY OF CALIFORNIA, Nov. 3, 1886.
Dr. J. KERRIE—Dear Sir: I have analyzed your sample of "Nitrogenous Superphosphate," with the following result:
Soluble Phosphoric Acid.....12.90 per cent
Reverted Phosphoric Acid......95 "
Insoluble Phosphoric Acid......2.23 "
Potash.....2.23 "
Ammonia.....1.7 "
Nitric Acid.....2.95 "
The above amount of Nitric Acid is equal to 0.85 per cent Ammonia, therefore, total of Nitrogen calculated as Ammonia, 2.72 per cent.
This Fertilizer is a Valuable Manure for vineyards, orchards, gardens, farms, and I recommend its use by the cultivators of the soil generally, in California. Yours truly,
DR. E. A. SCHNEIDER.

University of California, College of Agriculture.

BERKELEY, Nov. 20, 1886.
Dr. J. KERRIE, San Francisco—Dear Sir: I take pleasure in adding my testimony to that of Dr. Schneider as to the high quality of the "Nitrogenous Superphosphate" Fertilizer, analyzed by him at your request. It is a high-grade article, and as such returns the user a better money value than a low-grade

H. M. NEWHALL & CO., Agents, 309 and 311 Sansome St., San Francisco.

fertilizer. It is especially well adapted to use in California, on account of the predominance in it of Phosphoric Acid, which is generally in small supply in our soils. Yet it is desirable that "complete" fertilizers be used in our orchards and vineyards, and yours is of that character in furnishing Potash and Nitrogen as well. Very respectfully,
E. W. HILGARD.

The value of this Fertilizer consists in the large percentage it contains of Phosphoric Acid—the chief element of all plant food—in combination with the necessary quantities of Potash and Ammonia, and the ease and cheapness with which it can be applied.
In ordinary soils the following quantities will be found sufficient: For Wheat, Barley, Corn and Oats, 300 to 350 pounds per acre. For Grass, Sugar Beets and Vegetables, 250 to 300 pounds per acre. For Vines, Fruit Trees, from 1/2 pound to 1 pound each. For Flower Gardens, Lawns, House Plants, etc., a light top dressing, applied at any time, will be found very beneficial.

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On board cars at Sbranto, Station of the C. P. R. R., 20 miles north of San Francisco, at \$30 per ton, by the MEXICAN PHOSPHATE & SULPHUR CO., H. DUTARD, President, room 7, Safe Deposit Building, or

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Recommended by the Agricultural Department of the University of California, and by other prominent parties. Send your address for circulars.

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FOR THE SEASON OF 1888.

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It will be necessary to give your order early to secure prompt delivery. Special prices given for carload lots. Write for prices or any information desired. Address

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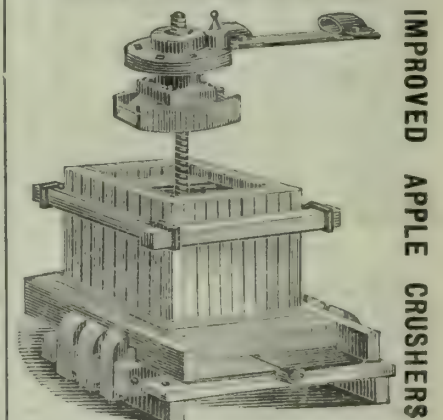
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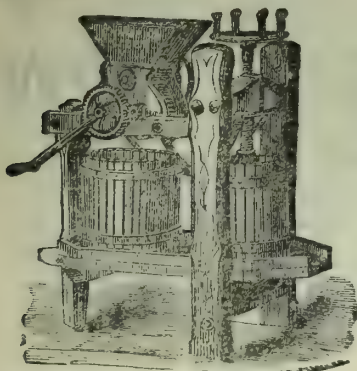
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The very extensive sale we have had for our Mills proves their popularity in all sections of the country, and we will guarantee them to grind as many apples in a given time and produce as much cider from a given quantity of apples as any other hand-power Mill in America, and do it with much less labor than any other Mill on the market.

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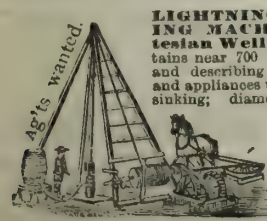
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This Mill has been in use on this Coast for 6 years,
TAKEN THE PREMIUM AT THE STATE FAIR
Four years in succession, and has met with general favor,
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Over 200 of them in use in California, Nevada & Oregon
It is the most economical and durable Feed Mill in use. I am sole manu-
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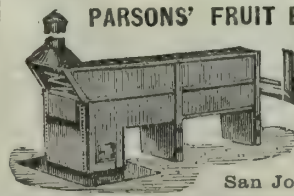
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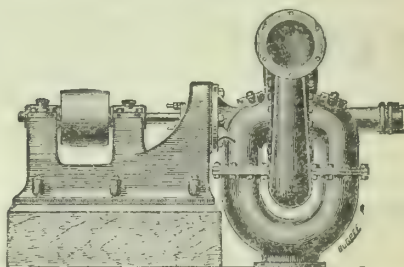
1. Perfect facilities for putting on the cloth, as the
bale, after being pressed, is fully exposed at the sides
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2. A good depth of box for a hand press (7 feet).
3. A perfectly tight and solid box with no slots or
sliding pieces at the ends.
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out at the bottom.
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break and fail to give the required power at the pinch).
6. A balanced follower that goes up without assist-
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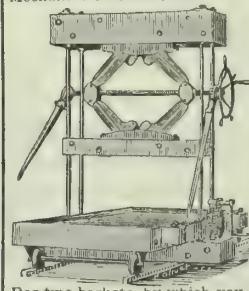
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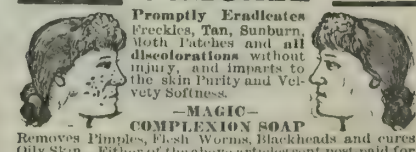
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cider makers to my im-
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of 264 inches, the first
revolution of the screw
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ins., the last revolution
is but 1-16 of an inch,
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screw or lever press in the market that use only one
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C. Stiller, Guberville; Lay Clark & Co., Santa Rosa;
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Gabriel; James Finlayson, Healdsburg; P. & J. J. Gobbi,
Healdsburg; Wm. Allen, San Gabriel; Wm. Metzger,
Santa Rosa; J. Lawrence Watson, Glen Ellen; Walter
Phillips, Santa Rosa; Geo. West, Stockton; Eli T. Shep-
pard, Glen Ellen; Rancho Wine Co., Rancho, Los
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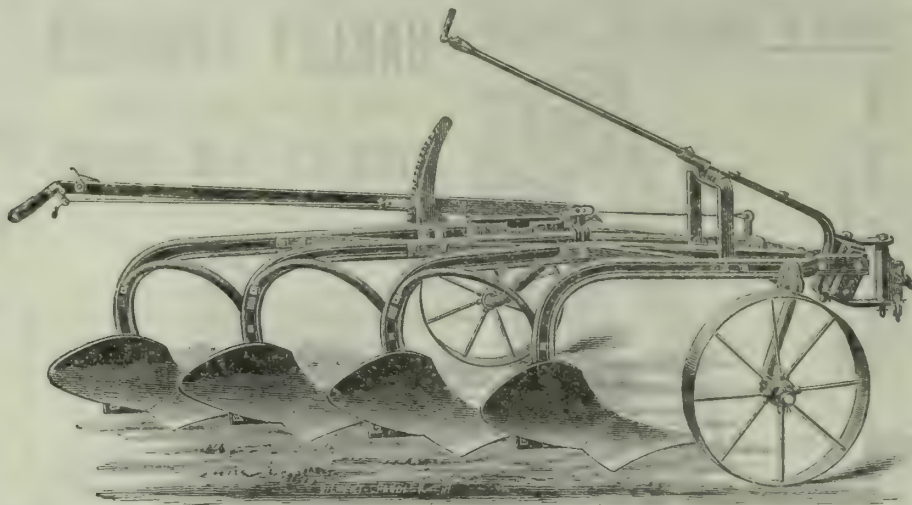
THREE,

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—AND—

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FURROW.



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—AND—

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Its economy of operation, ease of handling, lightness of weight and draft, simplicity, durability and cheapness are points which cannot fail to attract attention and convince every wide-awake farmer of its superiority and economy over any other plow ever placed in the market.

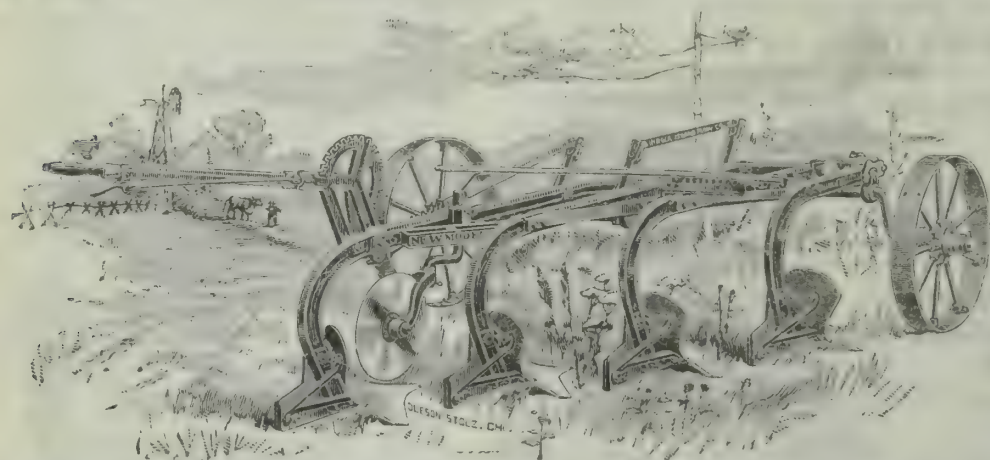
In ordinary conditions of soil the NEW MODEL GANG will turn a 24-inch furrow with the same power (three horses) required on a 16-inch hand plow or sulky, a saving of 50 per cent in labor and cost of plowing; in short, the NEW MODEL PLOWS will turn over more land per day, with less expenditure of horse and man power, than any other wheel plow in the market; hence, the NEW MODEL positively is the lightest draft, most economical and best plow to buy.



THE NEW MODEL is no experiment, but has been severely and thoroughly tried throughout the San Joaquin and Sacramento Valleys, and is pronounced by all the lightest draft, the easiest handled and most desirable gang.

The Patent Lever, used on this plow only, insures perfect control and easy management. The wheels are substantial, with wide tires. The Bottoms are the lightest running and best shape made, being much the same as are used on the celebrated Rock Island Plows.

These Gangs are furnished with two, three and four plows, and either 8 or 10-inch cut.



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PACIFIC RURAL PRESS

TWENTY-PAGE EDITION.

Vol. XXXIV.—No. 10.

SAN FRANCISCO, SATURDAY, SEPTEMBER 3, 1887.

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Arizona.

The development of Arizona during the last few years has been rapid and considerable. Its advancement in population and in mining industry since the settlement of the Indian difficulties, is promising for the future. The growth of agricultural arts in Central Arizona, the excellent results obtained from irrigation as applied to field crops and orchards, and the inception of other important agricultural enterprises, are all important and timely topics. We are fortunate in securing from Rev. Dr. O. C. Wheeler, who has made a careful study of Central Arizona, its conditions and resources, a series of articles which will present a concise and well-considered statement concerning the region named, which we believe will be very acceptable to our readers. Dr. Wheeler's recognized trustworthiness and ability to intelligently discuss agricultural matters will win for his statement a confidence which would not pertain to an anonymous publication, and his writing will, we doubt not, be of material influence in building up the region which he describes.

Dr. Wheeler will discuss systematically the various matters pertaining to the pursuit of agricultural arts in Central Arizona, and will give sketches of what has already been accomplished. The reader will be introduced to an Arizona very different from the popular conception of the Territory. It will be a district of green fields and flowing waters, of improved fruits and livestock, and his descriptions will be emphasized by views of some of the scenes which he will describe. For the purpose of showing the contrast which we have hinted at, we give on this page a group of scenes in Arizona which are the usual types from which a popular conception of Arizona, arid, sun-bleached and cactus-grown, has been derived. We begin with these views because something very different will be presented in Dr. Wheeler's articles. Taking all together, the reader will be able to discern that there is a picturesque Arizona, with all the characteristic formation and vegetation of a desert, and there is a productive Arizona which is beginning to exhibit all the excellencies of a high development of agricultural arts, and which has a most promising future.

Dwelling for a moment upon the scenes presented in the engravings on this page, the reader's attention is called to the ruin of Casa Grande, the wonderful ruin left to us of the structure by some prehistoric people. Next is the line of the railway among the domes and castellated cliffs which rise from the burning sands, upon which only desert vegetation can exist, and which has for its most striking feature the giant cactus which the engraving shows. At the side a giant cactus is given in enlarged form, while about its base cluster agaves and other forms of desert growth. Another sketch shows the mirage—the horseman beholding what appears to be a chain of mountains mirrored upon the surface of a lake.

ENGLISH FERRETS.—Mr. Hiram Corey of Monterey county, near Salinas City, has been troubled with rodents of various kinds. Last spring he sent to Zanesville, Ohio, and procured a trio of English ferrets, one male and two females, at a cost of \$24, including expressage. His flock has now increased to 17, and he has a

A DAY'S BUDDING.—On Thursday, Aug. 11th, W. B. Holliday of Martinez and his brother George budded 2473 pear stocks in 11 hours. In the afternoon they ran out of scions and cut 800 buds to run them through as they proceeded along the row. They cleaned away the dirt which had been heaped around the stocks by

Agitating for a Division of the State.

With the "land boom" in Southern California there is being revived in that quarter the idle talk about a division of the State. It is a long time now since this question was last agitated, and from the little favor it then met with, there was reason to hope we should hear no more of it. The pretext for a revival of this movement is the alleged diversity of resources, pursuits and interests that exists between the northern and the southern portions of the State—a pretext with very little reason to justify it.

There is not another country in the world covering so many degrees of latitude in which the climatic conditions are so nearly alike and the natural productions so nearly homogeneous as in California. The interests of one section of the State are so nearly identical with those of every other section that California may in this respect be said to be a unity.

Supposing a division of the State agreed upon, where is the line of separation to be drawn? There is a line running east and west across the State, forming the southern boundary of Monterey, Tulare and Inyo counties. This line being straight and avoiding the necessity of dividing any existing county, would naturally suggest itself as being a suitable one to form the northern boundary of the proposed new State. Supposing the latter to consist of the territory here indicated, what sort of a commonwealth would this be, fully one-half of it, all that portion lying east of the San Diego and the Sierra Nevada mountains, being little better than a desert? A sorry State, to be sure, with almost no timber land and not a lake or a navigable river in it!

California, as now constituted, presents a territory regular in its outlines, and vast in dimensions; she being next to Texas, the largest State in the Union. Justly has she been called the Empire State of the Pacific, a distinction her people should be careful not to forfeit by consenting to any proposed act of dismemberment.

The framers of our State Constitution in fixing the boundaries of California builded better than they knew. Left to carve out from the public domain a new commonwealth, they determined not only that it should include a large

area and be symmetrical in form, but that its boundaries should, as far as practicable, consist of natural objects grand and conspicuous. For more than 500 miles the eastern boundary of the State is formed by the crest of the Sierra Nevada, and the Colorado river, than which nothing more suitable could have been adopted. Let us see to it that the lines so fixed by these pioneers be on all sides preserved intact.

FISHERMEN near Antioch are making quite large catches of salmon. The boats average from 20 to 50 fish each, which they sell for 60 cents apiece to the canners.

SOME of the peach-growers about Nevada City get \$400 per acre for their fruit, sold on the trees, this year.



GLIMPSES IN THE DESERT REGIONS OF ARIZONA.

breeding-pen and grounds for them to burrow in. Mr. Corey has experimented with ferrets in hunting rabbits, rats, mice, and squirrels. As domestic hunters they have proved a great success, and he has supplied several of his neighbors with them and made one shipment to Mexico. It is Mr. Corey's idea in utilizing the ferrets to raise a sufficient number and turn them loose in the fields and let them run wild and become squirrel-hunters on their own account. We shall look with interest on his experiment and inform our readers of his success.

THE farmers of Washoe valley will harvest about 75,000 tons of alfalfa this season.

TEHAMA COUNTY has 181,265 acres devoted to prunes and olive trees.

the cultivator. The stocks were planted in March and were all budded to Bartlett. W. B. Holliday cut and set the buds and George tied them. How is this for a day's work? We like to hear about such things from readers of the RURAL.

ALLEGRETTIED FRUIT.—We have had the pleasure of eating plums which had been in Mr. Allegretti's storehouse three weeks, pears five weeks, and peaches four weeks. The fruit was in excellent condition, sound and true flavored. There seems to be no question about the full demonstration of the practical success of his process.

THE fall wool clip will be an exceedingly large one in New Mexico.

HORTICULTURE.

Plums and Prunes.

The State Horticultural Society met in the elegant new rooms of the State Board of Horticulture, at 220 Sutter street, on the afternoon of Aug. 26th, President Hilgard in the chair.

Mrs. H. Berger of San Francisco was proposed for membership, and Messrs. McK. Lennan of Berkeley, E. Steele of Alameda and L. M. Holt of Riverside were elected members.

Leonard Coates of Napa read the following paper on "The Nomenclature of Prunes," and exhibited several varieties of that fruit grown by himself and others.

Mr. Coates' Essay.

The question of prune nomenclature remains at present unsettled. Pomological works describe some 25 distinct varieties. The term "prune" in the English language signifies those varieties of plums that, when dried, are sweet. "Prune" is merely the French way of spelling "plum."

Here lies one source from which errors have sprung, many varieties of plums having been imported to California from Europe, and brought here by foreigners under the French name "prune," while in reality they may not have had the slightest right to the name "prune," viz., a sweet dried fruit, as we understand it here.

For example, take what is commonly called Hungarian prune, and by shippers Gros prune, thereby creating a very erroneous and harmful impression upon the Eastern public as to the individuality of a California prune in a fresh state, for this Hungarian, so-called, is nothing but a large, very showy plum, the other being extremely acid, and, as a dried fruit in any shape, neither profitable nor desirable. The correct name of this fruit, as Mr. Rock has pointed out, is undoubtedly Pond's seedling.

The prune generally cultivated here as French prune, *Petite d'Agen*, Petty prune—I believe to be synonymous with what Downing describes under the name of *Prune d'Agen*, having also seven French synonyms. There is one other variety, described by Downing, called Burgundy prune, which so nearly resembles it that it is doubtless either a seedling or was grown under different conditions, which caused some modifications in its appearance.

I do not see any reasons for disputing the statements made years ago by Mr. West of Stockton after his visit to the prune-growing districts in France. First, that the prune known here as *Petite d'Agen* is the prune of Agen, the term *Petite* having been locally applied to it in California, owing to its small size in comparison with other fruits; and second, that from time to time seedlings have been originated by the peasants, from which have arisen varieties, or sub-varieties, differing slightly from their parent, and yet being so nearly similar that all have been pronounced under the generic name of *Prune d'Agen*.

I wish also to reiterate what I have said on a former occasion, that the French prune is liable to very noticeable outward changes, subject to stock, soil, and the season. I have grafted the same season large trees of apricot, German prune, and almond, with scions of French prune from the same stock, and, in two years, when all were bearing some fruit, the prunes differed very much in size and color. Some were as large as a small Pond's seedling (Hungarian?), showing that by heavy pruning and thinning the French prune will be as large as those that are graded by the French as their largest select fruit, but which are so large that many have thought, and so stated, that they must have been of another variety.

Mr. Gillet of Nevada City is still experimenting with varieties of prunes he is obtaining from France, as I learn from a letter recently received from him, and he would have sent me samples of the fruit from his later importations, but what little fruit he had has been destroyed or injured by a hailstorm.

The expressions Mr. Gillet so often uses are apt to be misleading—"true from the root," "true type," etc.—for there is no doubt whatever in my mind that it is some of the seedlings before alluded to that Mr. Gillet is endeavoring to find.

It is a very common practice among fruitmen in France and Germany to propagate their prune trees by suckers or sprouts from the root. As those produce the same fruit as the tree from which they are taken, of course this tree has never been budded or grafted; or, in other words, is a seedling.

A German in Napa valley has brought over many of these "sprouts," which bear the same fruit as the trees from which they were taken.

I have found trees in Sonoma and Napa counties of the French prune that every year bear larger fruit than the adjoining trees, although stock, soil, age and other conditions were the same. The inference is, that there are in California prune trees which have been propagated from several of these seedling French stocks, but which are hardly distinct enough to constitute a new variety. Yet, if such be the case, they should be distinctly named by the State Horticultural Society and propagated from as rapidly as possible.

I have samples of another prune which I imported from France under the name *Prunier Datte*, and which is identical with the variety

called by Mr. Rock, *Robe de Sergeant*. I have both trees growing and fruiting together.

By reference to Downing, it will be seen that *Robe de Sergeant* is given as a synonym of *Prune d'Agen*, and further, the significance of the term *Robe de Sergeant*, referring to the varied colors in a recruiting sergeant's uniform, is lost entirely if applied to this fruit, which, as will be seen by the sample, is nearly round and of a dark-purplish color, never assuming those varied colors so often seen in the *Prune d'Agen*, or French prune.

I am, therefore, entirely at a loss as to the correct nomenclature of this variety. The wood and habit of growth is very similar to that of the French prune, but the fruit is very distinct.

The prune described by Chas. Downing as *Imperiale de Milan* seems to be identical; it is as follows:

"Tree vigorous, rather spreading, branches smooth. Fruit rather large, roundish oval. Suture broad, extending two-thirds around one side, often enlarged. Skin, deep purple, covered with a thick blue bloom. Stalk, stout, set in a small cavity. Flesh, greenish, juicy, sugary, adheres to the stone. Good. Early September."

At the next meeting I hope to be able to show that there is a marked difference between the Silver prune and Coe's Golden Drop.—LEONARD COATES, Napa.

Prune and Plum Exhibits.

At the close of his essay Mr. Coates called attention to the specimens alluded to in his essay. The fruit from H. L. Gibbs of Calistoga was very large indeed. Some brought by S. H. Shaw of Sonoma were also very large. He showed also specimens varying in size and color according to location, soil, etc.

James Shinn made a fine display of Japan plums of different kinds; also European plums and varieties originated from them. E. H. Rixford showed French prunes. Other fruits shown will be mentioned farther on in the report.

Letter from Felix Gillet.

Edward J. Wickson, Secretary State Horticultural Society.—DEAR SIR: The subject to be discussed at the August meeting of the State Horticultural Society being the "Plum and Prune," I would like to make a few remarks and offer some suggestions, and at the same time correct some wrong notions in regard to the prune industry, which is assuming such immense proportions in our favored State.

First, I would call the attention of our prune-growers to the fact that overconfidence and blowing are more apt to injure than help the development of the prune interest on this coast. "There is no doubt," exclaims exultantly one of our over-enthusiastic prune-growers, "of the superiority of California prunes," and we are yet to grow prunes of the d'Ente or d'Agen variety that would grade 24 to 30, 30 to 35, 35 to 40 to a pound, as the three first grades of that prune do in the d'Ente district of France. Some others, after comparing their own grown and cured prunes with those French imported ones, as we find them in San Francisco stores packed in fancy boxes of one kilogram (2½ pounds), at the very low price of 75 cents per box, came to the conclusion that theirs beat the best-cured French prunes, ignoring the fact that these imported prunes are all of the fourth and fifth grades, or "first grade for exportation."

But on the curing, manipulating and packing of the prune, as done in France, the ignorance of our people is so manifest that I believe it is rendering our prune-growers a service to call their attention to the way the French handle that great product of the southwest of France. The fact is that our fruit-growers should employ more care in picking, curing, grading and packing their prunes if wishing to clean out the French imported goods from the American market, compete with them abroad—in fact, extend the scope of their exports. Of course, duties on imported prunes, as it is wrongly suggested for raisins, might be raised to such figures as to exclude the importation of prunes altogether from this country. This would compel the consumer of the prune in the United States to purchase from us our prunes in whichever way we would put them on the market, but I do not think this is the right way to help and develop this great industry of the Pacific Coast.

French Prune-Driers.

Until Mr. Klee, at a recent meeting of the society, read a translation of Mr. Issartier's paper on the preparation of the prune d'Ente in France, as read before the *Concours Regional* of Agen in May, 1886, almost every one in California had an idea that the French dried their prunes in bread ovens. Better informed people, or those who should be better informed, do or did share in the same delusion. "The fruit-grower in France dries his fruit in an oven sufficiently to keep about two weeks without molding," said Mr. Aiken in an essay on the prune read before the Fruit-Growers' Convention a year ago. Now this is all wrong. It is true that the small fruit-grower, the peasant who owns but a few trees, does put his bread oven to good advantage in drying his little crop of prunes; and a bread oven cannot dry more than 500 kilograms or about 1100 pounds of prunes a season, that is, turn out more than the above quantity in dried prunes. So the large growers who turn out as much as 70,000 pounds of dried prunes (and not half dried as wrongly stated by Mr. Aiken) have to use driers, and indeed have been using them ever since 1837. At the

present time there may be a hundred different patterns of driers in the prune district of the Lot, in France; and it is quite a sight to witness as many as 20 to 24 of those various driers competing every year for premiums at the *Concours Regional* of the great prune centers of the Lot, such as those of Clairac, Montolar, Villeneuve, Bergerac, etc. A *Concours Regional* in France is pretty much like one of our district fairs, with the exception of the holding of horse-races and horse-gambling, which is not allowed there; the *Concours Regional* being simply an agricultural and horticultural competing fair, as its very name, *Concours*, implies. Every year the French are improving on their driers, and in the face of the ever-increasing opposition to their great product from other European prune centers and California, they are striving to turn out a finer article still at cheaper prices and under new forms. My last information from the prune district of the Lot, and I am trying to keep myself well posted on anything going on there in regard to that prune business, of such personal interest to me, is that since the invasion of the phylloxera and the destruction of vineyards in those departments comprising that prune district, and the surrounding departments, too, the grapevines have been taken up by the root, and large quantities of prune trees planted in their place. This is bound to create an overproduction, for which a new market is already sought after. My informant writes to me that many large growers propose to handle their crops in the following manner: Three grades are to be made of all the prunes, the largest ones, from 24 to 50 prunes to a pound, for which there are special rates with always a good demand, will be sold in their bulk to the prune merchants; the second grade, or 55 to 70 per pound, are to be packed in fancy pasteboard boxes with glass covers and sold at 70 cents per box wholesale, and five francs or one dollar retail, the box to be made to contain 2½ kilograms of prunes or 5½ pounds. As to the third grade or *fretin*, or smallest prune, 75 to 110 a pound, they will be worked up in two ways, viz.: Either sold to distillers to be turned into brandy, which is said to be delicious and with as fine an aroma as Cognac, or turned out into preserve or *confiture*, which requires as much sugar as pulp to keep, and put in pots or small glass jars of 500 grams or one pound and two ounces, to be sold at ten cents per pot wholesale. The United States, as usual, is the main objective point for those new or overproducts of the French prune-grower.

The Apricot in France.

Though the apricot is foreign to this prune discussion, I would right here, in speaking of the planting of so many prune trees in France, put a flea in the ears of our apricot-growers and canners. In the valley of the Rhone in France, the home of the apricot there, and where the phylloxera has caused such a ruin among vineyards, immense quantities of apricots are planted in the place of the grapes and "canning" resorted to. Canned apricots from California have already found their way not only to England, but also to France; in the latter country, I suppose, as an object of curiosity. Well, the French did smile at the poor quality of the California article; they are going at it now, but using glass instead of tin, and "putting up" only their very best fruit, keeping the smaller and inferior one for confectionery purposes, to make that delicious "apricot paste" which requires such an enormous quantity of apricots every year. I hope that our apricot-growers and canners will take the hint, if wishing, too, to extend the scope of their exports and put their goods on foreign markets.

How Prunes Should be Handled.

The prune d'Ente should never be picked from the tree, or shaken down, unless perfectly ripe; and never put to dry before being in a withering condition. This is the great secret for obtaining sweet pulpy prunes with a jet black color, as are the best French dried prunes. But here I understand that the fruit is often gathered all at once, ripe or not ripe, and cured in that state of unripeness. This method may be expeditious and cheap, but it is certainly wrong. Let our prune-growers well remember that the beautiful black color of the French prune, its exquisite flavor and pulpy condition, is due above all to the complete maturity of the fruit. In regard to the

Flattening of Prunes.

Which are used on the top of boxes or the sides of glass jars, fingers are no more used for that work. For years the French have been using cylinders coated with a good thickness of India-rubber, which do the work so much quicker and nicer. Pressing prunes in boxes and barrels with the feet has also been done away with; a machine named *Pagueuse* does the work now.

As to the packing in pasteboard boxes, zinc canisters, glass jars, and the like, the prunes, just before packing, are put at a temperature of 120° Centigrade and sealed up tight at once; so packed they will keep years, and may be exported to warm as well as temperate or cold countries.

More than a hundred vessels leave Bordeaux every year loaded with the precious merchandise from the Lot, the chief countries of export being the north of France, Belgium, England, Holland, Germany, Russia, and more particularly the United States.

The prune merchants in Agen and Bordeaux have their own way of preserving and packing the prune, which they keep *secret*, and it is

very hard, unless paying well for it, to get at any of those secret and personal ways of preserving and packing the prune, without having to cook it as hard as a Sacramento valley prune.

Naming Our Prunes.

Before concluding my remarks on this prune subject I would like to make a suggestion to our prune-growers and shippers; it is simply to call by its name our California-grown prune. In fact, why should we call it "French prune"? That is no name at all. In the first place there are several different families of French prunes. I have myself 8 or 10 varieties, blue, red, yellow, all colors and shapes, such as d'Ente, St. Catherine, Perdignon, Dame Aubert, Duriman, etc. I would therefore propose that our "Petite prune d'Agen," more commonly known under the name of "French prune," be called "California prune d'Ente," and that our shippers label it so, for it is a true type of the d'Ente family, and California grown.—FELIX GILLET, Nevada City.

Discussion.

After the reading of the essays on the prune there followed a very interesting discussion, of which we will give an outline in the next RURAL.

SERICULTURE.

The Silk Station at Piedmont.

The Oakland *Enquirer* recently gave an account of the Silk Station work at Piedmont, Alameda county, from which we take these interesting points: The building was put up at the expense of the United States Government three years ago, when Congress made the first appropriation for the encouragement of the silk industry. In this undertaking the Government co-operated with the Ladies' Silk Culture Association of California, and when Congress failed, a year or two afterward, to make an appropriation to continue the work, the ladies took measures to get the property into their own hands. The building, which had cost the United States about \$2000, was sold to them for \$2.50, and at the same time they acquired from the Piedmont Land Company, on easy terms, a title to the tract of land, of 14½ acres, on which the building stands. The affairs of the association are now managed by a Board of Directors of which Dr. Gibbons of Alameda is president and Mrs. Pratt of San Francisco is secretary. Other members of the Board of Directors are Mrs. O. M. Washburn, Mrs. T. H. Hittell, Mrs. Kerr, Mrs. McClellan and Prof. Davidson. Mrs. H. B. Williams is president of the association itself.

Little or nothing was done at the Piedmont station last year, but this spring the association employed Mr. Harford to take charge of the farm, and Mrs. E. R. Spencer, a lady of experience in the rearing of silkworms, has managed the cocoonery. Not much has been done with the latter, however. It was late in the season when operations were commenced, and the building is not properly arranged or ventilated for a cocoonery. There were about 40,000 worms, but leaves to feed them had to be brought daily from Milbrae, and for this and other reasons most of them were not afforded a chance to spin. Not over 15 pounds of cocoons have been made, and the present generation of worms is the last which it will be attempted to rear this year.

The ladies are planning great things for next year. Congressman Morrow succeeded in getting an appropriation of \$5000, which became available July 1st. A new cocoonery will be built. It is proposed to feed 500,000 worms next year, and to do this properly plenty of space will be needed. The new cocoonery will be located in the rear of the existing building. Another building for a reeling establishment is projected, though it may not be put up this year.

Mr. Harford is now clearing a part of the land by cutting down the gum trees and grubbing up the stumps, and a large number of mulberry trees will be planted the coming winter. Five or six acres of land have already been cleared, and there are two or three acres of mulberries, which were planted a year ago. The trees ought to be three years old before their leaves are used; so that if 500,000 worms are reared next season the food for them will have to be brought from a distance.

One of the principal objections to location at Piedmont is the difficulty of getting water, which now has to be brought from a spring at an inconvenient distance. A well is being dug in a hollow on the association's lands, and if a good supply of water is developed, a steam pump will be put in to force a stream into the buildings.

The soil around the silk culture station is shallow and is superimposed upon a stratum of decomposed rock. The roots of the eucalyptus penetrate this rock, and the trees grow thriftily.

Silk Culture.

The State Board of Silk Culture met Saturday, August 20th, President Trumbo in the chair.

A communication was received from the Charitable Mechanics' Association of Boston, Mass., asking that samples of cocoons and reeled silk from this coast be exhibited at the

fair in that city during September. It was voted to send the specimens. A request from F. A. Parker, principal of the High school at Dubuque, for samples with which to illustrate silk culture in the classrooms, was also granted.

The board decided to place on exhibition at the Mechanics' Fair the two beautiful American flags, recently manufactured in New Jersey from California silk, together with the costly reeling machine just imported.

The mulberry trees lately planted at Brentwood, Contra Costa county, were reported to be in good condition and likely to be ready for distribution after the early rains.

A letter had been received from Y. Kadoi, special agent of the Japanese Department of Agriculture, thanking the board for the annual report and congratulating them on their success in promoting sericulture.

THE VINEYARD.

Vintage Work and Instruction in the Viticultural Laboratory, 1887.

University Experiment Station. Bulletin No. 74.

The vintage work in the Viticultural Laboratory of the University will be resumed during the first week of September next, substantially on the plan pursued during previous years, but with facilities greatly enlarged and improved. The general features of this work are outlined in the legislative Act of 1880, which is here given for the information of persons interested:

The Provisions of the Act of 1880.

An Act for the Promotion of the Viticultural Interests of the State. (Approved April 15, 1880. Stats. of Cal., 1880, p. 53.)

SECTION 8. And for the further promotion of viticultural interests, it shall be the duty of the Board of Regents of the University of California to provide for special instruction to be given by the Agricultural Department of the University, in the arts and sciences pertaining to viticulture, the theory and practice of fermentation, distillation and rectification, and the management of cellars, to be illustrated by practical experiments with appropriate apparatus; also, to direct the Professor of Agriculture, or his assistant, to make personal examinations and reports upon the different sections of the State adapted to viticulture; to examine and report upon the woods of the State procurable for cooverture, and the best methods of treating the same; and to make analyses of soils, wines, brandies and grapes, at the proper request of citizens of the State; also, to prepare comprehensive analyses of the various wines and spirits produced from grapes, showing their alcoholic strength and other properties, and especially any deleterious adulterations that may be discovered. The Regents shall also cause to be prepared, printed and distributed to the public, quarterly reports of the professor in charge of this work, relating to experiments undertaken, scientific discoveries, the progress and treatment of the phylloxera and other diseases of the vine, and such other useful information as may be given for the better instruction of viticulturists.

Under the provisions of this Act, work has been carried on at the University since its passage, so far as the funds available for the purpose permitted. For some time it was severely restricted by the want of proper appliances and working force. The larger scale and ampler means with which the experimental and illustrative work can now be carried on, render the methods and results more directly applicable to the work of wineries.

The plan and character of the work in the viticultural laboratory has been so fully and repeatedly set forth in the bulletins and reports of the College of Agriculture as to render a reiteration in this place unnecessary. Apart from its use in actual instruction, the experimental work is intended to secure "a definite knowledge of the qualities of each of the prominent grape varieties, and of their influence upon the kind and quality of the wine, in blending before, or as the case may be, after fermentation; of the treatment required by each in the cellar, during the time of maturing; and finally, of the differences caused by difference of location, climate, etc., as well as by different treatment of the wines themselves during the first and after-fermentation."

The Experimental Vineyards, established under the auspices of the University by public-spirited citizens, will this season supply a largely increased material for such work. But grape-growers and wine-makers all over the State are invited to send sample lots of grapes for analysis and experimental wine-making. As a rule, each variety will be made into wine separately; the analysis of the must is made on the day of crushing, and will, if so desired, be at once communicated to the sender. That of the wine must, of course, be delayed until the latter has acquired a reasonable degree of maturity, after several rackings. But reports on special points that may be ascertained sooner will be sent if desired.

Experimental blends will also be made either in accordance with the request of growers, or such as examination or previous experience may seem to render desirable.

It is hardly necessary to say that, other things being equal, the larger the quantity of grapes worked, the more certainly and nearly will the result correspond to that which may be expected on the large scale. In the case of rare grapes, a few pounds, carefully treated, may be made to give fair results; but it is very desirable that the amount sent for experimental working should in no case be less than that which will

yield five gallons of finished wine—say (considering the losses consequent from transportation, amounts required for analysis, frequent racking, etc.) 100 pounds; but twice that amount is preferable. And larger consignments, sufficient to test the merits of various modes of fermentation with one and the same grape, will be welcome.

The prominent characteristics of any locality or variety, as to the production of sugar or alcohol, acid, tannin, body and color, are, of course, identically shown by small as well as large-scale samples; and these, the natural possibilities of each variety, soil and locality, are what our experiments primarily aim to determine. Wines made in 5-gallon packages develop differently from those made in 1000-gallon tanks; but the difference does not go so far as to prevent the accurate reproduction of the characteristic bouquets. A competent wine-maker will know how to make allowance for the unavoidable differences, and can come to a close estimate of the outcome on the large scale, from samples made on a small scale, for the government of his winery work.

The comparison of the effects of different methods of fermentation upon wines made from one and the same grape, made last season, and described in the report for 1886, have furnished important indications for large-scale practice, in more than one point of view. These experiments, with others of a similar nature, will be repeated during the present vintage.

It will be readily understood, from the methods and objects pursued, that the University laboratory does not aim to produce crack wines, for comparison with the products of the wineries, but rather samples that are to be distinctly studied and judged in connection with the conditions of their production.

Course of Instruction in Vinification and Wine Analysis.

Students taking this course will, during the vintage season, occupy the greater part of their time in actual work in the viticultural laboratory, under the direct instruction of Assistants Jaffa and Colby. In addition, from two to four lectures on the principles and practice of vinification and wine analysis will be given them by Professor Hilgard.

It is very desirable that students taking this course should have some general knowledge, at least, of chemistry and physics; and some preliminary experience in winery practice will be very advantageous.

Applications for this course should be addressed as soon as possible to Prof. Hilgard, at Berkeley, in order that the proper laboratory arrangements may be made before the brunt of the vintage comes. The lecture course will begin at the opening of the University session, September 23d, but, according to the season, the laboratory work may begin sooner, and students applying will be promptly notified of the fact. Instruction is gratuitous, but a charge, varying according to actual breakage of apparatus and use of chemicals, from a minimum of one dollar per month upward, is made to laboratory students.

Suggestions to Senders of Grapes, Wines, Etc.

Wine grapes, being usually very juicy and of delicate texture, should be packed with especial care, either in "basket crates" or in small, shallow boxes holding not exceeding 20 pounds each, and preferably in layers with grape leaves between. In no case should packing paper be used, as it causes a rapid production of mould, spoiling both the grapes and the experiment. Persons not having proper boxes may have them sent to them by express from the laboratory by giving timely notice. Basket crates, such as are used in the shipment of table grapes to the East, are in every respect the best package and are exclusively used in the shipment of grapes from the University experiment stations.

Crates and boxes should be carefully labeled or marked with the name of the grape and of the sender, on at least one of the sides, and not on the top or bottom, where almost any mark will soon be obliterated in handling. In addition, a label plainly written with lead-pencil should be placed inside on top of each package.

As a safeguard against erroneous or indefinite designations of varieties, it is specially requested that a good cane, representative of the variety, with leaves and all, be placed in at least one of the packages representing one variety. Any peculiarities occurring in the production of the samples sent should be mentioned in detail in the letter of advice.

Ready-made wines or brandies of which the analysis or other examination is desired will receive attention in the order of their receipt at Berkeley.

All work is, of course, done gratuitously, transportation charges being ordinarily paid by the sender.

Send promptly advice of shipment, whether by express or freight. Address University of California, care of Prof. Hilgard; if by express, to Berkeley; if by freight, to West Berkeley depot.

The Choice of Resistant Stocks.

In the report of viticultural work for 1886, I have discussed to some extent the special adaptations of the several resistant stocks now most commonly relied on in California, and have called special attention to the disproportion between the growth of the *Riparia* and *Rupestris* on the one hand and the quicker-growing *Vinifera* grafts on the other. As few subjects are

of greater importance to some portions of California than the establishment of the new vineyards upon properly adapted resistant stock, I desire at this time to call the attention of those who have used such stocks to some points which have come under my immediate observation, and which, if verified as of general occurrence, deserve the most earnest attention of persons concerned. It is partly with a view to eliciting the experience of others in the premises that this publication is now made.

There is no reason to expect that the grapevine should not stand as much in need of a careful selection of grafting-stock adapted to both the graft and the soil, as do the orchard fruits. The plum is not more different from the peach and almond than the several species of wild vines are from one another, and from the European vine, both in adaptation to soils and habit of growth. When such adaptations are not considered in making a choice of resistant stocks, it must be expected that the penalty will have to be paid, whether in the unproductiveness or early death of the vines.

It has for some years been said by several eminent French vineyard experts that the wild vines, and among them especially the *Riparia*, is not well adapted to the *Vinifera* graft, and tends to shorten the life of the vine constituted by their aid. In connection with this come occasional reports that even the *Riparia* does not resist the phylloxera.

From the personal experience and other facts now before me, I have little doubt that most if not all of these adverse reports are due to the want of co-adaptation above referred to. There can be no question that the wild *Riparia* fully resists the phylloxera, for otherwise it would long ago, with the rest of the wild vines of the East, have been eradicated. When therefore it succumbs to the attack when used as a grafting stock, it must be because its vitality is too heavily drawn upon by other causes. Such a cause may well be found in the imposition upon it of a graft whose growth exceeds several times that of the stock, and thus naturally tends to exhaust the latter. I have before me junctions of *Riparia* with *Clairette*, *Blanche* and *Palomino*, looking like a claret bottle turned upside down; the same with *Rupestris* as the stock, is still worse. In others, in which the slow-growing *Barbera* forms the graft, the joint is almost cylindrical. It can hardly be doubtful that under ordinary conditions, the latter will far outlive the former. On the other hand, grafts of the same varieties on *Californica* show, in the case of the *Clairette* and *Palomino*, almost exact equality of the graft and stock; while the junction of *Barbera* with *Californica* looks like the claret bottle right side up, the stock far exceeding the graft.

But the influence exerted upon the growth and bearing qualities of the grafts is not less remarkable. In all cases the (2d year) *Riparia* grafts bear the heaviest crop, exceeding the average of the *Californica* (similarly short-pruned) nearly two to one. The wood growth is also quite different, being much stouter and more copious on the *Californica* stock than on the *Riparia* and *Rupestris*. The last named, however, is also deficient in crop.

The superabundant bearing of the *Riparia* seems to be quite analogous to that of the branch of a fruit tree which has been severely bent or girdled to check the sap and thus to promote fruiting; and like the latter, it is likely to cause the vine to be proportionately short-lived, and less likely to resist unfavorable influences (e. g., the phylloxera) that it might have easily overcome had it not been overtaxed. Some, however, may prefer even for their vines "a short life and a merry one," with heavy crops.

On the other hand, the *Riparia* seems to be a proper stock for such vines as the delicate *Barbera*, which on the *Californica* stock has made an enormous amount of wood but very little fruit.

Again, in a soil better adapted to the *Riparia* and *Rupestris* than is the calcareous clay soil of my vineyard, the outcome might be different, and less favorable to the *Californica*. However, upon inquiry made by me at the late meeting of the Grape-growers' Association, Messrs. J. H. Wheeler and Clarence Wetmore reported very nearly the same experience from their Livermore vineyards, which have very different soils.

The subject is too complex to be fully considered here; but I desire to call the earnest attention of those having the opportunity for observation to the importance of this subject, and request them to communicate to me the facts noted.

E. W. HILGARD.

Berkeley, Aug. 26, 1887.

A LARGE PLANK.—The Humboldt Standard describes a sample plank which the editor saw at John Vance's mill, and which was about to be shipped to Kansas City. This plank was 65 inches wide, 16 feet long and 3 inches thick. There is not a blemish in the piece, and it is a fair sample of the lumber cut from Mr. Vance's Mad River woods. It is the intention to exhibit this specimen plank at the exposition to take place in Kansas City this fall.

THE WOOL CLIP OF COLORADO this year exceeds by a million pounds the clip of any previous season, and the great bulk of this wool finds a market in Chicago. Formerly it was shipped to Boston and Philadelphia, but the tables have turned, and Chicago enterprise is fixing this point as the great future wool market of the country.

THE STOCK YARD.

Mad Itch.

EDITORS PRESS:—The Cottonwood Index says that some gentleman terms a certain disease in cows the "mad itch;" this name for the ailment is misleading. Itch or mange produces much irritation or "itching," but not sufficient to make the animal apparently mad. Mange is due to an insect burrowing under the three layers which go to make up the skin. But this disease seldom, if ever, causes death. The cows in question "acted strangely, rubbing their heads violently against the fence; they continued this for several hours and after rubbing and beating their heads and necks into a pulp, died." Probably it is due, as Mr. Addison says, to eating quids of cornstalks left by hogs after chewing and extracting the juice. If it is due to this cause it might have produced intense pain, ultimately causing inflammation of the stomach and bowels, the brain then sympathizing, and the animal dying exhibiting much excitement.—ROBERT J. DAWSON, Veterinary Surgeon, 225 Geary St., S. F.

We give below the full account to which Dr. Dawson alludes. Mad itch is, as he says, misleading, as it leads one to infer that the real seat of the trouble is in the head, whereas the real trouble is inflammation of the stomach from the presence of indigestible material. We have often warned our readers not to allow cattle to feed on hog leavings. The danger has been shown by disastrous results of the practice in the prairie States and on this coast. The following is the account referred to:

John Reno informs us that on the 18th inst. two valuable milk cows belonging to Reno Bros. died rather suddenly. He noticed them in the morning acting strangely, rubbing their heads violently against the fence. They continued this for several hours, and, after rubbing and beating their heads and necks into a pulp, died. Mr. Addison gives it as his opinion that the disease of which they died is the "mad itch," and that it is induced by eating quids of cornstalks left by hogs after chewing and extracting the juice. Others affirm the correctness of Mr. Addison's theory from positive evidence. At all events, it is well enough to provide against losing cows in this way.

Notes on Breeding.

G. M. D. of Sacramento writes to the *Sagebrush Stockman* as follows: An article published in your journal last week urges that only pure-bred sires should be used by our horse and cattle-breeders, and affirms that no improvement can be made in our stock by using grade sires.

I agree with your statement that where circumstances of location and pecuniary ability will permit of securing the services of pure-bred sires, none other should be used; but I am confident you are putting it too strongly when you state that grade sires will not improve our common stock.

If a cattleman has a band of common cows, and desires to improve them by introducing the blood on some fixed breed of improved cattle, he should aim to introduce as much of that blood as he can consistently in a given time, and if his band is large and he cannot afford to purchase a sufficient number of pure-blood sires of the breed desired, he acts wisely if he secures fifteen-sixteenths, or seven-eighths, or three-quarters, or even one-half bloods. The higher the grade the better, of course. And experience demonstrates that either grade will give far better results in his herd than can be secured by using only common scrub bulls on a par with the cows.

There are not enough thoroughbred bulls in the United States to-day to serve the breeding cows on the vast ranges, and I submit that it is far better, if you cannot secure the thoroughbred, to secure and use the highest grade you can. The same is true of horses. There are many grade sires in the country which are doing splendid service in improving our horses. Would it not be poor practice to discard these and use a common scrub sire when unable to secure the use of a thoroughbred?

I observe that many of our intelligent cattle-men prefer high-grade bulls to pure-bloods, claiming that they are far more hardy, and thus do better on the range. This is doubtless true as regards some breeds that have been inbred and highly pampered for generations. But breeders of our more modern breeds of improved cattle that are becoming justly popular claim it is not true when the pure-blooded animal is not forced and pampered in raising.

In breeding stock the stockman should fix in his mind an idea of the animal he wishes to produce, then select his sires from the breed coming nearest to that idea, and get as much of that blood into his herd as he can in a given time.

There is altogether too much haphazard, go-as-you-please, trust-to-luck method, or rather lack of method, in stock-breeding. The man who will win in the end is the one who fixes an ideal and then breeds for it slowly, earnestly and surely.

THERE are now about 1000 men at work in the woods and mills between Arcata and the north fork of Mad river.

PATRONS OF HUSBANDRY

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

The Anti-Debris Association.

The annual meeting of the Anti-Debris Association of the Sacramento valley was held at Yuba City, Saturday, Aug. 27th. The following Board of Directors was chosen: C. E. Stone, G. W. Hutchins, T. B. Hall, B. F. Walton, N. D. Coombs, Geo. W. Carpenter (Treas.).

Resolutions were passed thanking C. E. Sexey, the retiring president; also recommending that Geo. Ohleyer remain the manager.

The report of the latter referred to the long-continued delay of U. S. District Attorney Carey to bring suit against the hydraulic miners under the anti-debris clause of the last river and harbor Act as very exasperating. The report set forth that no hydraulic mining injurious to other interests is now prosecuted except in contempt of the State or Federal courts. A few mines are still running when not watched, and the association is making strenuous efforts to bring such offenders to justice, but the miners have the locality so well guarded by wires and sentinels as to make it very difficult to get them into court. The question of offering a reward for information to convict was left to the new Board of Directors. The report recommends that a committee, or a party of interested persons, spend all or a part of September in the mountains, visit every hydraulic mine upon the Yuba, Bear and Feather rivers and report their condition. Mr. Ohleyer says that no violation of the anti-debris injunction should be permitted during the coming winter and spring. This measure would, in his judgment, prevent all controversy and litigation; and this can only be accomplished by having sufficient men on the ground, either employed by the association or by the State and Federal Governments, to prevent the use of monitors. The report congratulates the association on the great work it has accomplished in the virtual extinction of hydraulic mining, and commends the president, C. E. Sexey, for his long years of valuable service in that office without fee or reward.

It was stated that the financial condition of the association is such that the money due from the Milton hydraulic mine for fines imposed for contempt would more than pay all the indebtedness. The association recently divided between Yuba and Sutter counties over \$2200 collected from fines imposed upon the North Bloomfield Mining Company.

The meeting was harmonious, and the utmost determination was shown to complete the work of suppressing the debris evil.

Review of the Anti-Debris Struggle.

The *Sutter Farmer* last week contained an historic sketch of the war against the debris evil—presumably from the pen of Hon. Geo. Ohleyer—the larger portion of which we lay before our readers, as follows:

From what is now too plain to be mistaken and too well known to be gainsaid, the agitation against the mass of earth set loose by the monitor was not begun a day too soon. In fact it should never have been permitted, and no doubt never would have been, had its far-reaching consequences been seen from the beginning. The early practice of California mining practically gave the State to the miner to use as he desired; but it was not law, and among the first laws promulgated in the camp of the miner was that every miner should so conduct his operations as not to interfere with the rights of his neighbor.

When the agriculturist desired the same protection he was treated with scorn and derision, and was told that he held his possessions subject to the superior rights of the men in the mountains. These were so confident of their position that they hailed the beginning of suits with apparent satisfaction, and promised to abide by the decision. The Keyes suit, the pioneer onslaught, was not decided, but turned out of court on a technicality, and as since decided, erroneously.

In subsequent complaints we were told that the filling of the rivers was a benefit and the sand on our farms a fertilizer, and that they had prescriptive rights anyway, which were confirmed to them by our acts in constructing levees, etc.

Thus the levee ground was traversed, step by step, and when nothing more could be said in defense of the little giant, the case was submitted with the understanding that the decision should settle the issue and restore tranquility to the people of both sections. The decision came; it was the most searching and exhaustive ever produced on the Pacific Coast. It was so thorough and just, and so well grounded in law and equity, that it was not appealed, two years' probation failing to reveal a flaw in it on which the defendants dared ask for a reversal.

By their (defendants') consent the decision stands as the law of the land, and all infractors could see the "handwriting on the wall" in plain English. No stronger or better notice to quit could have been given; but instead of doing so, of carrying out the implied pledge of submission to law, they at once sought methods to accomplish indirectly what the courts had forbidden. What was formerly lawful by toleration only was now illegal and done in con-

tempt of court, whose mandates had no effect whatever on the late honor-protesting hydraulic miner.

What was before surmised became a certainty, and that was the intention of continuing in spite of the courts and the plaintiff, and that if the plaintiff hoped to get the relief given him on paper, he must enter the rebellious territory and enforce the courts' decrees. This marks an area in the struggle wholly different from that of the past. The fight on the part of the defendant descended to abuse of the victors; nothing too mean and untruthful could be said of him; but it was not confined to those seeking the protection of the Government—it was leveled against all the courts with equal ferocity. The agents of the valley counties and those of the bays as well, were abused as the veriest scoundrels, for the sole purpose of destroying their standing and to discourage appropriations and pursuit. Their acts have stood the test of every investigation, and their desire for rest and relief has always been met with refusals by the people and those in authority. We could forgive the old and honest press of the mountaineers; they are entitled to respect on the ground of the cherished ideas so long in the ascendant there, and we believe they will be the first to see the error of their theories.

The most deplorable story of this whole struggle remains to be told. We refer to the depth of infamy into which the hydraulic vandals have plunged a few editors. It must be stated that no respectable journal, either city or country, of any size or pretensions, is devoting space to this inhuman warfare. This is left to the scout and adventurer. Some of them are bold and barefaced; others wear the mask of pretended friendship toward a tax-ridden people. The first abuse the valley agents because 75 per cent of hydraulic mining has been stamped out beyond recovery; the latter because 25 per cent continues to defy the laws of the land with every opportunity. This class of papers have never a kind and encouraging word for the plaintiff in his numerous victories, and never a word of censure against the lawless. Both know that the hydraulic vandal is responsible for the presence of the hated "spy" and the irritation and expense engendered by his acts; and both know that a full and complete surrender to the law and decrees would stop every act and pursuit and prosecution in a day. Among the many silly mistakes of the hydraulic crowd, the worst is maintaining journals in the valley whose hostile criticisms are quoted for the purpose of showing a change of public sentiment. While it deceives no one, it serves to show to what depths a bad cause may descend, and to prolong and intensify a struggle that can end only by complete submission.

It Fills the Bill.

It is reasonable to suppose that every farmer desires to better his condition, relieve himself of burdens that are unjustly saddled upon him, and realize something from his labor. This result he ought to attain, and we believe would achieve, if the work was gone about in the right way, in the proper spirit and with that determination which knows no let-up until the objects aimed at are accomplished.

Let us look at this matter dispassionately for a few moments. Here is a body of men embracing slightly over one-half of the voting population of the country, engaged in a common calling, with an identity of interests and a oneness of purpose that ought to unite them indissolubly in some movement for their welfare. But are they united? Do they work together for the attainment of a common end? What is needed is thorough organization and intelligent direction. How is it to be had?

The farmers' club, though very good in itself, is far from meeting the requirements of the hour. Discussing the succession of crops, the raising of stock and the application of fertilizers—all important topics, we concede, but not the real subject at issue—consume the time of the club. The farmers' institute, one of the best places in the world for airing pet theories and riding darling hobbies, also leaves the vital question unsolved. We must look somewhere else for relief, and there is only one source of help left. The Grange fills the bill, if that form of expression is admissible, and to its standard let the farmers gather from every nook and corner of our broad land. Bury all partisan differences; turn your backs upon party leaders; think, act and vote for your own interests, and you can secure all you desire. Dissensions among farmers themselves render spoliation possible and profitable.—*Virginia Granger*.

JERSEY PATRONS ON A PICNIC.—Eastern Grangers appear to be well abreast of their Pacific kindred in the way of pleasant and profitable outdoor gatherings. A correspondent of the *Farmers' Friend* tells how the Patrons of Burlington county, N. J., held their regular annual picnic under the auspices of Pomona Grange, in the Old Camp woods, near Vincentown, Saturday, Aug. 6th. The committee had made careful and complete arrangements, and, excepting the showers of the afternoon, everything passed off in the most pleasant manner possible. The dinner covered several long tables, and was a complete success. Every Grange in the county was represented, and there were beside visitors from five other counties of the State. With organ accompaniment, a large choir of young folks rendered

some excellent Grange songs. Among the speakers were Richmond Coles and Mortimer Whitehead, Master and Lecturer of the State Grange; Judge Buchanan, Congressman of the district, who is not ashamed to face his constituents because of his work, and votes for the oleomargarine and other laws in the interest of all farmers, and Bro. Applegate of the State Grange Legislative committee. Bro. D. T. Haines acted as chairman and made the address of welcome. The rain interfered with the speaking, but there was plenty of Grange literature for distribution, and so the good seed was sown and the crop cultivated.

"GRANGE WORK AND PROGRESS."—Owing, as we suppose, to some delay in the mails, the wanted favor of National Lecturer Whitehead has failed to reach us the present week.

AGRICULTURAL NOTES.

CALIFORNIA.

Amador.

GETTING READY FOR THE FAIR.—*Record-Union*, Aug. 29: Plans were adopted and contracts let on Saturday for building the Pavilion at Ione, for the Agricultural District comprising El Dorado and Calaveras counties. It will be 60x100 feet, and the walls made of concrete, thus rendering the structure nearly fire-proof. The contract for construction was let to C. W. Swain of Ione, and the mill work will be done by Pearson, Amsden & Burnett of Sacramento. The building will cost about \$3500, and is to be completed in time for the fair, which is to open Oct. 3.

Butte.

ITEMS FROM GRIDLEY.—*Cor. Record Union*, Aug. 25: The last of the wheat bought on contract was forwarded to S. F. to-day. Farmers are now busy hauling their grain and storing it in warehouses, expecting better prices. Some 4000 tons are now stored in the Gridley warehouse. We will also have about 10,000 sacks of as fine corn as was ever raised in the State for market. We have about 30 acres of vines in this section, all loaded with choice raisin grapes. The 700 orange trees set out by A. W. Campbell last spring are growing nicely; also those planted in town. The yield of wheat hereabout has averaged 10 sacks to the acre, and barley 13.

El Dorado.

FRUIT NOTES.—*Placerville Observer*, Aug. 23: S. D. Colburn, who has a fruit ranch at Kelsey, 2200 feet above the level of the sea, was in town Saturday arranging for the shipment of his peach crop. And such peaches! For his Strawberry Clings he uses six-inch boxes, and finds it necessary to use a half-inch cleat on the ends to admit of two tiers.... While passing through Hardie's orchard last week, Dr. Wrenn picked a Diamond Cling peach of more than ordinary size, brought it to town, and found that it weighed a plump pound. Pretty good peach to grow on land that cannot be irrigated.... W. H. Whitbeck was in town Saturday with a few Lyon seedling peaches, as handsomely colored as any we have ever seen, and large enough to attract attention in any market. Mr. Whitbeck has named his place Fairview ranch, because of the fact that, standing in his doorway when the weather is fair, one gets a view of the entire Sacramento valley, including the State Capitol and Insane Asylum at Stockton. But a few years ago this ranch was as rough and densely covered with chaparral as any land in the county. Off three rows of blackberry vines, 80 feet long, he has picked this season 510 quarts of berries, and today one would hardly believe any had been picked. His land has an elevation of 3000 feet above sea level.

Kern.

PEACH CROPS SOLD.—Telegram from Bakersfield, Aug. 24: The agent of a Sacramento fruit company purchased to-day the crop of two peach orchards in this vicinity, paying two cts. per pound. The owners will net at that rate \$400 an acre. They are to be shipped to Chicago. The purchaser states that the fruit is the finest he has ever seen in the State.

Los Angeles.

NORWALK ENTERPRISE.—*Cor. Colusa Sun*: I lately visited the little town of Norwalk. They have just put up a fruit-drier, and hope to make a large crop of raisins this fall, which will be much more commendable than making wine. Between Norwalk and Artesia they have set out a great number of eucalyptus. As this grows in a few years to be a tall, stately tree, yielding a large amount of fuel, it is thought it will prove remunerative. We are by no means confined to raising lemons, oranges, or even grapes. Apples, peaches, nectarines are now in order. Apricots bore well this summer, and have already been disposed of.

Marin.

CHOICE FRUIT.—*Journal*, Aug. 25: The fruit production in San Rafael is something marvelous in its way. Nearly all the fruit raised is in private yards or house grounds, and in nearly every instance the produce here is superior in quality to any in the market from abroad. We have most delicious apples, pears, peaches, plums, grapes and berries, yet we have no orchards. Oranges, equal in flavor to any grown south, are raised here, and our grapes are said by connoisseurs to equal in quality those of the south of France. Yet our capacity for these products is not generally known.... Some of

the finest egg plums that ever grew may be seen on Judge Mahon's grounds. They are turkey egg plums and very delicate in flavor.

Nevada.

MELONS ON DEBRIS.—*Grass Valley Tidings*: We are indebted to Mr. Nichols, the dairyman whose place is two miles west of town, for a sample watermelon grown by him on pure, unadulterated slickens and without irrigation. The melon was sound, sweet, and of just the right consistency—as edible as the best we have ever partaken of. Mr. Cassaway, who is connected with the dairy, tells us that there is about half an acre of these melons, and that some of them will tip the scales at 60 pounds. The slickens was undoubtedly soft, thus allowing the tap root of the vine to penetrate deep and derive sufficient moisture. Four-pound egg-plants are also grown on this same slickens.

Placer.

IRRIGATING TOMATOES.—*Auburn Republican*, Aug. 24: H. B. Gaylord, who is a practical gardener, says there are some varieties which need water and fill well when it is used liberally. Such varieties are the Essex and the Cardinal. Other varieties, such as Turner's Hybrid, will grow large but slice up into "cart-wheels."

Sacramento.

THE HOP HARVEST.—*Bee*, Aug. 24: Hop-picking was begun at Menke's ranches yesterday. Over 400 persons are engaged in the work. A very large proportion are Chinese, as the man who promised to open a boarding-house for whites failed to keep his word. The hops are of fine quality, and Mr. Menke states that his force can pick 60,000 pounds a day. Three Chinamen yesterday picked 826 pounds. The price paid is 95 cents per 100 lbs.

SEEDLING CLINGSTONE.—*Record-Union*, Aug. 29: On Saturday Adolph Jean of Mayhew Station brought to this office samples of a seedling clingstone peach raised by him which is second to none in the market. It is evidently from an orange-cling pit, and nearly true to the tree from which it came. This seedling may be of a little redder marking and flesh, but it is hardly distinguishable from the orange-cling either in appearance or flavor, and in size ranks with the best. Some of the samples measure over 12 inches in circumference and weigh a pound. The tree upon which they grew is three years old, and bore this year five boxes of this mammoth fruit.

San Bernardino.

ARTESIAN WELL AT CUCAMONGA.—*Ontario Record*: An attempt to find artesian water on the Fruit Land Company's land was crowned with success Friday, August 19th, when Mr. H. Griggs, the well-borer in charge, struck a fine stream at a depth of 220 feet. The water is clear as crystal and six degrees cooler than the cool stream flowing from tunnel No. 1. This fact suggests different sources for the two streams. The flow began with about two miner's inches. It has been increasing steadily up to this (Monday) morning, when the flow is 15 inches strong over the top of the pipe, two feet above ground. The different strata passed through in sinking the well were as follows: First, 50 ft., gravel and boulders; thence to 70 ft., hard cement and boulders; thence to 90 ft., coarse gravel; thence to 150 ft., cemented boulders—very hard; thence to 158 ft., clay; thence to 210 ft., cemented boulders—very hard; thence to 220 ft., coarse gravel full of water through the entire stratum, when fine compact sand was struck and work ceased.

San Diego.

OFF NON-IRRIGATED VINES.—*National City Record*: The finest sample of grapes brought in this year are from Geo. L. Kimball's ranch, and may be seen in our window. There are three varieties, Rose of Peru, Flaming Tokay and Muscat. Mr. Kimball never irrigates, and always raised the best and most highly flavored grapes brought to this market.

FLAXSEED BY THE CARLOAD.—*San Diego telegram*, Aug. 30: Twenty thousand pounds of flaxseed arrived from Fallbrook yesterday. The seed will be sent to the oilworks in San Francisco.

San Joaquin.

TESTING A GRAIN-CLEANER.—*Stockton Independent*, Aug. 28: A thorough test of the Angle Sieve grain-cleaner was made on Hunter-street square yesterday in presence of a large crowd. The wheat operated upon was mixed with oats and barley, and the result proved conclusively that the machine was able to do all that is claimed for it. Several experienced farmers who witnessed the test said that the Angle Sieve was the best cleaner and separator of wheat they had ever seen. The machine is manufactured at the Stockton Combined Harvester and Agricultural Works.

CROPS ABOUT ATLANTA.—The grain is garnered and the farmer has learned how much has been the reward for his toil. The average exceeded the expectation, summer-fallow in many cases yielding 26 bushels to the acre and winter-sown grain from 8 to 15 bushels per acre. Those who sold early felt very well pleased, but those who still have wheat to sell are rather more quiet.

San Luis Obispo.

A GRANGER AT PASO ROBLES.—*Leader*, Aug. 27: Hon. J. V. Webster of Creston was in town last week and took a look around to see what the prospect for fruit-growing was here. He paid a visit to the hotel orchard on the river-bank, and, like every one else who sees

that remarkable feature of our development, was astonished. The peaches he pronounced equal to anything he had ever seen, and the nectarines superior to any that had met his notice elsewhere in the State. In size, beauty of color and exquisite delicacy of taste they are simply incomparable. But, while the excellence of the fruit grown on the river-bottom amply demonstrates the adaptability of that soil to fruit-growing, Mr. Webster gave it as his opinion that the mesa and hill lands were even more desirable for horticultural purposes, and this opinion is coincided with by those who have made the matter a study.

Santa Barbara.

LOMPOC DOTS.—*Record*, Aug. 20: We wish that all who have any notion of coming to Lompoc could at this time visit the numerous young orchards all over the valley and see the wealth of fruit of every variety with which the trees are laden, and also how free from every kind of fruit pest these orchards are. There is not a codlin moth in this region. Then the scale, which is such a pest to the pear, leaves our fruit smooth and clean. The Early Crawford peach crop in the valley is very large, the fruit is of superior quality and fast ripening.... F. Legee has just thrashed a piece of mustard that had but half an inch of rain after being sown, and it yields 22 sacks per acre. Mustard will be worth about three cents per lb., or \$66 per acre.... Wm. Cantley estimated that he would have about 1400 sacks of barley on his ranch in the valley; but instead he had over 2700, and this is but a sample of the increased yield of grain the present season in Lompoc valley.

Shasta.

FROM FALL RIVER MILLS.—*Cor. Redding Democrat*, Aug. 22: Heading is about completed and the whistle of the steam thrasher is for the first time heard in the valley. Grain is of fair quality, but the yield is light owing to dry weather and the late frosts. The fruit crop is a failure, and the vegetable crop is late and of only medium quality. The farmers, however, are far from being discouraged, as there is no case of an entire failure of crops in the valley.

Solano.

PAYING PEAR TREES.—*Suisun Republican*: L. B. Abernathie of Suisun valley has a little less than one acre of Bartlett pear trees planted out very irregularly and about 20 years old. There are 108 trees in the patch, and from these Mr. Abernathie gathered and sold at \$1 a box to J. Z. Anderson, 1045 40-lb. boxes of pears (this lacks just 35 pounds of being ten boxes to the tree). The best part of the business is that each year the yield is about the same. Besides the fruit sold, there are enough small pears to pay all expenses of cultivation.

Sonoma.

RICHNESS OF SOIL.—*Santa Rosa Republican*: Wesley Woods, who is farming a portion of the Hanneth estate, two miles east of this city, has furnished us with the following data. The same land that he is now cultivating has been sown to grain for 22 consecutive years and the yield this year is as follows: Oats, 60 bushels to the acre; barley, 55 bushels; wheat, 43 bushels. When the land was first farmed in 1855 it was sown to barley and the yield was only 52 bushels to the acre. Now after a period of 32 years, without any rest, the increase is 8 bushels to the acre.

Stanislaus.

HARVESTER BURNED.—On Tuesday, near Ceres, the Young Combined Harvester, owned by W. Whitney, was totally destroyed by fire while the crew was at dinner. The precaution had been taken to drive the machine across the road, out of the standing wheat, and no grain was burned. The fire is supposed to have been caused by a hot box at the end of the draper.

COYOTES OUTWITTED.—*Modesto News*: A large den of coyotes was found on the McMillan ranch, near Knight's Ferry, this summer by his header crew. Frequently the men took their rifles in hopes to kill some of them, but in vain. Last week Ally McMillan and Ed Parlier took some fresh meat, poisoned it with strychnine, proceeded to the den, and scattered bits of the meat. Next day they found three of the largest coyotes that have ever been killed in Stanislaus county.

Yuba.

GROWING CASTOR BEANS.—*Marysville Appeal*: A large number of acres in the lowlands east of Meridian and Moon's Ferry are planted in castor beans, and the owners say that the profits per acre will run from \$12 to \$20. They have gathered two and three crops thus far this season.

NEVADA.

GRAIN AND ALFALFA.—*Reno Gazette*: C. T. Bender of the First National Bank came in last night from Lovelock, and brought with him a beautiful specimen sheaf of wheat and oats. The oats stood six and a half feet high and attracted the attention of every "old-timer" at the depot, as well as that of many inquisitive strangers. It was grown on the ranch of J. H. Theis, about three miles from Lovelock. The land yields 60 bushels of wheat and 80 bushels of oats to the acre. The richness of the soil is due to the overflows of the sink of the Humboldt in centuries gone by. Joe Marcy will stack 4000 tons of alfalfa this season quite close to where the specimen mentioned came from, while the Marker Bros. will stack 3000 tons.

The Fair at Santa Rosa.

The ninth annual fair of the Sonoma County Agricultural Park Association began at Santa Rosa, Monday, August 22, and continued, with growing interest, to the end of the week.

A member of the *RURAL*'s editorial staff went up from San Francisco Saturday morning to make a hasty survey of the exhibits, and catch a few notes on the spot. As the train rolled away from the Marin county landing, grand were the glimpses caught of Mt. Tamalpais, whose rocky summit showed clear above the fog-drifts that swept along his rugged sides. On we sped over miles of salt-marsh, through brown pastures, where cattle grazed and colts were scampering; among changeable hills, where on ambitious vineyards crowd back the native groves; past tidy, bustling Petaluma, and through young orchards, with corn flourishing between their rows, and found ourselves, a good hour before noon, in the streets of Santa Rosa, lined with neat brick structures and abundant shade trees.

Entering one of the many vehicles that plied between the city and the fair-grounds, we reached the track in time to see a goodly portion of the live-stock led past the judges' stand, and the prize-winners decorated with their blue ribbons. There were superb and mighty draft-stallions—some clad in satiny black, another iron-gray, and others light-dappled. The two great Cleveland bays, "Baron Hilton" and "Royal Studley," shown by Seth Cook of Danville, were marvelously beautiful in their lithe vigor and graceful dignity. And Mart Rollins' sorrel roadster-stallion "Rosewood" was a most elegant and spirited creature to look upon.

At the head of the procession of cattle there marched in sheeny majesty Cook's black Polled Aberdeen Angus bull, "Marathon of Fintry" (said to weigh 2200 lbs.), followed by a dozen jetty members of the same family. Then came the fine-looking Jerseys, Holsteins, Shorthorns, and graded cattle—perhaps 50 bovine head, all told.

A stroller past the stables, after lunch, found many of them shut; but frequent glances were had at slim, sleek speeders, carefully tended, before one came to the open stalls of the magnificent black Clydesdale, "Pride of Cree" and his neighbor, the black Norman, "Trumpette," entered by the Sonoma Stock-Breeders' Association. J. H. Laughlin's Clydesdales "Dina," with prize colt, "Black Mollie," and his black yearling jack, "Yolo Chief," were among the few other animals visible.

Of the swine-pens, the sole remaining occupants were R. H. Crane's big two-year-old "Theodore" (what a name to give a boar), who sharply grunted disapproval at being spoken to, "Lucy," of the same age, and one younger specimen of the Poland China breed.

The ovine delegation embraced R. H. Crane's 16 Southdowns—one ram, and ewes, ram lambs and ewe lambs in fives—R. B. Cannon's Shropshire buck and 16 grades, and, over against their white fleeces and dark faces and feet, E. W. Woolsey & Son's Spanish merinos, eight in number, with clear, flesh-colored muzzles, heavy dust-blackened coats and big cork-screw horns, contentedly chewing their cud.

In the poultry department, 30 coops or more were occupied. H. Hoag showed game fowl and Bantams. T. C. Starr had tricos of big Langshans, Plymouth Rocks, Partridge and Buff Cochins and Light Brahmas, the latter especially handsome. Plymouth Rocks, Langshans and both Brown and White Leghorns were exhibited by several parties; Black Spanish, also, by H. E. Phillips; Silver-Spangled Hamburgs by W. H. Hudson; Bronze Turkeys and Pea fowl by Julius Ort; Toulouse Geese by H. H. Button, and pure-white Fantail pigeons by V. Piezzi. One coop was devoted to a freak in the shape of a rooster, with a paunch like a duck and very short legs on which he stood upright, penguin-fashion, and walked with difficulty. When he wished to feed, he would lie down flat on his breast and in that posture pick up corn. A pair of lovely white rabbits and half a dozen California quail added variety and beauty to the exhibits.

In the Pavilion.

The display of the Pomona Grange was the foremost feature, the tables on which it was made being set in the middle of the floor and extending nearly the entire length of the building. The choicest of green fruit—pears, peaches, plums, nectarines, grapes, etc.—was put forth in vast variety. A fine assortment of dried fruits and berries under glass from Button's drier; a case holding specimens of silk, and 17 medals—three gold and 14 silver—won at State, Mechanics' and Sonoma county fairs; a set of little slabs of native woods, duly labeled; hundreds of glass jars, containing samples of seeds, grains, nuts, etc., arranged on flights of shelves, capped with bottles of native vintage; the most luscious of large blackberries, grown without irrigation; huge beets and cabbages, musk and watermelons, corn and squashes, and a sunflower head 17 inches across its face, were among the objects we caught sight of. But there was scanty time for inspection Saturday, as the dismantling of the boards and packing of the exhibits for removal to Petaluma began early in the afternoon—a procedure which the numerous small boys deemed the signal for frugal raiding.

Prof. Neuman's sericultural exhibit, to which a place had been assigned on the Grange table, is described in the *Democrat* as follows:

"The valuable little insect is to be seen in its various stages of growth—from the egg just laid by the moth before its death, through the larva and chrysalis, to the moth itself. The collection also contains specimens of the wild silkworm, a native of California, which Prof. Neuman in his enthusiasm declares is destined to create a revolution in silk culture. The worm resembles the green tomato or tobacco-worm, and feeds on the wild coffeeberry plant, also a native of this country. The exhibition has created no little interest, and greatly aided the professor in his efforts to popularize silk culture."

To the pillars supporting the gallery-front were bound stalks of corn and sheaves of grain; leafy and fruit-fraught boughs hung from cross-lines aloft, and high over all was strung a bright-hued banner, whereon were vividly depicted Sonoma's purple hills, golden grain-fields and thriving vineyards.

It was pleasant to meet again Messrs. Hawkins, Rogers, Whitaker and Adams, whose faces became so familiar to us during the Mechanics' Fair a year ago, and we felt that the Pomona Grange had shown its wisdom in securing this veteran committee to care for the displays the present season.

Disposed around the sides of the pavilion, on the lower floor, were some fine vehicles, plows and other implements, the ingenious Empire fence machine, the handsome outputs of the cannery and Del Monte Milling Company, and a beauteous mound of greenery and bloom, exhibited by M. H. Dunn, a local florist. A little electric pump, by Zinks & Ruhlman, kept steadily at its work and attracted some notice.

In the spacious galleries, beside the elegant furniture and saddlery, the skillful needle-work and all the varied witchery of the art-room, which the lateness of the hour forced us to slight utterly, was a very creditable display of vegetables from the county farm, arranged by Superintendent C. W. Hawkins. The placards for this exhibit were written mostly in the rinds of big squashes, where they had been growing apparently for weeks.

Sixteen boxes of choice pears represented as many varieties—namely, Flemish Beauty, Vicar, Beurre d'Anjou, Sheldon, Seckel, Beurre Hardy, Urbaniste, Keiffer, Beurre Clairgeau, Beurre Easter, White Doyenne, Duchess d'Angouleme, Louise Bonne de Jersey, Lawrence, Winter Nelis and Souvenir du Congress. These were shown by E. H. Smyth, a Santa Rosa paint-dealer, who is evidently a successful fruit-grower besides. A large and tastefully ordered collection of natural-history specimens, comprising minerals, fossils, shells, insects, etc., invited hours of study while we had but a few tantalizing minutes.

The loaves, both white and brown, which had been cut and were tasted by the visitor, proved that the fair bread-makers of Sonoma county have attained a high degree of excellence.

As the time for the closing races drew near, crowds gathered upon the grand stand and the places commanding good views of the track, and strains of instrumental music from the band alternated with the yells of the pool-seller. We mingled awhile with the spectators, witnessed the flyers' single dash and the decisive heats of the first trotting, partaking somewhat of the excitement of the occasion—and found our opinion of horse-racing, as an element of the agricultural fair, substantially unchanged.

The attendance during the week and the financial results proved very satisfying. On Thursday, particularly, business in town was generally suspended by common consent, schools were dismissed—even the real-estate dealers relaxed their efforts, and Hon. J. K. Luttrell (Senator Vrooman's substitute) had a great concourse of hearers. He spoke for upward of an hour, reviewing the history of the county and the rise and progress of Santa Rosa; giving a graphic sketch of the labors of the Agricultural Park Association, and dwelling at length upon the outlook and possibilities of Sonoma, with the combined labors of the various organizations now in existence. The address was received with much enthusiasm, and the speaker retired amid prolonged applause.

One noticeable feature of the fair this year was the scarcity of a certain class who have been wont to swarm on such occasions. The city authorities had lately passed an ordinance prohibiting the running of all chance games during fair week. The directors of the Agricultural Park Association resolved to the same effect, and issued no privileges for the conducting of wheels of fortune, dice or similar games within the fair-ground limits, yielding to the gamblers only so far as to admit the pool-seller. This action has produced encouraging results, and may well be carried one step further in the future.

The advent of the boom was evident in the many showy signs of real-estate dealers. Daylight hardly sufficed to dispatch their press of business, and some of their offices were lighted well into the night.

Premiums.

The following awards on live-stock were made on Saturday. Others are to be announced later.

Horses.

THOROUGHBREDS.—P. Carroll took all premiums except one, viz.: C. Underhill, best 4-yr-old mare, Rosette. Graded—Jos. Purington, 9-yr-old stallion, Alexander, Guerne & Murphy, suckling horse colt, Frenchy; 9-yr-old mare, Josie French. J. H. Laughlin, 1-yr-old stallion, Mark L.

HORSES OF ALL WORK.—Stallions—J. T. Car-

michael, 4-yr-old and over, Darkness. J. W. 3-yr-old stallion, Blaine. J. Keeler, 1-yr-old stallion, Tobe. J. R. Green, suckling horse colt, Mares—J. W. Wiley, 4-yr-old, Liza; 3-yr-old, Maud. J. T. Carmichael, 2-yr-old, Molly. J. H. Laughlin, 1-yr-old, Queen. Families—J. T. Carmichael, family stallion, Darkness, with colts Risa, Benton, Dolly, John and Molly.

DRAFT HORSES.—Stallions—Sonoma Co. Stock Breeders' Association, 4-yr-old and over, Trumpette. J. F. Cooke, 3-yr-old, Crown Duke. F. Roberts, 3-yr-old, Pointsman, Jr. Mares—Crane & Hill, 4-yr-old and over, Anne. John Gamble, 3-yr-old, no name. A. H. Crane, 2-yr-old, Ann. Crane & Hill, 1-yr-old, Bessie. J. H. Laughlin, suckling colt, Black Mollie.

ROADSTERS.—Stallions—John Strong, draft horses in walking match, Mart Rollins, 4-yr-old, Rosewood. G. E. Guerne, 2-yr-old Alfred G. G. E. Grosse, 1-yr-old, Guy E.; suckling colt, Guess. J. H. Laughlin, gelding, Seldon. Mares—J. Gamble, 4-yr-old and over, May. J. H. Laughlin, 2-yr-old, Roxie. G. E. Grosse, 1-yr-old, Bridget. C. Underhill, suckling colt; no name. Families—J. Purington, family roadster, Alexander, with Grover Cleveland, Daisy, Star, Sallie Walker and May Walker.

CARRIAGE AND SADDLE HORSES.—Jessie Peters, family carriage team. J. L. Walker, single buggy mare, Nettie J. Jas. Austin, saddle horse, Jake.

STANDARD TROTTERS.—Stallions—Dick Button. I. De Turk, 2-yr-old, Anteeo Button, Guerne & Murphy, 1-yr-old, G. & M. Mares—Guerne & Murphy, 6-yr-old and over, Daisy. E. W. Woolsey & Son, suckling colt, Twilight.

JACKS.—J. H. Laughlin, 1-yr-old jack, Yolo Chief.

Cattle.

POLLED ABERDEEN.—Seth Cook, best exhibit. **DURHAM.**—Bulls—V. Piezzi, 2-yr-old, Fingermark. R. H. Crane, 1-yr-old, Blaisdale. Cows—V. Piezzi, 3-yr-old, Sally; 2-yr-old, Minnie.

JERSEY.—E. W. Woolsey & Son, 4-yr-old bull, Ronda; 4-yr-old cow, Berkeley Maid; heifer calf, Daisy.

HOLSTEIN.—Guerne & Murphy, 3-yr-old cow, Hicke; heifer calf, Maud; bull calf, no name.

GRADED CATTLE.—W. S. M. Wright, bull, Winfield. Guerne & Murphy, bull calf, Dick. V. Piezzi, 4-yr-old cow, Fannie; 1-yr-old cow, Clara; heifer calf, Maggie; fat cow, Dora.

Stockton Notes.

EDITORS PRESS:—Circumstances have prevented me from writing since the harvest, which proved abundant, and paid well those fortunate enough to sell, deliver, and get their money while wheat was at \$1.70, \$1.80 and \$1.82. But, alas! the crash came when wheat was \$8 a ton higher than in Liverpool, and some had to take their wheat back. A large number are storing, while the market is at \$1.25. Dealers say it will brighten to \$1.45 for a time, at least. The uncertainty of the grain market is stimulating fruit and nut culture all over this county, which it is a proven fact, produces the finest shipping fruit, unequalled in flavor.

The boom, begun in wide-awake Lodi, has set land agog in Stockton. In city, suburbs and country, sales go on. People with winter chill in their bones have come to stay; sojourners, seeing the soil yielded its fullness and the climate its healthfulness, are buying; citizens are rushing around, looking up lots and records, and many farms are being sold at \$70, \$100, and \$150 per acre—cheap for their goodness, compared to lands in other counties.

The pavilion is grand—the finest in the State—and reflects great credit on the stirring character of L. U. Shippee, president of the State Agricultural Society, and S. J. V. District Society. The committee of 100 gentlemen and 100 ladies, under the guidance of Mr. Wolf and Mr. Dohrmann of the Kindergarten, are active in plans to decorate and fill the building, now nearly done, and a rousing fair is a certainty.

Pomona Grange, No. 3, under the experienced leadership of J. D. Huffman, is, through the subordinate Granges, gathering every product of the county and its manufactured complement to fill 2000 feet of space at the State Fair, to compete generously with adjacent counties at Stockton and help dedicate the pavilion to all that is excellent in labor or skill.

The summer has been cool, except a few days. No need to go to the sea-shore for pleasant days. The big circuses and the coast pick up all loose change in the interior.

MRS. W. D. ASHLEY.

Stockton, Aug. 29, 1887.

SAYS THE ALBUQUERQUE DEMOCRAT: Several prominent Arizona capitalists are contemplating a canal enterprise that promises to be a successful venture. The Gila river will be tapped at the Box canyon, eight miles above Agua Caliente Springs. The canal will be 30 miles long and about 40 feet wide, and is intended to cover considerable of the mesa land in the vicinity of the Eagle Tail mountains.

A COMPANY has incorporated in Redding for the purpose of taking water from the Sacramento river for irrigating purposes. The river will be dammed near Clear Creek, 12 miles above there, and 100,000 inches of water taken out. The company is composed of San Francisco and Redding capitalists, and the work will undoubtedly be pushed vigorously.

LATEST INFORMATION from the mouth of the Klamath is that the fisheries there are turning out remarkably well. As many as 500 fine salmon is not an extraordinary catch there, and as high as 1000 are frequently caught at one haul of the seine.



Wayward Love.

[Written for the RURAL PRESS by DAGMAR MARIAGER.]

I loved one loved by many, rich in all
The needs and luxuries of pompous sway;
His infant straying doomed my love to fall,
And like a worthless thing 'twas cast away.

Again I loved unwisely, I must own—
I loved a lovely face and winning way;
My ardent love then lost its lofty throne,
And like a worthless thing 'twas cast away.

Once more I loved—he hero of an hour,
And he was grandly eloquent and gay;
An impulse and an accident gave power,
And then again my love was cast away.

I loved a jurist for his magnetism,
The force with which he could his case portray;
His gravity, sarcasm and witticism,
And once again I cast my love away.

Once more my wayward love was to be snared—
He was an actor good in grand array;
My love became a passion, but he spared
It not, and I the madness cast away.

My scattered loves I gathered and embraced,
As subjects to my reason's cold assay;
Not wholly base, but awkwardly misplaced,
They'd served as painful evils on my way.

"Dear love within my bosom," then I said,
"Cast vanity aside; be thou a sage;
Dive 'neath the glittering surface unafraid,
And worthy welcomes will thy rest engage."

Fuss and Feathers.

[Written for the RURAL PRESS by THEODORA HOLLY.]

It was one of those June mornings when all nature is happy and gay. The meadow larks poured forth their melodies and the modest linnets joined their sweet notes to the chorus. The sky was soft and blue, and the lazy clouds rested motionless, as if not deeming it worth their while to sail. The dewdrops sparkled and glistened in the sunshine like rare rubies. The roses danced gaily in the breeze, at times peeping in at the window to "bid good morrow," and, as I have said, on this fair morning all nature was happy and gay; but still Mrs. Jones looked sad. This was not her wont—it was as if a cloud had darkened the sunshine. It was evident that something disturbed her peace of mind. At last, turning to her daughter, she said:

"Milly, have you seen anything of Bantam? I cannot find her anywhere."

"O mamma! she can't be lost, for I saw her only yesterday," replied Milly.

"I hope that we can find her," said Mrs. Jones anxiously, "for I set such a store by her—she is worth her weight in gold," and had she been the fabulous hen that laid the golden eggs, Mrs. Jones could not have prized her more highly, for if that worthy lady had a weakness it was for fine poultry. Mrs. Jones and Milly searched until noon—searched high and low, as Mrs. Jones told her husband, but no Bantam was to be found. Mr. Jones listened quietly to the end of the harrowing tale, and then, much to his wife's horror, carelessly remarked:

"Oh, well, she will come around in a few days, and if she is lost it won't take a mine to buy another; they are not so scarce as that."

"Oh, but I never shall find one like her: she is the finest Bantam I ever saw," replied Mrs. Jones, mournfully.

After Mrs. Jones had washed the dishes and put everything in its place, she donned her sunbonnet and went over to Mrs. Smith's to confide all her fears concerning her Bantam to that good woman, for she knew that Mrs. Smith would not treat such a serious matter as indifferently as Mr. Jones had done, for these two women had always been the best of friends, agreeing in all points of poultry, and many were the amiable chats they held, while healing stockings, over the best way of bringing up young chickens.

Susie and Milly cared not for the best way to bring up young chicks, nor cared they for the wise talk of their fathers as they swung merrily on the gate. Thus their small world rolled peacefully on, undisturbed by thoughts of the great outside world, with its bustling cities and enterprising railroads. But soon this calm state of affairs was all changed—for after Mrs. Jones had poured her tale of woe into the intent ear of her friend, and she had fully sympathized with her, and had reassured her again and again that her pet would soon return, Mrs. Smith led the way to the barnyard, saying, "I want to show you my beautiful new Bantam," pointing as she spoke with no little pride to a fine fowl that was busily eating scattered grain, and great was Mrs. Jones' surprise to recognize her own Bantam, with all its peculiar marks—every spot and every feather the same; and great, too, was Mrs. Smith's surprise at her friend's strange behavior, who hemmed and cleared her throat, and then said, coldly:

"You are mistaken; that is my Bantam and I did not think that you would play such a joke on an old friend."

"Your Bantam," cried Mrs. Smith. "Why, I bought her yesterday."

"Madam," said Mrs. Jones, in a voice that sent a chill to her friend's heart, "I could swear that that Bantam was mine. I should know her 20 miles from home."

"Samantha Lucretia Jones, do you mean to say that I have stolen your Bantam?" asked Mrs. Smith, her face red with wrath; but Mrs. Jones, not deigning to answer her question, bowed coldly as she stalked out of the barnyard, saying, "I never was so deceived in any one in my life before—never!"

Mrs. Smith rushed into the house and threw herself upon the bed, moaning, "How could she, after knowing me all these years—" but to all outward appearance, Mrs. Jones was calm. She related what had transpired to her household, at the end of which she repeated with great emphasis: "I was never so deceived in my life before—never."

"Stuff and nonsense!" said Mr. Jones. "Why, the idea! You would suspect your best friend of stealing! I have no patience with women—no knowing what would become of them if it were not for the men." Delivering himself thus, he walked dignifiedly out of the room.

I do not say whether it was curiosity or not that caused him to look into Mrs. Smith's barnyard—but what he saw there much surprised him; but, of course, he would not acknowledge it to any one but himself, for there was his own bantam, looking very contented, and quite at home in his neighbor's barnyard. He turned and re-entered the house, took his pipe deliberately from his mouth and said: "I thought so. It is our bantam, as I said."

Mrs. Jones looked astonished and somewhat vexed, but thought silence the better part of valor. Mr. Jones took his accustomed seat on the back porch, wrapped in deep thought—the subject of his thoughts was Mr. Smith and his deceitful wife. As for Mr. Smith, he felt both disgust and pity, and wondered what graces he had found in Mrs. Smith to fascinate him, forgetting that he himself had once fancied her to be a very nice girl. And as for Mrs. Smith, he wondered what she would do, now that she had been found out. "Poor, deluded creature!" he said, heaving a deep sigh for his friend Smith.

The news of the trouble between the two friends spread over the country as if borne on the wings of the wind. Neighbors became suddenly aware that they owed Mrs. Jones or Mrs. Smith a call. The village gossip put on her sunbonnet, and, taking a basket over her arm, started for Mrs. Jones—her errand to borrow some eggs, though plenty were stowed on her pantry shelf. After she had completed her mission, which was really not to borrow eggs, but to find out all that she could concerning the misunderstanding, she departed, and on her homeward way she paused at the gate of Mrs. Smith, and then, with a chuckle, passed through, saying: "I guess I'll drop in. I haven't been to see her for quite a spell."

Never was there such a commotion—even Grannie Jenkins' cap came askew, and she sat up straighter than ever in the great old-fashioned arm-chair, arguing the question with poor Miss Betsy Ann, whose thin, cracked voice became more cracked than ever in her excitement.

Fashionable Mrs. Bon Ton, who lived on the corner, issued invitations to all her friends to take tea with her, and 5 o'clock found them in her pretty dining-room, talking over the scandal, as they gently sipped their tea from dainty china cups.

It was somewhat embarrassing for those two good husbands, Mr. Jones and Mr. Smith, to meet.

"Good-morning, Mr. Smith," said Mr. Jones; "couldn't find a nicer day for making hay."

"No," briefly replied Mr. Smith. A pause followed in which Mr. Jones looked very hard at the toe of his boot, and Mr. Smith became very much interested in the examination of a crack in the sidewalk; and then Mr. Jones said, with the air of one who is saying something very original: "Fine day for making hay; couldn't find a finer one if we had picked it out ourselves."

Each tried to appear as if nothing had happened, and each thought that he had succeeded admirably. Mr. Jones noticed that his friend looked uneasy, and thought that he would let him know that the trouble had made no difference with his friendship; accordingly he said, "I am very sorry that there has been any trouble between our wives," and then he sympathetically added, "I hope your wife will soon come to her senses."

At this remark Mr. Smith became very choleric and red in the face, and opened his mouth to speak, but Mr. Jones interrupted him with, "Don't be so affected, old friend; it must be a hard blow, but bear up under it," and he soothingly placed his hand upon his friend's arm.

"How dare you speak so of my wife?" said Mr. Smith, thrusting his friend's hand aside. "My wife is honor itself, while I should think you would be so ashamed of yours that you could not look honest people in the face," and he strode angrily away; and these two who had been friends from boyhood parted with resentment in their hearts.

Those young misses, Milly and Susie, aged respectively eight and nine, and who were just staggering through the multiplication table together, met on their way to school.

Susie said boldly: "Don't you think that

your ma is real mean to tell my ma that she takes things that don't belong to her?"

"No, I don't," returned Milly, who had a full allowance of American independence. "My ma is just as sweet as she can be," and she added with bitter sarcasm, "I don't see how you can love such a ma as you have one bit." And for the first time they went separate ways to school, each vowing that they would not speak to the other again.

The school-children were so surprised at such a state of affairs, for these two friends, Susie and Milly, had always been inseparable—playing together, and eating their lunch side by side under the great oak tree. But now they let each other severely alone. And no wonder that the school-children almost thought that the world had come to an end.

The Sunday church-bells were pealing when Mr. Jones and family, as all religious people should do, started for church. As they entered the vestibule there stood Mr. Smith, his good wife and daughter, who seemed sublimely ignorant of their existence, and the Jones family were equal to the occasion. After they were seated in their pews, Mrs. Jones, as the Smith pew was directly in front of theirs, had full opportunity of generously criticising her friend's back, and much to her joy discovered a tear in Mrs. Smith's cloak most ingeniously mended, and at this, of course, she sniffed the air and derived a deal of comfort therefrom. And Mrs. Smith consoled herself with the thought that she was not as conceited as Mrs. Jones.

Mr. Jones noticed that Mr. Smith's collar was somewhat limp, "and that," he soliloquized, "shows what kind of a wife he has;" and then he thought of his own stiff collar and gazed affectionately at his wife. I need not add that Mr. Smith's breast was not filled with a holy calm, for the thoughts that raged there were not fitting for such a place, and he a deacon of the church.

Milly and Susie being supported by the example of their parents, exchanged scornful glances between the parson's pauses. There seemed to be a great attraction in the direction of the Smiths and Jones, for the congregation cast stealthy and frequent glances toward them. After the services had ended the people loitered in the vestibule to talk over the sermon, and the gossips had ample time to mention the difficulty between the Smiths and Jones. But these worthy people, being aware of the general attention that they attracted, passed quickly out, not remaining, as usual, to discuss the fine points of the sermon; and, to speak truly, I do not think that they could have told whether it was on the descent of man or the best receipt for making fruit cake.

It was one bright morning about three weeks after the disappearance of the bantam that Mr. Jones stepped out on the back porch, and to his great astonishment there stood mother Bantam looking very demure, while 13 young bantams brought up the rear. Mr. Jones gave another glance to reassure himself that it really was their bantam, and then burst in upon Mrs. Jones, who was quietly clearing the table of the breakfast dishes, saying, "Bantam and her chickens have returned just as I said, and if you had listened to my advice you would not have got us both into such a scrape, but women always think they know more than any one else, and when they have a foolish quarrel themselves, they are never satisfied until they drag the men in too, and there is no knowing what the end of this will be;" and slamming the door behind him he sought relief in the open air, leaving poor Mrs. Jones to recover from her emotions as best she might.

As he walked aimlessly down the lane he met Mr. Smith, to whom he explained matters and very penitently begged forgiveness for both his wife and himself, and added pleadingly, "For old friendship sake, don't let this trouble part us."

At first Mr. Smith was unmoved, for he thought that his wife had been shamefully treated, but at last, acknowledging the plea of old friendship, he relented and took Mr. Jones to the house to make peace with his wife. They paused on the threshold with surprise at the unexpected sight of Mrs. Jones sobbing violently in the arms of her friend, as limp as a bedraggled sunbonnet with all the starch out of it. Susie and Milly had already made their peace over the division of a bag of candy, and were swinging merrily on the old apple bough.

It was at a generous feast, some time after this, provided by Mr. Jones and cooked to a nicety by his good wife, who, in her heart, called it a thanksgiving dinner, for never had she given thanks more heartily than when she saw her old friends again seated happily around her family board, that Mr. Jones gave a toast for the first time in his life in which he lauded the virtues of Mrs. Smith in a very delicate and flattering manner, which made that worthy soul blush with pleasure, and entirely melted her husband's heart, who, although he had granted his friend forgiveness, yet had not until then felt his former affection for him, as his maxim was "A friend in need is a friend indeed." Again Mrs. Bon Ton issued invitation cards to her friends to tea, and it was poor Betsy Ann who, in her thin cracked voice, told Grannie Jenkins of the reconciliation of the Jones and Smiths, who both at an early hour received calls from the village gossip.

In relation to the events recorded, some people remarked fretfully that they thought that "it was much ado about nothing," while others cheerfully replied that "All is well that ends well."

Some Wild Birds' Songs.

[Written for the RURAL PRESS by FANNIE H. AVERY.]

Some wild birds' songs are short and broken,
And yet are earnest, sweet and clear;
And breathe of much that is unspoken,
As could no chant of loudest cheer.

They cannot voice what joys elate them
Like the more gifted feathered throng;
But not less lightly let us rate them,
Because they lack great powers of song.

What though their strains fail to give utterance
Of all they think and feel and know?
Much speech is of but small importance
If hearts with grateful fervor glow.

Perhaps the One who reads the writing
Stamped on the tablets of the mind,
May find these wild birds' songs inviting
As those of more melodious kind.

A Bird Visitor.

Several weeks ago the RURAL entertained us with "Aunt Susie's" account of the "Mud-builders," and now comes Dr. Gally with his observations on the road-runner to interest and amuse. These anecdotes have led me to conclude to tell about a small bird visitor we have had among us for some days.

But, first, I want to say that I read "Aunt Susie's" story aloud to the children, much to their satisfaction. Indeed when I got to the end of it they wanted to hear "more," so I had to go over it and point out and dilate on the different parts to please them. How much little folks are interested in such things, and how much they want to know about them! They think of what they see and hear, too. Only a short time since a little girl I know asked her mamma if birds went to heaven. On being questioned as to her reason for making such a query, she answered: "The little birds can fly; they have wings."

I also intend to read what Dr. Gally has written about that odd bird, the road-runner, to our little ones.

(In passing, I want to say that I differ with Dr. Gally, inasmuch as the geographical distribution of birds and animals, etc., interests me exceedingly, and appears to me a perfectly legitimate field for observation and speculation.)

But to my story. Several days ago my little boy Georgie came into the house bearing a bird's nest in his hands, in which was ensconced a solitary nestling, not old enough by a week or more to fly.

I gazed with dismay and compassion at the living fright. What was I to do with that tiny, helpless thing? Somehow anything, no matter how small it is, that has the divine gift of life in it, always appears sacred to me. I took the bird—one of the common wild species—and promised to take care of it. It seemed some men had been cutting down trees on the sidewalk near by, and in one was this trophy, which Georgie captured and brought home.

I first tried to feed it, but in vain. I could not get it to open its mouth; so I concluded to let it alone for awhile. Later, as I sat sewing near by, my ears were greeted by a loud chirp, which was followed by several more. Delighted, I turned to the bird and responded with a feeble imitation of its call. What was my surprise to see it open its little beak as wide as could be, the chirping still continuing. Concluding it wanted food, I soaked some bread in water, and had no trouble feeding it; only it would not eat much at a time. When the children came in, how pleased they were to see it eat. They had only to chirp at it, and the little thing would immediately respond. And if we forgot it for a time it would soon let us know it was there, and hungry. Its presence has been a source of real pleasure to the whole household, each of whom manifests interest in its welfare. At first, some of us thought we would not be able to keep it alive, but we have had it four days now and it is as lively as it was at first. Of course we think it an exceptionally bright bird. It is perfectly at home, and has the cunning habit of trying to hide itself in a dark corner sometimes, after it has been fed. Once it got inside the sleeve of one of our folks and ran up his arm.

I had to throw the nest out, it made the place so untidy. It was quite large—ever so much bigger than another nest a friend brought me once, and which hangs in a conspicuous place on the wall. This is a humming-bird's nest, and such a dainty bit of architecture as it is! It is built right at the end of two branches, and in such a way that it comes right under the green roof of a broad leaf. It is very, very small, yet how many thoughts it suggests:

A frail and tiny treasure-trove,
And yet how strong a token
Of earthly and of heavenly love,
And truth that is unspoken.

We are going to keep our little bird-visitor until it is able to fly and strong enough to look out for itself. Then we will let it go free. I wonder if it will be kindly received by its kith and kin when it returns to them? I hope so. I remember reading in Henry O. Forbes' book, "A Naturalist's Wanderings," of a monkey he had kept in captivity, but which he gave its liberty, because when it heard the cries of its mates in the forest it would assume the most piteous expression of countenance and demeanor. When, however, it returned to its former life in the woods, its companions would have nothing to do with it. Probably in the end, though, they did associate with it, after it had lived a wild life again for awhile.

We will be sorry to part with our little bird,

so easily do hearts become attached to anything that is lovable. And it? Will it have any regrets at leaving us, I wonder?
San Francisco.

Brief Correspondence.

EDITORS PRESS:—The following brief correspondence recently passed between two brothers, the one 84 years old, and the other 65 years, who, for more than half a century, had kept up an uninterrupted friendly correspondence, but between whom there had sprung up a slight coolness, thus illustrating the saying, "No fool so big a fool as an old fool."

JOHN: Let us pray. ALLEN.
ALLEN: Prov. xxiii 19. Amen. JOHN.
CORRESPONDENT.

TRYING TO KEEP COOL.—J. H. Harding, who lives near Fresno, has devised a somewhat novel dwelling, within which a refreshing coolness may be enjoyed when the mercury is high outside. He calls it his new plan for an adobe house, and gives the *Republican* his recipe as follows: "First lay upon the ground 2x12 redwood for mudsills, and use the same material for studding. Board up the inside to the top of plate with heavy lumber, and securely batten all the cracks, nailing only battens on to the edge of the upper boards. As you nail on the rustic outside fill in the space with dry, clean earth, and tamp down well, and fill thus till you reach the top. Use 2x12 joist overhead, and ceil beneath, battening cracks securely, fill half full of earth. Put on the roof, leaving a space of four or five inches on each side at the plate for ventilation. Let the roof project at least four feet on sides and ends to keep the sun from striking the walls, and you will have a house which is always cool in summer and warm in winter, and about as solid as Plymouth Rock." As a matter of course it requires a little more expense to build this sort of house than it does a thin shell, but does not the comfort which it will afford for years compensate many times over the additional expense?

TAKE CARE OF THE MATCHES.—The Nevada City *Transcript* says that about three years ago the matches kept in a tin box at G. M. Hughes' planing-mill disappeared so rapidly that some person around the establishment might have been suspected of filching them, had it not been known that all the employees were strictly honest. Long afterward some changes were made in the building, and on tearing down a wall, there came to light a quantity of matches with the heads gone, the latter having been apparently eaten off by rats. Many dead rats were found in the same place, giving proof of the correctness of the theory that the rodents had stolen the matches and devoured the sulphur upon them. One bunch of matches had been ignited while being chewed, but had only partially burned. Moral—Keep your matches where rats can't get hold of them.

"THE WORLD OWES ME A LIVING."—Why does it? What have you done for the world to entitle you to merit a living from it? These questions often arise in our mind when we hear a great lubberly fellow, with both hands plunged into his pants' pockets, roll a huge quid of tobacco from one cheek to the other, and with an oath exclaim: "The world owes me a living and I'm bound to have it!" No, no, we beg leave to differ with you, for the world owes you nothing unless you earn it. Nearly all are endowed with physical or mental qualities which enable them to be of some use in the world, and unless we make suitable use of those gifts we cannot conscientiously claim our living as a matter of right.—*Ex.*

METAL NECKTIES.—Scarfs and neckties of metal are a new German invention. Gold, platinum and silver strips are welded, after the mosaic style, upon a metal ground, prepared by the incandescent process, then compressed by means of powerful presses, and finally elongated by rolling into long sheets or strips. The colors are yellow, red, green, white, gray and black, and the scarfs, being indestructible, are considered of practical value.

THE CIRCULATION OF THE BLOOD through the lungs was first announced to the world by Michael Servetus, a French physician, in 1553. Caisalpinus published an account of its general circulation through the system in 1569; but his ideas were somewhat confused. It was not fully understood, however, until Harvey took it in hand in 1628.

CALICO was first imported into England by the East India Company in 1631. Calico printing and the Dutch loom engine were first introduced into England in 1676—45 years later.

"A BOY assassinated," read Mrs. Bascom from the newspaper. "Well," she remarked, "a assassin' boy is a great trial, but I don't think he ought to be hanged for it."

WOMEN AS INVENTORS.—Up to Dec. 14, 1886, there had been granted to women by the United States, letters patent for 1935 inventions.

YOUNG FOLKS' COLUMN.

Nelly's Story.

[Written for the RURAL PRESS by T. H. W.]

My little darling's soft brown eyes
Looked pleadingly into mine;
"Come, papa, tell me a story,
All about the olden time!"

"Not a story of elves and fairies,
For I don't think they are here;
But about the blessed Christ Child,
You know He is always near."

Well, a long time ago a little child
Knocked at a rich man's gate;
The wind blew cold and bitter,
And the night was growing late.

His clothes were torn and scanty,
His bare feet were weary and sore;
And he trembled with cold and hunger
As he knocked at the massive door.

When at last the door was opened,
In vain he asked for bread;
For pity and love in the rich man's heart
Had for many long years been dead.

The door had been closed in a moment,
When instead of a little child,
The rich man saw in heavenly light
The form of the Christ so mild.

He knelt to ask His forgiveness,
But too late it seemed to be;
"As ye did it not to the least of these
Ye did it not unto Me."

Leisure Hour Work.

[Written for the RURAL PRESS by ADAM F. BATELLE.]

Have some employment, some way of spending your leisure time. Not much work is exacted of young people when in school, but that is no reason they should not have some specialty on which to exercise care and attention.

Among the things commendable for promoting out-of-door exercise are flower or vegetable gardening, poultry-keeping or entomology, botany or mineralogy. This is not so heterogeneous a list as it may at first appear. The three last mentioned are practical if for nothing more than to know the pest which destroys your apple trees, the plant overrunning your meadow, or that curious rock scattered broadcast over the surrounding country. These employments may seem suited only to the country, yet in any but the largest cities something similar may be substituted.

The culture of silkworms requires only a room of even temperature and a few mulberry trees and patience. Many feel a repugnance for worms, but these silk-producing little creatures do not seem to belong to that category. Despite all that has been said to the contrary, there is a demand for the cocoons.

Something else that may be carried on in town is flower-gardening. The variety of flowers that a very small bed will produce is surprising. Perhaps you have flowers, but is it not mother or grandma who takes care of them? Every boy who lives on the farm should make a small vegetable garden each year. It may become a source of profit, for fresh vegetables and berries seldom fail to find a market.

The world is full of pleasant and profitable work, and those who look for it seldom fail to find it. "Pleasant and profitable" does not include "easy." The failures are they who hunt for "easy" places.

His Big Friend.

A crowd gathered on a wharf in San Francisco had an opportunity to see a dog rescue another dog from drowning, and go about his work as intelligently as if he had been the trained officer of a humane society.

A small terrier dog fell from the stringer of the wharf into the bay. He swam around for some time in a circle, and many plans were suggested for his rescue, but none of them proved practical. The little creature seemed doomed to a watery grave, for he was fast becoming exhausted. The female portion of the audience was much exercised, and gave many expressions of pity.

Just at the moment that all hopes of saving the terrier were given up, the bark of a dog in the crowd attracted attention, and there appeared upon the stringer, in front of the wharf, a large Newfoundland.

He saw the little fellow in the water, and, with a low wail, he ran to and fro along the wharf for a moment or two, and then, to the surprise of every one present, he sprang into the water and at once swam to the terrier.

He seized him by the neck with his teeth, and, after swimming about for some time, sighted the new sea-wall extension, about 100 yards distant, for which he headed.

Upon landing his burden on terra-firma, the Newfoundland gave two or three sharp barks, and seemed to be proud of what he had done. It was some time before the terrier was able to gain strength to walk away.

One of the witnesses to the strange sight patted the Newfoundland dog, and said, "This dog is mine, and I would not take \$1000 for him at this moment."

GOOD HEALTH.

A Medicinal Honey.

The discovery of a valuable medicinal product of wild bees is reported in a late number of the *New York Medical Journal*. The account is given as follows:

About three years ago a distinguished French naturalist, M. Guilmeth, who was traveling in Tasmania, came suddenly upon a grove of gigantic eucalyptus trees, from 260 to 390 feet high, and with a trunk so large at the base that it took 40 of his Kanakas, joining hands, to reach around one of them. High in these lofty trees he discovered what he at first took to be enormous galls, but which he soon ascertained to be the dwelling-places of swarms of small, black, wild bees of a variety before unknown to him. Dr. Thomas Caraman proposes for this bee the provisional name of *Apis nigra mellifica*. Besides being black and smaller than the ordinary honey-bee, this wild bee has its languet rather more developed than that of the domestic bee. M. Guilmeth attempted unsuccessfully to domesticate it in Tasmania. He caused some of these immense trees to be felled, and secured the honey. The largest individual store of honey weighed as much as 11,000 pounds avoirdupois.

The honey is described as a thick, homogeneous, somewhat transparent sirupy liquid of a deep orange color, having an odor suggestive at once of its containing eucalyptus principles. As the result of his experiments on himself and one of his friends, Dr. Thomas Caraman states that, on taking a tablespoonful of the honey in a little tepid water or milk, after a few moments one perceives a gentle, agreeable warmth take possession of the whole person. At the end of half an hour the elimination of the active principles by the air passages having begun, the voice becomes clearer and the breath perfumed; the lungs feel more elastic, more supple. Having continued the use of the honey for a week, four tablespoonfuls daily, the author, who speaks of himself as respectably fleshy, found that he could go up two pairs of stairs, two steps at a time, without stopping to take breath or feeling at all blown.

SCRAPINGS OF HORN TO SUBDUCE PAIN.—A physician writes as follows to a contemporary: "The fine scrapings of any common cattle's horn steeped in vinegar and bound hot as can be borne upon a wound will subdue pain almost instantly, and effectually subdue lockjaw. I have often used this remedy, and have never had a failure. In wounds torn and lacerated, as for example, where a nail has been stepped on penetrating the sole of the foot, and the patient wild with pain, countenance livid, teeth chattering, limbs trembling and lockjaw seeming inevitable, with this remedy I have produced perfect quiet, relaxation of muscles and freedom from pain, and even from soreness of the wound, in the space of 15 minutes' time. I was called in haste to see a young man of 15 years who had stepped on a nail. I found him almost in spasms and had no remedies with me. In the house I found a powder-horn, and with a piece of glass went to scraping. As soon as I had a common thimbleful I barely covered it with vinegar and heated it as hot as could be borne, and, setting others to scraping, I applied it to the wound, changed often as cool, adding the scrapings accumulated, and with this treatment had the boy easy and out of danger in 15 minutes. I know not what there is in horn that produces this effect, which I have seen many times, and have often wished there might be some preparation of this remedy a little more convenient to use than the crude material."

SPREAD OF DISEASE THROUGH THE MEDIUM OF MILK.—The spread of disease, says the *New York Medical Journal*, through the medium of milk, has often been demonstrated, but seldom more strikingly than by an investigation lately pursued by the Massachusetts State Board of Health, for the purpose of discovering the cause of an outbreak of typhoid fever that occurred last autumn in a certain district of Cambridge. It was found that all the milk supplied to the district came from one farm at New Hampshire; that on the farm there was a well into which a privy vault drained, the water of this well being used to wash the milk-cans; and, finally, that last summer a person lay sick with typhoid fever on the farm. The conclusion was unavoidable that the fever germs were carried in the milk, and thus the disease disseminated among the people of Cambridge.

NOVEL METHOD OF HEATING RAILWAY CARRIAGES.—An entirely new method of heating railway carriages from the engine is announced to be tried on a Pennsylvania railway. The principle to be adopted is similar to the air-brake principle, and considered just as practicable. An air pump forces the air along the cars for the brake system, and it is argued that plenty of heated air could be had from the fire-box of the engine. There is always plenty to spare, and, in fact, large quantities are wasted. The hot-air method would cause no danger, because, if any break occurred, there would be no possible chance of fire or explosion. Of course, if this plan is adopted, all locomotives would be equipped with suitable appliances to carry it out.

DOMESTIC ECONOMY

LEMON CAKE.—One cup fresh butter, three cups pulverized sugar, rub to a cream, stir in the yolks of five eggs well beaten, one cup sweet milk, one teaspoon soda, juice and grated peel of a fresh lemon, the whites of five eggs, four cups sifted flour, one teaspoon cream tartar. Bake in round or square pans with straight sides.

BAKED LEG OF MUTTON.—Take a leg of mutton weighing six or eight pounds, cut down the under side and remove the bone; fill it with a dressing made of four ounces of suet, two eggs, two ounces of chopped ham, six of stale bread, one onion, a little thyme, sweet marjoram, parsley, nutmeg, salt and pepper; sew up, lay in a pan and put in a hot oven; baste with butter, cook three hours.

CHOCOLATE PIE.—Take four tablespoonfuls of grated chocolate, one pint of boiling water, yolks of two eggs, two tablespoonfuls of corn-starch, six tablespoonfuls of sugar. Stir together and boil until thick like custard. Make and bake a crust, put in the chocolate filling; beat the whites of two eggs, sweeten, flavor with vanilla, spread on top and brown in a quick oven. Serve cold.

APPLE MARMALADE.—Wipe the apples well and do not pare, but core and slice them. Have ready a syrup of three pounds of sugar to a pint of water, boiled quickly for five minutes. Into this boiling syrup throw the sliced apples and boil quite rapidly for an hour, reckoning from the time of its first boiling up. Stir often. It should then be clear, jellified and rather stiff. Allow three pounds of sugar to four of apples.

BOILED BEANS WITH SAUCE.—Boil a quart of fresh young beans in slightly salted water, until nearly tender; drain and put them into a clean saucepan with half a pint of stock, some sweet herbs finely minced or powdered; a teaspoonful of sugar, and salt and pepper to taste. Stew until the beans are quite tender, then add the yolks of two egg beaten up in half a pint of milk. Stir over the fire until very hot, then serve.

STEWED CELERY.—Wash two heads of celery very carefully, trim them neatly, cutting off the outer stalks, leaves and tops, and boil them in salt and water until sufficiently tender. Drain them, and lay them in a hot dish. Have ready in another saucepan a breakfast cupful of good cream; let it boil with an ounce of butter rolled in flour until rather thick and perfectly smooth, then pour it over the celery. Grate a little nutmeg over the top and serve nice and hot. If liked, a few neatly cut squares of toast may be placed in the dish underneath the celery.

STRING BEANS, FRENCH FASHION.—Pick and string the beans and cut each one into three or four strips; wash them thoroughly, then throw them into a saucepan containing plenty of fast boiling, salted water. Boil them briskly until quite tender, then drain them into a colander. Put into a clean saucepan a quarter of a pint of milk, two ounces of fresh butter, the juice of half a lemon, a tablespoonful of finely chopped parsley, a grating of nutmeg, with salt and pepper according to taste. Stir these ingredients well together, then add the beans and toss the whole over the fire until quite hot. Serve them neatly on a hot dish with a border of croutons round about.

RUSSIAN SOUP.—Cut two large onions and a small cabbage to tiny dice. Fry this mixture in some good beef dripping until it becomes highly colored, then mix in gradually two ounces of flour; add three pints of good brown stock, and season with nutmeg, pepper and salt. Stir the soup till it boils, then draw the pan on one side and leave it for half an hour to gently simmer. Place at the bottom of the soup tureen some slices of potato fried crisp and brown and some toasted bread, cut into small dice; add a glass of white wine to the soup, and if the flavor is relished, a little chopped tarragon. Pour it into the tureen and serve.

POTATO PUFFS.—This is a most enjoyable sweet dish. Put three tablespoonfuls of milk into a saucepan, with two ounces of butter, a teaspoonful of finely minced lemon rind, and two tablespoonfuls of fine white sugar; let the milk heat very slowly until the butter is dissolved, then add, by small degrees, three ounces of boiled potatoes, dried and sifted, and beat the mixture until it is light and perfectly free from lumps; stir in the yolks of three eggs, well beaten, and just before the puffs are to be baked, throw in the whites whisked to a firm froth; butter some small patty tins, put in the mixture and bake in a well-heated oven for about 20 minutes; dust powdered white sugar thickly over the tops, and serve very hot.

SAVORY CREAM.—Peel and cut in slices a dozen large potatoes and six onions; put them in a saucepan with four ounces of butter—or three ounces of good beef dripping—a liberal seasoning of pepper and salt, a quarter of a nutmeg grated, and two quarts of white stock, or milk and water mixed. Put the saucepan on the fire and allow the contents to boil gently until the potatoes are sufficiently cooked, then rub the whole through a sieve and return it to the saucepan; stir it over the fire until quite hot again, then add half a pint of cream, or if this is not convenient, the yolks of two eggs, beaten up with a little milk, may be used instead. Stir for a minute or two longer, then serve with fried croutons of bread on a separate dish.



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W. B. EWER.

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See Advertising Columns.

The Week.

Still the fairs go on and form the chief topics of interest in the several districts. This week the displays are being viewed by thousands at Petaluma, Placerville and Marysville. Next week the First District Fair, usually held in Oakland, will open at the Bay District grounds in San Francisco. Next week also are the fairs at Redding and at Grass Valley, each representing important and growing sections of the State. This week, as stated elsewhere, the Mechanics' Fair opens in this city. It is already clear that in extent at least it will be the grandest exhibition ever held in this city, and there is every reason to expect its quality will be up to the standard.

Preparations for the State Fair at Sacramento should not be longer delayed. The fair will open Sept. 12th and continue two weeks. Entries are large and exhibitors may expect good competition and active interest. The capital city is hugging a boom to her bosom and this will bring to the study of State Fair exhibits many strangers. We hope the uttermost parts of the State will send their best ma-

terials and let us have a display for the whole State, which will make the Californian proud of every inch of its area.

Admonitions of the coming of autumn appear in light showers at the north and extending southward as far as Woodland in the valley and Auburn on the foothills. Fruit-driers can get along very well without any more rain at present.

The Water and Timber Preserves of California.

A great deal has been said, yet none too much, about the great excellence of our California soil and climate. But the State possesses certain other natural advantages and sources of wealth, which, though only secondary in importance, have been measurably overlooked. Foremost among these are the timber and water supplies afforded by the Sierra Nevada. Looking at these mountains so rugged and broken, large portions of them towering into the region of perpetual snow, few persons fully comprehend the extent of the utilities here stored up for the benefit of coming generations. In the magnificent forests that cover this range, reaching up to the timber line, the future is assured of an inexhaustible supply of lumber. Inexhaustible, because these forests as fast as cut away reproduce themselves, and because the most of the land being unfit for cultivation will never be wholly cleared of its timber. These lands will therefore forever remain a great timber preserve, without any special measures being taken to set them aside and dedicate them to such use. In due time railroads reaching from the main trunks in the valleys will be built up all the principal divides, affording increased facilities for the transportation of lumber from these heavily wooded mountain-slopes to points where it is required for consumption; and thus will the whole west-lying country be assured a cheap and endless supply of this article, for these forests on the Sierra will outlive those in every other part of the State.

And the hydrography of this part of California, is there elsewhere in the world anything like it? In vain we look to other countries for such a system of lakes and rivers as exists here. And these rivers, falling thousands of feet, furnish a water-power of almost illimitable extent. This water, with such a head, can readily be made available not only for the propulsion of machinery, but also for extensive irrigating purposes, as it covers not only the great interior valleys, but also the entire foothill region of the Sierra. As much of it, too, as may be required for such use can be carried further on and supplied to towns, cities, factories, etc., wherever situated. No densely populated part of California need, in fact, ever be without an ample supply of cheap and wholesome water, this from the Sierra Nevada being of the greatest purity.

Formerly these mountain streams, owing to their remoteness from manufacturing localities, were regarded as of little importance. But now all this is changed through the readiness with which such power, through electric conductors, can be transmitted from its source for long distances without suffering material diminution of its force. If the electricians have not miscalculated their ability to so convey power we may yet expect to see machinery driven all over the State by motors located hundreds of miles away in the mountains. In this aspect of the case these interior rivers loom with an overshadowing importance. It may well be that the day approaches when water will be made to do the work that it has been thought only coal or other fuel could accomplish.

Death of Matthew Cooke.

Many readers will grieve to learn that the painful malady with which Matthew Cooke strove for about two years has at last overcome him, and his mortal remains were laid to rest in Sacramento last Sunday. Readers of the RURAL PRESS are well informed of Mr. Cooke's devoted work in the repression of insect pests, how he was really the first to come earnestly forward against the codlin moth, how he labored early and late to inform himself concerning the life history of all insect pests as fast as their work became a menace to our agriculture, how assiduous he was in answering the appeals which came to him for information, how he labored to secure effective laws for the repression of insects, and finally,

how he was first ruined in his business because he neglected it to pursue his work against insects, and then how he was prostrated by rheumatism, and though a sufferer of acute agonies, labored on to prepare his valuable publications until his hand was held fast by death. All these things are too well known to our readers to need recital, but it is fitting to say a word of earnest tribute to his memory. Most certainly his work, beginning as it did, answered a most pressing need of our agriculture. The field was new. We had good entomologists, but no good bug-killers—the man who studied the insect for the purpose of learning how to kill it was called for. Such a work could not be done without giving oneself to it. This Mr. Cooke freely did. The result was that all sought him for help, and almost day and night he labored. Soon others came to his aid, and others worked independently of him; but it must be acknowledged that he rose first, and, as is usual with pioneers, he bore the heaviest burdens and is entitled to unstinted praise.

Mr. Cooke's work remains in many forms. Of his large book, entitled "Injurious Insects of the Orchard, Field, Garden, etc.," there have been copies enough sold to pay the cost of publication, and a number of copies are on hand, the returns for which will go to the widow, who needs the funds. The book is permanently valuable and should be purchased by every fruit-grower. Mr. Cooke's smaller work, "Insects, Injurious and Beneficial," was written for use in the schools, and there is nothing now available which is better for the purpose. Mr. Cooke had also completed a series of charts for use in schools, which, we understand, have already been adopted by a number of schools. We shall be glad to have attention paid these works by our readers, either for their individual use or for schools which they may have charge of. The best work which can now be done to testify one's thanks to Matthew Cooke will be to assist his family by patronage of his publications.

Mr. Cooke came to this country in 1850, and to California in 1862. At his death he had just completed a quarter of a century of life at Sacramento. He leaves a wife and two children. His son has an ambition to carry on his father's work, and we trust he will have much encouragement and success. The name of Matthew Cooke will live in our agricultural history.

The Mechanics' Fair.

We ran through the Mechanics' Pavilion on Wednesday afternoon to see how the county exhibitors were progressing with the installation of their exhibits. Of course all was in confusion, the carpenters and painters still at work, but some notes of interest were obtained.

Nearest the entrance we found the Napa county men, with M. M. Estee and H. W. Crabb at the head, laying out a display which will occupy great space and will be given many artistic features.

Next is the San Mateo exhibit. It will be a in a rustic redwood pavilion of beautiful design, and around the pavilion there will be a railing of redwood products—pickets, vine-stakes, shakes, etc. It is evident that the San Mateo pavilion will be one of the striking objects of the fair. It is so large that a vast amount of material will be gathered under its roof, but the county will also have large spaces on the central floor for its fruit display. The committee whom we found busily at work included Charles Ashton, N. J. Brittan, H. P. Bowie, G. W. Adams, John McLaren and N. C. Carnall.

Next came a large space in which the Sonoma valley exhibit was being set up. Robert Howe, Capt. Boyes and M. K. Cady were on hand as the committee, and H. Appleton was in charge of the work.

Sonoma county exhibit, which is distinct from the above, has a large space in the "Garden." This display will be fine, as a matter of course, and will be set up in a day or two.

San Luis Obispo is represented by Mr. E. Leedham of Arroyo Grande, with a large amount of good material, which he is setting up temporarily, awaiting the completion of a new annex.

Santa Clara county is well represented by a committee of four to whom is intrusted the setting up of the exhibit. These are Mrs. E. O. Smith and R. D. Fox of San Jose, I. A. Wilcox of Santa Clara and Dr. Morey of Gilroy.

When the exhibit is in shape, another committee of four will come for a week, and so on. The plan of the exhibit, as kindly explained to us by Mrs. Smith, is varied and comprehensive. Nearest the entrance is a large canopy covering the product of the Paul O. Burns Wine Co., and next that will be a grand pyramidal display of J. H. Flickinger's canned fruit. Moody's Mills will have a flour and grain display, and the Lick Paper Mills will also have a special stand. A feature, original and unique, will be one of C. B. Bailey's Angora goats in a little octagonal pavilion covered and adorned wholly with goat-skin and mohair products. R. D. Fox will have a grand central pyramid of ornamental plants. Four fruit-driers from the Willows promise displays. The tanners, broommakers, the silk factory, the woolen-mills, J. H. Barbour with his glass fruits, the New Almaden mines with cinnabar, A. Block of Santa Clara with his large variety of pears, including his own seedlings—all these are among the contributors to be furnished space. Already the immense vegetables and the most delicately shaded jellies are appearing on the tables. The Santa Clara display will contain water as well as wine, as the Saratoga Springs will exhibit and Saratoga fruit-growers also promise a display. It is impossible thus early to specify accurately, but it is plain that the Santa Clara county exhibit will be a notable one.

We give these hurried notes merely to let our readers know what is going on. Of course, there will be many exhibits not mentioned, and a number of counties have their material still unpacked, and therefore invisible. A few days more will change the appearance of the pavilion, as our later reports will show.

The demand for space for county exhibits is so unexpectedly large this year that new buildings are being erected. For this reason one cannot tell yet what many of the counties propose to do.

QUERIES AND REPLIES.

Alfalfa or Black Alkali.

EDITORS PRESS:—Referring to Prof. Hilgard's note in your issue of the 20th, it is gratifying to me that such a high authority should indorse my theory in any respect; but if he will read over my original article, I think he will see that we agree on most, if not on all, points.

We both say that there are alkali soils that are so badly afflicted that they require the application of a neutralizing substance. He names the substance "gypsum," while that was what I referred to but did not name, as I did not propose to treat of such soils, and so stated, "leaving them to future generations to conquer."

Nevertheless it may be of interest to show that even the black alkali soil will produce. With this I send you a sample of alfalfa that grew in such soil, and that has been handed me by the gentleman on whose place it grew. I also submit an analysis of the soil in which it grew, which analysis was made at the University, under the supervision of Prof. Hilgard. By the analysis you will see that the soil is quite badly afflicted with black alkali (carbonate of soda). It is moreover of a clayey, putty-like character, that cannot be plowed when wet, as it simply packs on the mold board every few feet, and the ground bakes like cement when flooded.

The land was plowed dry and the seed sown in the month of January, and the plants pulled out of the ground in the month of June of the same year. Considering that this sample has been drying for over a year, and during that time has been handled and examined 100 times, it certainly shows a remarkable and healthy growth for the time and circumstances.

This sample is a remarkable corroboration of the truth of my theory, as will be seen at once, when it is known that it grew on the banks of a ditch above the water-line, while all the alfalfa that was in the checks and was flooded in irrigating was killed completely. I am, moreover, informed that though the land has been entirely neglected—in fact, abandoned, the alfalfa was still growing on the ditch banks in June of this year, and that, too, in spite of the fact that the jackrabbits kept it gnawed close to the ground. And I will venture to assert that it will continue to grow in so far as the rabbits will permit it to do so.—RECLAIMER.

[The analysis shows 2.725 per cent of carbonate of soda. The growth of alfalfa is about two feet in height and well rooted.—EDS. PRESS.]

RAILWAY INVESTIGATION.—The United States Court has decided that the Pacific Railway Commission has no power to compel a witness to answer the questions put to him. We rather expected that it would so decide.

Capping Flowing Wells.

[Written for the RURAL PRESS by A. BORE.]

There are in this State many hundred flowing artesian wells. From most of these the water, for the greater part of the year, runs utterly to waste. This is notably the case in the great artesian belt of Kern and Tulare counties. Some of these wells flow as high as two and a half million gallons a day, and it is safe to say that from them all there is an average waste of water per day of fully 100,000,000 gallons.

This water is not only unutilized, but is in its uncontrolled state a nuisance of great magnitude, as it covers large tracts of land, converting deserts into marshes, and finding its way into shallow sloughs with which the country abounds, crosses the roads in innumerable places, making travel and transportation both difficult and dangerous.

This is not only contrary to equity but to the law, as there is a State statute requiring such wells to be capped when not in actual use. Practically, the law is a dead letter, as it is never enforced, and the nuisance continues to grow, until it will quite soon reach immense proportions; such that, for the safety and prosperity of the artesian belt, the law will have to be invoked.

The object of this communication is to direct the attention of such of your readers as may be interested to the prime importance of capping all flowing artesian wells. With this I send you an illustration of the manner in which this has been done on the great well recently sunk for the Miramonte colony in Kern county.

The illustration shows clearly what is above the ground; below it is arranged, as shown in the diagram, as follows:

In beginning work on the well, a 10-inch casing of galvanized iron, riveted and soldered at all joints so as to make it water-tight, is put down into the ground 40 feet. Nine feet underground is riveted to the outside of this casing a cast-iron collar and flange. On top of this, and extending outward from the casing on all sides, forming a diameter of about four feet, is run a block of concrete eight inches to a foot thick. This serves as an anchor to hold this casing in the ground against the pressure of the water when the well-cap is closed. On the top of this 10-inch casing is a flange and collar, to which is fastened a regular water-valve gate, as shown in the illustration, and an elbow of cast iron on top of that to divert the water in any desired direction. Inside of this 10-inch casing is started the regular eight-inch well casing in two-foot joints, and the well put down to its required depth, and the space between the 8-inch and the 10-inch casing filled in with sand and cement.

By the illustration it will be seen that in the side of the ten-inch casing, and of course opening into the eight, is a smaller connection which may be from one to three inches. A pipe connected with this and carried underground will lead the water in any direction and to any desired point or points, such as a dwelling-house, barn, corral, watering trough, etc.

As there is a heavy pressure of water in the well casing when the cap is closed, the water is carried in this pipe under that pressure.

I do not know that anything more can be added to the above description and illustration. It tells its own story, which would certainly be an eloquent one to any person who has had experience with flowing artesian wells.

In the outline engraving, A is the eight-inch elbow of cast iron; B is the water cap or gate, also eight-inch; C is the gate flange; D is the ten-inch casing; E is the small connection and pipe; F is the anchor of concrete; G is the cast-iron flange; H is the eight-inch casing; and I is the sand and cement between the casings.

HERE AND THERE.—Acknowledged stagnation, says a cotemporary, in almost every industrial line in Europe contrasts most singularly with the great activity everywhere apparent in the United States. European nations are warlike and ruled by monarchs who use men as mere tools to further monarchical ends and ambitions. The United States are peaceful States ruled by the people for the people. Europe is squeezed to financial death to maintain her great armies. In the United States there is practically no army. European nations use iron and steel largely in making murderous weapons and impregnable armors for costly warfare. In the United States the main use of iron and steel is in the interest of peace.

Fruit Notes in Vaca and Pleasant Valleys—No. 2.

[Editorial Correspondence.]

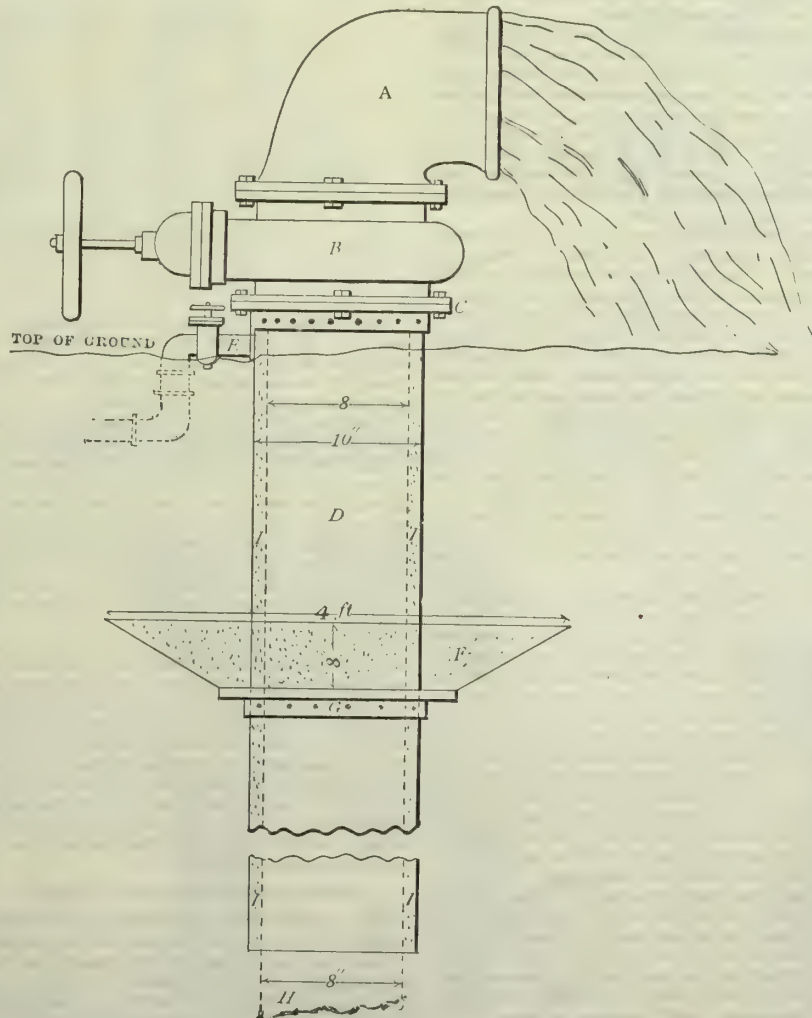
We dropped our itinerary at Mr. Thissell's to make a digression on the subject of handling the peach crop, which we desired to bring immediately to the knowledge of our readers. We return now to the course of the narrative. We have already hinted at the desirability of Mr. Thissell's picturesque situation for fruit.



PERSPECTIVE VIEW OF FLOWING WELL WITH CAPPING ATTACHMENT.

He has trees which he planted as far back as 1857, and he has extended his plantation until now at the home place he has 120 acres in fruit, and at another place, which he and his son own jointly, there are 60 acres in fruit. The

We found Mr. Henry Brinck at home, but unspeakably busy, with his large gang of fruit-pickers, for the Brincks are shipping East not only the bulk of their own crop, but some from their neighbors. Fruit to fill five cars went



SECTIONAL VIEW OF ARTESIAN WELL SHOWING ANCHOR, CASING AND CAP.

fruit-grower who visits Mr. Thissell will probably be most interested in the very excellent seedling fruits which have come into notice through his efforts. Of these are the Thissell seedling apricot, which Mr. Thissell and his neighbors grow as the earliest good apricot, ripening just after the Pringle; the Muir peach, which is known to our readers for its peerless drying qualities; and the Lovell. We saw acres of three and four-year-old trees of these two varieties—perfect pictures of abundance in the crop they were then carrying. The Muir

ripens between the Early and Late Crawfords, and the Lovell comes in after the Late Crawford.

But our visit at Mr. Thissell's, with its many entries in our note-book, which we cannot touch at this time, came to an end at last and we turned our course southward. Adjoining Mr. Thissell on the south is the large and well-equipped orchard and vineyard property of H. & W. Brinck. They have 150 acres in trees and vines and have been in the valley 14 years.

of smaller places which we had not time to visit, but their thrifty trees and neat dwellings could be clearly seen from the road on the warm hillside. Of this group of small holdings, F. N. Wirtner has 15 acres; T. D. Parker, 10 acres; W. H. Austin, 5 acres; H. P. Austin, 15 acres; W. D. Rhodes, 30 acres. We especially note these smaller places, for we believe the time will come when these valleys will have many times their present population, and hosts of families will enjoy a good living from small places.

Passing along through Pleasant valley, we stopped a few moments at the ranch of J. M. Pleasant. Mr. Pleasant with his son, W. J. Pleasant, came into the valley very early and began fruit-growing as early as 1852. The first enterprise was the planting of peach pits, some of which cost 25 cents each at Younts in Napa county, and others were brought from Kentucky. W. J. Pleasant has peach trees from Kentucky pits planted in 1856, which are still vigorous and thrifty, and most of them were long ago grafted over to good varieties. Mr. Pleasant says he sees no signs of death from old age in the trees; where they show weakness, it has resulted from ill treatment. We climbed to a bench about 75 feet above the floor of the valley where Mr. Pleasant's orange orchard is located. He has about an acre of trees 15 to 25 feet in height and laden with fruit which ripens early and is profitable. We mentioned last week Mr. Pleasant's method of lye-peeling of peaches. J. M. Pleasant we found very busy in building a peach-pitter and spitter of his own design, which he was in haste to have tried before the peach crop was disposed of. We shall be glad to hear how it works.

There were other places in the neighborhood which we would like to have visited, but it was getting late and we had to drive for shelter. Mr. Wash. Johnston's fine residence looked very handsome amid its environment of trees, and on the hillside on the east Mr. Chas. Martel's orangery and famous Tokay vineyard were spread out to the last rays of the sun. Farther southward is the place which Mr. J. S. Shearman has lately vacated to transfer his energies to the upbuilding of another county. Next came G. T. Robinson's. In the distance, on the western slope of the eastern hills, the places of W. Cantelow, Fred. Rogers and Nathan Rogers could be seen in the twilight and were mentally chalked down for a visit at another time, which, we trust, will not be long delayed.

At this point in the valley it became too dark for further sight-seeing, and thoughts of rest and refreshment suggested themselves. We took tea with W. R. Nutting, who is occupying a house in the orchard of F. Herbert Buck, and doing some excellent photographic work, illustrative of the progress and natural beauties of the valley. That night we were given a kindly welcome at the fine new residence of Frank McKevitt and hospitably entertained. In the morning we had the pleasure of looking through Mr. McKevitt's vineyard and orchard. The former was one of the most interesting 20 acres we saw in the valley, because of the data it offers to the student of *vinifera* varieties upon the *Vitis Californica*. Mr. McKevitt finds that some varieties do exceedingly well on this root, notably the Chaselas Fontainebleau and the Folle Blanche. Some varieties, as the Tokay and Cornichon, largely overgrow the root, but are still growing and bearing well. Mr. McKevitt has had a Tokay graft six months from grafting bear a six-pound cluster. He grows table grapes only. The variety in growth of the seedlings of *Californica* upon which he has grafted the *vinifera* has given him opportunity of interesting study, and he has learned to recognize the source whence he obtained the roots by their different behaviors. Mr. McKevitt could write us a most interesting and valuable letter on his observations and experience with the *Californica* stocks, and we hope he will find time to do it when the hurry is over.

We next visited A. McKevitt, whose place joins his son's, just noted. Mr. McKevitt and his son have both become horticulturists since their coming to California a few years ago, and they have certainly made most rapid progress in the art. Their name is indelibly fixed in our horticultural annals by being affixed to a most excellent seedling peach—McKevitt's cling. It was first noticed and propagated by M. R. Miller, of whom Mr. McKevitt bought the place. Mr. Miller did not wish to make it

from their packing-house from a Wednesday to the following Monday. Besides this work, a large spread of dried fruit could be seen out in the peach orchard. Mr. Brinck speaks highly of the Austin cling peach, originated by one of his neighbors, H. P. Austin—a large yellow cling, ripening after the Salway. The buildings (barn and house) on the Brinck place are new and excellent, and the whole establishment has a prosperous look about it.

A little back from the county road, and upon the hillside easterly from Brinck's, is a group

known, but Mr. McKevitt, when he bought the place, decided that if the peach was good for him it was good for his neighbors, and they were welcome to it. In return for this favor, the neighbors named the peach after him. The peach originated, it seems, in the apricot orchard, and Mr. Miller had secured about 50 trees of it when he sold out. It is described as one of the finest white clings—white to the pit. The tree is vigorous, free from curl, has but little mildew and is a heavy and regular bearer. Mr. McKevitt has also Miller's seedling, a white cling, coming two months later than the McKevitt. It has been sent East as late as the last of October and has brought good prices. We found at Mr. McKevitt's a very neat packing-house, 24x32, two stories. The lower floor has doors which fold outward, so that nearly the whole north side can be thrown open if desired. The south side has a continuous window, closed by a long blind hinged along the top, so that it shuts out the sun when raised to admit light. Thus a light and cool packing-place is secured. Upstairs there is a large room for storing and packing dried fruit, of which a good large amount was on hand at our visit. The house cost about \$500, and was well finished with rustic. It struck us as well adapted to the needs of a medium-sized orchard.

During the morning we drove through the extensive orchards and vineyard of Senator L. W. Buck, but the owner was at Sacramento, attending to the management of the Fruit Union. Senator Buck's place is one of the finest and most noted in the valley. One of the most obvious features to the passer-by is the grand avenue which he has made by planting both sides of the county road with California black walnuts. Mr. W. W. Smith has a long row on his line at the county road. This sort of planting should be more general. The roads in the valley should be macadamized, shaded, and sprinkled. As it is now, the roads are about as bad as they can be.

At John B. Carey's we found a busy scene at peach cutting, as mentioned last week. Mr. Carey has 26 acres in orchard, mostly trees just come into full bearing, and a fine-looking lot of trees they are. He has 200 New White nectarine trees, four years old, which yielded him this year over three tons of dried nectarines—a most beautiful fruit.

Our next call was at the large ranch of J. W. Gates, in Gates canyon, a fine arm of Vaca valley on the west side thereof, the canyon opening southward and securing fine exposure. Mr. Gates has lately been won over from live-stock to horticulture, and he is showing great adaptation to the fruit business. We found at his place a fruit-grader which seemed to us to have particular merit. Mr. Gates contracted his peaches and other fruit to the Benicia cannery for several years at good prices, but cannot deliver fruit below a specified size. How to select them gave him much trouble until he devised his grader. It consists of a box about 3x7½ feet wide and long, set on legs in such a way that one end can be raised more or less to secure whatever slant is desired. About midway between the top and bottom of this box is fixed a grating of adjustable bars, very ingeniously contrived. At the bottom is a cushioned end against which the fruit rolls. In operation the fruit is poured from the baskets upon the upper end of the bars, and the slant sets it to rolling down the bars, and all below the size at which the bars are set will drop through and roll into the box for culls, while the full-size fruit rolls down on top of the bars to the boxes in which it is sent to the cannery. The arrangement is such that it could be set to grade very small or large fruit. Mr. Gates has a new peach which he thinks much of. It has been named Grover Cleveland, and is a light-yellow cling of uniformly good size, clear to the pit and the pit small, good flavor, and the tree a great bearer. The seedling originated on Mr. Gates' place, and he thinks so well of it that he is growing it largely.

After leaving Mr. Gates, we drove to J. A. Webster's place near Vacaville. Here is a splendid group of orchards just coming into fruit on land formerly in the Pierce estate. We wanted to call on a number of orchardists in this district, but could not find time to do so. At Mr. Webster's we found his No. 2 Acme steam drier being run to its full capacity, using about a ton of green fruit, and producing a very fine evaporated fruit.

Adjoining is the 60-acre orchard of Henry

Bassford. Mr. Bassford has had an exceedingly busy season, and his packing-house is one of the notable places of the region. He has shipped a vast quantity and his dried peaches and nectarines will amount to 40 tons. He has employed 60 hands steadily during the packing and cutting season. He has 18 acres of shipping grapes and about 40 acres of peaches and nectarines. At the packing-house we met F. J. Bassford busily engaged in packing Muscats for the East. He has the handling of his own and R. A. Campbell's crop and has his hands full.

By the time we finished at Mr. Bassford's it was time to drive to Vacaville to take the Saturday afternoon train, and we were obliged to postpone further sight-seeing in the Vacaville district until another opportunity.

ENTOMOLOGICAL.

The Use of Hydrocyanic Acid Against Scale Insects.

University Experiment Station, Bulletin No. 78.

NOTE.—As stated in a previous University Bulletin (No. 71, June 12, 1887), a special investigation was undertaken by this station at the request of orange-growers of San Gabriel, Los Angeles county, to determine the practicability and efficiency of gaseous insecticides. The results obtained were so satisfactory that the orange-growers who bore the extra expenses of the first experiments urged the advantages of continuing the work, and the Board of Supervisors made an appropriation to cover expenses, the work to be done under the auspices of the County Horticultural Commissioners. For this reason the following description of later experiments and their results takes the form of a report to the local authorities of Los Angeles county.

To the Board of Horticultural Commissioners of Los Angeles County—GENTLEMEN: I herewith transmit a preliminary report of investigations, carried on at your request, relating to the use of gas as an insecticide against the cottony cushion scale insect (*Icerya purchasi*). The work was a continuation of that carried on some time ago, and consists mainly in devising means for the easier application of the gas which was found by the earlier experiments to be the most efficient.

In resuming the work, to carry out the general principles of application as set forth in the last report, it was found necessary to vary considerably the form of apparatus and preliminary preparation of materials, for the purpose of increasing the rapidity and certainty of application. A fan-blower capable of carrying a heavy volume of wind replaced the pump previously used, and this necessitated a change in the form of the generator.

Many experiments were made to determine the most convenient methods for using the chemicals. The old way of mixing the soda and cyanide in the generator was found to be too slow and uncertain to be practicable. Often a heavy crystalline coating formed around the mixture and prevented complete action when the acid was added; again, when the two salts were not mixed, the usefulness of the carbonate as a protection to the foliage was often lessened. In order to avoid this difficulty, it became necessary to reverse the order of application and inject slowly the salt mixture upon the acid, as given in the directions below.

An attempt was made to use each ingredient separately, the soda being in a solid form, but the same difficulties of uncertainty and slowness were experienced.

The generator, in general terms, consists of a sheet-iron cylinder, or tank, held between two pieces of plank, one of which forms the cover, and the other a movable base which is carried up and down by an eccentric placed beneath. The cover holds two receivers (one for the acid and one for the cyanide and soda) and two tubes opening into the exit pipe which passes over the generator from the blower. A heavy volume of air, carrying with it the gas, is forced by the blower into the tent through a 3½-inch pipe, and after diffusing is again carried back by a similar pipe to the blower, thus establishing a continuous circulation and stirring up of the gas during the treatment.

In the pipes leading to and from the tent are two joints—one at the elbow close to the generator, used as a disconnecting joint when the apparatus is moved; the other, about three feet from this point, is used as the disconnecting joint when two tents are worked with the same generator, and becomes only a flexible joint when one tent is used; the former in this case becomes the disconnecting joint. The opening of the injecting pipe is covered with a perforated cap which distributes the gas when pumped into the tent.

The tent for covering the tree is made of heavy bed-ticking, thoroughly oiled with linseed oil. This cloth serves the purpose best, as it is very closely woven, is pliable and easily folded. Practice has shown that much labor and time can be saved, and less injury done to the tree, by having a tent which passes easily over the tree, with cloth enough to make a close connection at the bottom with the earth. The cloth is folded out at the bottom rather than folded in, as in the older treatments, and its margin covered with dirt, thus increasing

the area of soil treated without materially increasing the volume within which is to be filled with gas.

The tent should be made somewhat bell-shaped, having a "flange" at the bottom of sufficient size to move outside of the main tent at all times, and should fold over like a glove when the tent is removed. It should also be large, so that the points of attachment of the side guy ropes may be drawn close to the pulleys in the corners of the frame; thus, when wide-spreading trees are to be treated, the tent can easily be drawn over any branches included within the frame.

"The support of the tent, devised by Mr. Titus, is a very ingeniously contrived scaffolding mounted on wheels, which serve to move it from one tree to another. Its dimensions are 26 feet high, with a base 20x20 feet. Its upper part is 20x12, and carries upon the top a roller made of galvanized iron (6 inches in diameter and 12 feet long), upon which the tent is rolled when taken from the tree. Side guy-ropes are attached to the bottom of the tent and run through pulleys at the upper corners of the scaffolding. They are used to open the tent when it is to be dropped over the tree, and to fold it up when it is removed. The lightness of the apparatus allows of its being easily removed by two men, who operate the whole. If necessary, two or more tents can be handled by the same scaffolding, one tent being left over the tree while the scaffolding is moved to the next."

Later experience shows that it is advantageous to have a frame for each tent, with one generator to supply the gas for two tents. Such an arrangement can be handled by one crew of men without loss of time.

Acid.—Much of the success of the operation depends upon the use of acid of the proper strength, and it should be specially urged that the acid be of the strength recommended in the table of doses given below. This any workman can determine by the use of a Baume hydrometer, which can easily be procured with sufficient instructions for its use. If the acid is not of the proper strength, the table below will show the amounts to be used corresponding to the degrees indicated by the hydrometer. Thus, if the acid only shows 50°, use the column marked 50° Baume in place of that of the 65° in the regular prescribed doses of acid.

DOSES OF ACIDS OF DIFFERENT STRENGTHS.

Size of Tree. Feet.	65° Baume.	60° Baume.	55° Baume.	50° Baume.
5	.9	1.1	1.2	1.3
6	1.6	1.8	2.1	2.3
7	2.6	2.9	3.3	3.7
8	3.8	4.3	4.9	5.5
9	5.5	6.2	7.0	7.8
10	7.5	8.5	9.6	10.7
11	9.9	11.3	12.7	14.2
12	12.9	14.7	16.5	18.4
13	16.5	18.8	21.1	23.6
14	20.5	23.3	26.2	29.3
15	25.3	28.8	32.4	36.2
16	30.7	35.0	39.3	42.9
17	37.8	43.0	48.4	54.0
18	45.7	49.8	55.9	62.5
19	51.3	58.4	65.6	73.4
20	60.0	68.4	76.8	85.8

Soda.—It is best to use the bi carbonate instead of the neutral carbonate of soda. It should be finely pulverized, and can be conveniently measured in a can which will hold one pound and fractions of a pound.

Solutions.—The cyanide of potassium solution (not the "mining cyanide") is prepared by dissolving the salt in the proportion of ten pounds to two gallons of water. Place the cyanide in the vessel in which you wish to make the solution and add the water to it, bring nearly to boiling with occasional stirring, and let it cool. It is best to make the solution one or two days before using, in order to avoid as much as possible the stronger odor of a freshly prepared solution.

In the prescribed dose an excess of acid has been recommended, in order that complete action shall always take place. It is desirable to test the residue occasionally to be satisfied that the work is complete. This is done by adding a little more acid and noting whether boiling or effervescence takes place upon stirring; care being taken not to mistake the effervescence from the material accidentally gathered on the sides of the cylinder during the operation, for that of material which should have been acted upon in the bottom of the cylinder.

Doses According to Size of Tree.

The regulation of the doses for the different sized trees so as to produce uniform treatments is calculated on the basis of the results of the experiments which determined the amount of each constituent for a 12-foot tree. The following table indicates the amounts for trees of different dimensions of top, based upon the rates of cubical contents.

The amount of material for each dose differs from that previously recommended (Bulletin 71) by a decrease of one-fourth in the amount of soda and a slight change in the acid; the cyanide remains the same. Varying amounts of soda were used showing quite clearly that a decrease of one-fourth was possible, but farther than this an appreciable lessening in the preservative effect was noticeable.

Size of Tree. Feet.	Cyanide of Potassium. Fluid ozs.	Bi-carbonate of Soda. Pounds.	Sulphuric Acid. Fluid ozs.
5	1.6	.1	.9
6	2.5	.2	1.6
7	4.0	.3	2.6

8	6.0	.4	3.8
9	8.5	.5	5.5
10	11.5	.7	7.5
11	15.5	.9	9.9
12	20.0	1.1	12.9
13	25.4	1.5	16.5
14	31.6	1.9	20.5
15	39.2	2.2	25.3
16	47.5	2.6	30.7
17	57.5	3.1	37.8
18	67.7	3.8	43.7
19	79.9	4.4	51.3
20	90.5	5.2	60.0

The prescribed doses for small trees will be found too small, unless the trees are very low. The calculations are all based upon the supposition that the trees are nearly spherical in shape; but in most cases it will be found that the trees of small dimensions have most of the branches raised fully four to five feet from the ground, thus leaving a large volume on the inside of the tent unoccupied. Due allowance must be made when the height of the tree is so much greater than its diameter.

Mode of Operating.

Place the desired amount of acid in the acid receiver, then put the required amount of soda in a convenient vessel (a gallon measure serves the purpose well) and add water to bring it to a thin paste, stirring well to get rid of all the lumps, before the cyanide solution is added. Mix the cyanide solution and the soda paste so that the undissolved soda will remain evenly distributed through the mixture. Pour into the cyanide receiver and allow it to run slowly and regularly upon the acid which has previously been run into the generator. As soon as the cyanide solution begins to enter the generator, the blower should be turned slowly and continued until all the material is run in and violent action ceases. This usually takes a minute or so after the materials have united. Then follow with violent blowing for a minute or so and allow to rest until about 15 minutes from the beginning of the treatment, when, violent blowing is repeated for one minute. The time occupied in running in the mixture should be about as follows for the different sized trees:

10-foot tree	4 minutes
11 "	5 "
12 "	5.5 "
13 "	6 "
14 "	7 "
15 "	7.5 "
16 "	8 "
17 "	9 "
18 "	10 "

It is quite important that the time of injecting shall be closely observed, and should be lengthened rather than shortened. No time will be saved by hurrying this part of the treatment, for if run in too fast lumps will be formed which will take some time to be completely acted upon by the acid. If the time is slightly lengthened no serious results will follow. Some of the largest doses have been completely acted upon in less than 15 minutes, thus making it possible for a single generator to serve two tents when the prescribed time of exposure is adopted. It is advisable to continue the treatment of a single tree for about 30 minutes, although the time may be slightly shortened when two tents are used.

Injury to Foliage.

It was plainly noticeable that under the influence of the direct sunshine much more burning of the foliage took place. Trees, which were treated in the forenoon of hot days, were burned mostly upon the east side, and this injury to the foliage appeared always upon the side of the tree which was exposed to the sun at the time of the treatment. The injury was undoubtedly done while the tent was upon the tree, and did not result from burning after the tent was removed.

Trees which were treated early in the morning or late in the afternoon remained perfectly unharmed. In one case the temperature in the shade was about 92°, while within and close to the sunny side of the tent the temperature reached 108-110°.

This injury to the tree may be lessened somewhat by covering the frame with a cloth which will shade the tent; but it will be found more convenient to make the treatments with the gas in cooler seasons of the year, or in the cooler hours of the day. When injured by exposure to sun-heat the leaves drop off, but without injury to the green woody stems; fresh shoots have appeared in the course of three weeks after the treatment.

The prospects of effective treatment of scale insects by this method are quite promising. The gas is not only deadly to the insects but kills also the eggs, notwithstanding they are confined in the cottony cushion sac of the insect. The effect of the gas is equally deadly to the white as to the black and red scales.

Due attention should again be called to the extreme care which must be exercised in handling the gas on account of its highly poisonous properties; this warning cannot be too strongly urged. But it has been shown by practical operation that no special danger threatens the operators if due care be taken.

The limits of a preliminary report preclude a detailed description of the apparatus used in the operation. It is recommended that those who are interested in the construction of a machine shall, if possible, make personal examination of the working outfit at San Gabriel, and thus learn by actual observation the method of construction and operation.

F. W. MORSE.
Berkeley, Aug. 27, 1887.

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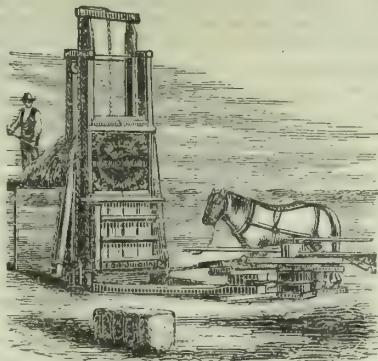
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JOHN LEIGHT, Pleasant Grove, Sacramento Co.
DEAR SIR:—You have scalped them all on hay presses. I would not give \$10 for the best press in California to use, if I could get a Lightning Press. Yours,
HON. THOS. McCONNEL, Elk Grove, Sac. Co.
DEAR SIR:—I want a Lightning Press to bale our hay. Will give 25 cents per ton more to have it baled with your press than any other. Very respectfully,
R. S. CAREY, Pres. Sac. St. R. R. Co.

We make a Press that you can put 10 tons in a car; the bale is 18x26 inches wide by 44 inches long; the car will take two bales endways and four bales high.

The Lightning Hay Press, when well worked, is capable of baling more hay in less time and in better shape than any other Press made; has often turned out, in the hands of skilled balers, 30 tons per day.

It will be seen by the accompanying cut that the Press stands upright when baling, and uses a drop to pack the hay chamber before pressing.

The Press is provided with a Derrick (not shown in the cut), to which is attached a fork, by means of which the team working the Press deliver the hay from the stack or mow to the Press for the feeder.

The team is worked by one continuous forward movement in a circle, making but one stop to each bale, while tying and discharging the bale from the Press.

The feed opening is 3 feet 10 inches wide, by 4 feet high, and is provided with large side-boards and feed apron that keeps the feeder employed preparing for the next bale while the bale in the press is being tied and discharged, thus making it a perpetual baler.

THE LOOSE BALING PRESS

Will make a bale 3 feet 10 inches long, 26 inches high, by 24 inches thick, and weighs from 225 to 275 pounds, according to the condition of the hay.

Presses Making Other Sized Bales will be Furnished When Wanted.

The Press is easily moved. When moving, the ground sills are swung under the wagon with windlasses on both front and hind gear, the upright part is hinged to the horizontal sills, and laid down when moved, and raised to work by means of a windlass attached to the Press for that purpose. It can be easily loaded by two men in 20 minutes, ready for the road, and set up ready for work in the same length of time.

The Press requires four men and two animals to operate it to do rapid work.

This Press will be on Exhibition at both the State Fair at Sacramento and District Fair at Stockton.

Send for Circulars. Correspondence solicited. For further information, etc., address

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MANUFACTORY: Benicia Agricultural Works, Benicia, Cal.

BAKER & HAMILTON.

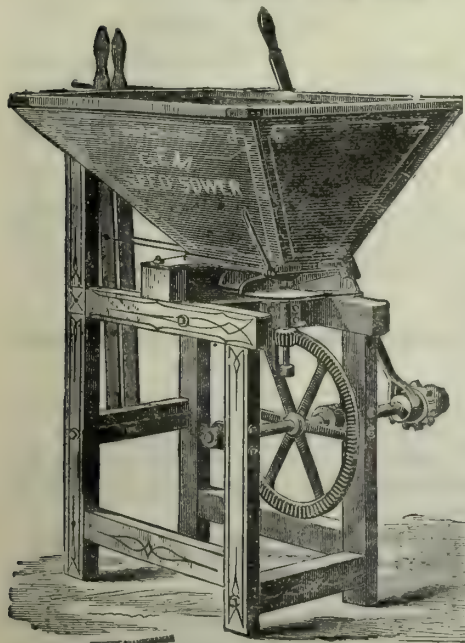
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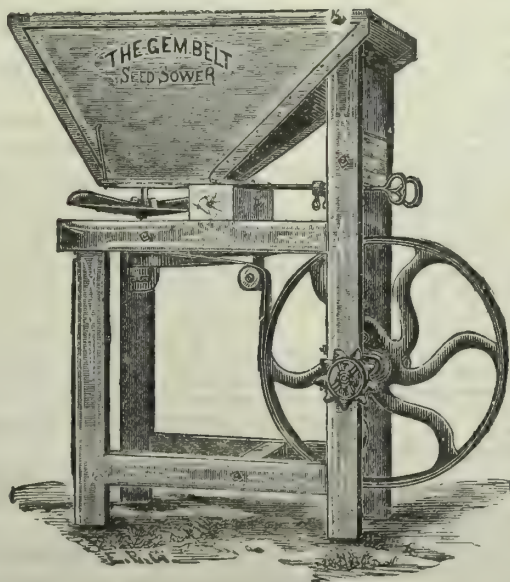
HARDWARE and AGRICULTURAL IMPLEMENTS.

GEM SEED SOWERS.



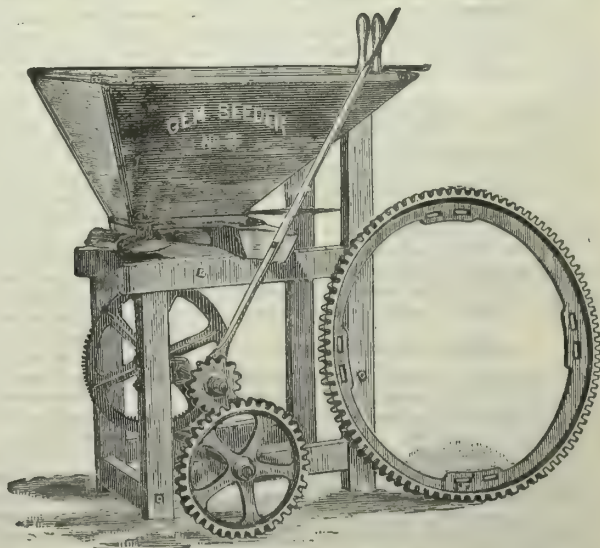
No. 1, Weight, 130 lbs. \$20.

This Machine is run with a Chain and Bevel Gear. It is the one we have sold for years, and has given the best satisfaction of any broadcast seeder yet invented.



No. 2, Weight, 154 lbs. \$22.50.

Runs with Chain and Belt Gear. The advantages gained on the bevel gear are smoothness of movement, noiseless while running, durability of the fast-running parts, and the evenness with which it sows the grain.



No. 3, Weight, 164 lbs. \$25.

Runs with all Gears. This machine is preferred by many to the others which run by Chain. The feed valves and distributor are the same as in the others.

We have manufactured the GEM SEEDERS for a number of years, and they have given better satisfaction than any Broadcast Seeder in the market. They throw the seed horizontally instead of vertically, and thus save a large portion of the grain. Where sold they have never failed to give satisfaction. ARMSTRONG'S PATENT FORCE FEED is attached again this year, and is considered by those who have used it, a great improvement.

THE GENUINE GEM SEEDERS are manufactured exclusively for us at Benicia. SEE THAT OUR NAME IS ON THEM.

CENTRAL ARIZONA.

[NUMBER I.]

(Written for the RURAL PRESS by O. C. WHEELER, LL.D.)

Introductory.

Arizona Territory, as now bounded, contains an area of 113 967 square miles. Within its boundaries are 80 rivers and small streams, and 20 lakes and ponds, having a water surface of 100 square miles, leaving a land surface of 113,867 square miles. It is therefore larger than all New England and the State of New York combined.

The Sierra Nevada and the Rocky mountain ranges terminate within its boundaries in a vast conglomerate of separated peaks and cross-ranges, running, for short distances, in all conceivable directions, and of the most fantastic shapes, covering the northern half of its surface. This, by general average, has an elevation of some 6000 feet, constituting a vast plateau from which there rise some lofty peaks and a great number of more moderate elevations, some of them covered with valuable pine forests, while intervening depressions are covered the year around with nutritious grasses capable of sustaining live-stock of every kind, and in great numbers.

The southern portion of the Territory, from the 34th parallel, is less elevated, by from 3000 to 4000 feet. In general terms it is an extended plain, traversed by several streams, and frequently pierced from below by sharply angular, rocky hills and mountain ranges of limited extent.

Throughout the Territory such deposits of the precious metals are found as to warrant the opinion that it is the richest mineral country of equal extent to be found on the globe. Its natural divisions are in three sections, Northern, Middle and Southern. The present, and a few succeeding articles, propose to treat, in a brief and concise manner, of the section known as Central Arizona.

Geography and Topography.

The district usually denominated Central Arizona includes Maricopa county, with portions of Gila and Pinal counties, and lies between 32° 30' and 34° north latitude, and between 34° and 36° of longitude, west from Washington, containing an area of something over 10,500 square miles (more than 900 square miles larger than the States of Connecticut and Rhode Island combined), of irregular, oblong form, its length lying in an easterly and westerly direction. It is in one sense a vast plain, elevated some 1500 feet above tidewater, and yet, with the exception of the valley of the Salt and Gila rivers, is freely studded with peaks and short ranges of mountains mostly composed of dark basaltic rock, rising from 100 to 3000 feet above the general surface. Many of these elevations bear, from base to summit, considerable quantities of shrubbery and timber, so that while the general aspect is that of a broken and rude country, the view is relieved with large quantities of evergreen foliage. Between these short ranges, and surrounding these irregular peaks, are valleys of sandy surface and forbidding appearance, covered with a great variety of cacti (some of which attain a height of 30 feet) and other kinds of semi-tropical growths and occasional lakelets that disappear for at least one-half the year, and creeks that, though full for several months, are during the balance of the year dry. But it has been demonstrated that all these valleys, when irrigated and cultivated, are extremely fertile, and many of them so sheltered and protected as to have a climate equally tropical with ordinary districts located 10° further south.

Prominent among these is the Salt River valley, about 50 miles long from east to west, and from 8 miles to 20 miles north to south, aggregating an area of about 550 square miles, or, in round numbers, 350,000 acres; and occupying a central position in Central Arizona. Something over 200,000 acres of this valley has a surface of incomparable smoothness, with a very gentle slope to the south and west, and is thus, by nature, better fitted for irrigation than any other tract of equal extent we have ever seen.

Geology and Mineralogy.

The geology of Central Arizona has thus far received very little really scientific attention, though very much has been said and not a little written on the subject. Yet enough is already known to assure the real student that there are materials of almost countless variety and value, inviting profound research, and promising rich reward to the toiler in the golden science, extending far beyond all previous developments as now found in the books on geological science. The larger mountains are of granitic formation, mostly, and so are many of the smaller ones. And yet there are so many and such distinct traces of gneiss, and of clay, and of micaceous and talcose slates, that the explorer is ill prepared to give any very definite descriptions until time has afforded opportunity for further investigations and more scientific research.

This much, however, is apparent, even with the present crude and limited amount of development, that the geological formations of

this district are (geologically speaking) of very recent origin. For, though the upheavals and the detritic deposits are said to expose geological strata 25,000 feet thick, and although all the geologic formations known to exist on the western continent, including the drift and tertiary periods, are here found in their regular order, there is good reason to believe that most of them are less than half a million years old.

The Mineralogy of Arizona.

Consisting as it does of one of the richest mineral belts in the world, has been the subject of very rapid and somewhat thorough research, and hence is far better understood than its geology.

In the richness and variety of its mines, Arizona is the peer of any State in the Union or any country on earth. Though but partially developed, the products of her mines fully justify the statement that as a producer of the precious metals she has no superior. Within the district called Central Arizona there are numerous mountains that abound in mines of gold, silver, tin, nickel, cinnabar, lead, platinum and iron. The latter is of superior quality and adapted to the production of the finest steel. Gypsum, salt and other mineral springs containing sanitary ingredients of great potency, together with natural loadstones of high magnetic power, vast fields of bituminous coal, red, white and yellow garnets, azurite, malachite, chalcodony, opals and sapphires, combine to make this one of the richest and most attractive mineral districts in the known world.

The Vast Amounts of Gold and Silver

Already taken from these mines, and the steadily increasing flow with which they are now, and for an indefinite future promise to continue, rewarding the application of science and labor, turning large numbers of miners into millionaires, give the strongest possible evidence of the verity of all that has been said, or can reasonably be said, of the extreme richness of this region in the precious metals. The field is still open to the prospector, with promise of as rich "strikes" as have been realized by any of his predecessors in this or any other field on the face of the earth. And there is no reason to doubt that large numbers of hardy, earnest, enterprising, persevering men, now with pick and shovel on the shoulder, will, ere long, become proprietors of mines as rich, and possessors of wealth as abundant, as any who have preceded them, in like pursuits, during the last quarter of a century. Moreover, railway communication is now open to the very heart of this section, giving it all the facilities of the most favored of the States, for procuring supplies of every kind, even from the most remote manufacturing, as well as from the sources of home supplies in the great Salt River valley, which is its central territory, for the production of all the results of agriculture and horticulture. These developments, rendering home supplies readily available, will hereafter make the toil and privation of the prospector far less than has been necessarily endured by those of earlier years, and are now endured by those of other regions. Yet his guaranty of abundant reward for his labor is quite equal to that afforded by the richest mining regions known to man.

Hydrology and Terrene.

Water, in this central portion of Arizona, is more abundant in its resources, larger in quantity, and more thoroughly distributed than in any other portion of the Territory.

The Verde river rises in the forests, on the eastern slope of the Juniper mountain range, near 35° 20' N. L., and running southeasterly and southerly about 150 miles, empties into the Salt river. It is a clear mountain stream, of no inconsiderable proportions, and is always reliable as an abundant supply.

The Black river, rising in the White mountains, north of the prieto plateau and running in a westerly direction some 120 miles, receiving in its course numerous streams, unites with Tonto creek and forms Salt river. This is increased in volume by collateral streams during its course, in a westward direction, of about 100 miles through the entire length of the Salt river valley, and debouches into the Gila river, the largest stream having its bed entirely within the Territory, at a point nearly equidistant from the eastern and western boundaries of the Territory. The Gila extends entirely across the Territory from east to west, and is by far the most important water-course within its borders. It will be readily perceived from the foregoing that the water supply of this district is not only the best in the Territory, but absolutely abundant for all purposes, if scientifically developed and properly utilized.

With this cursory glance at the hydrology of Central Arizona, we naturally approach the consideration of its

Terrene.

A field phenomenally *sui generis*, affording a study of the deepest interest. Long ago (how long, it were presumption to suggest) this whole region was broken up by subterranean convulsions, so that the surface of the country became like a vast ice-floe, everywhere broken and jagged beyond all description. This surface, after becoming measurably cool and hardened, again yielded to volcanic pressure from below, and there arose, by repeated lava flows, those lofty peaks and ranges which now tower up to elevations ranging from 6000 to 12,500 feet. The elements of geologic formations of almost endless variety, in a state of fusion, were forced to the top of those craters (which were continually increasing in height by their

own overflow), and running down the sides, each with sufficient heat to re-melt the surface of its predecessor, mingled with the other substances and resulted in combinations and formations which, for brilliancy and beauty, are not exceeded on the planet. Many of these are mingled with the precious metals in such forms as to render them exceedingly attractive, and in the hands of the lapidary produce gems that in elegance and value vie with the crown jewels of the Orient.

By abrasion and by the disintegrating forces of the elements, through unknown periods of duration, the various constituents of these multiplied volcanic formations have been decomposed, and by the law of gravitation sought and filled the intervening crevices, gorges and canyons, elevating their surfaces and enlarging their areas until they became the valleys and plains as we now find them, at such an elevation as to entirely cover a large portion of the original peaks, leaving at the present day comparatively few above the general level of the country. This surface of the valleys, both large and small, is still being continually elevated by the accretion of particles eliminated from the still protuberant portions; and this material, which is thus enlarging and elevating the surface of the plains, is in a continuous process of refinement and assimilation, producing in many places on the surface an almost impalpable powder, which has the rare quality of receiving and absorbing water with the greatest readiness, and at the same time holding it and not allowing it to leach through until it has received from the water the fullest benefit.

The quality of the soil, often many feet in depth, secures to it a richness of vigor in the production of vegetation not surpassed in the temperate zone. It combines the warmth of tropical sand with all the fertility of pure alluvium, thus reaching the acme of fecundity. The underlying strata are of gravel and sand, such as will, at all times, relieve the surface of an undesirable surplus of water before it shall have operated unfavorably upon seeds or plants.

(To be Continued.)

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Carbolic Smoke Ball

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SHOULD BE IN EVERY HOUSEHOLD.

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MAIL ORDERS. "Smoke Ball" and "Debellator" packages sent by mail, with full directions, on receipt of price, \$5.00 (Smoke Ball, \$3.00; Debellator, \$2.00), two 2-cent stamps. Remit by Postal Note, Wells, Fargo & Co., or Postoffice Money Order, Registered Letter, or in coin by express.

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Separate Parlor for Ladies, who will be waited upon by skilled and polite lady attendants.

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The ALLEGRETTI GREEN FRUIT TREATMENT and STORAGE SYSTEM COMPANY announce that they are now ready to store and treat all kinds of Green Fruit, Vegetables, and other Perishable Articles, on Storage System, by the week, month, or for shipment East.

This system is well known among fruit-growers, its power of preserving fruits, etc., in a fresh state, having been fully demonstrated with most satisfactory results.

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PACIFIC BANK
Oldest Chartered
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on the Pacific Coast.
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Cures all Diseases originating from a disordered state of the BLOOD or LIVER. Rheumatism, Neuralgia, Boils, Blotches, Pimples, Scrofula, Tumors, Salt Rheum and Mercurial Pains readily yield to its purifying properties. It leaves the Blood pure the Liver and Kidneys healthy and the Complexion bright and clear.

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Hunting Coats, Leggings, Loading Implements, Base Ball
Gloves, Lawn Tennis, Boxing, Fencing and Gymnasium
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selling book in this country; 360 copies sold in a
town of 3900 people; 66 in a town of 620; the largest
sales ever known; agents have sold 10 books a day for
4 weeks in succession; ask for the agency for "The
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Real Estate Exchange and Mart," full of reliable infor-
mation on climate, productions, etc., of

SANTA CRUZ COUNTY.

Address, "EXCHANGE AND MART," Santa Cruz, Cal.

The New Railway Fares.

We mentioned last week the reduction in passenger fares over the lines of the Southern Pacific System. The following is a fuller statement of changes to take place soon:

The rates from San Francisco to Ogden will be \$35 unlimited, \$30 limited and \$25 third-class. From San Francisco to El Paso the rates will be \$40 unlimited, \$35 limited and \$25 third-class. From San Francisco to Tucson the first-class unlimited will be \$38.15. In all local points in Arizona the reduction will be generally from 8½ to 5 cents a mile.

Following is a list of the principal reductions determined upon:

Between San Francisco and—	Now.	From 1887.
San Jose.....	\$ 1 75	\$1 25
Santa Cruz.....	4 75	3 00
Monterey.....	4 80	3 00
Templeton.....	8 00	6 40
Livermore.....	1 70	1 25
Lathrop.....	3 10	2 50
Merced.....	5 40	4 25
Fresno.....	7 60	5 90
Tulare.....	9 40	7 25
Sumner.....	11 90	9 10
Santa Barbara.....	23 00	15 00
Los Angeles.....	21 70	15 00
Colton.....	24 00	16 75
Banning.....	25 80	17 65
Napa.....	1 60	1 50
St. Helena.....	2 30	2 05
Calistoga.....	2 70	2 30
Suisun.....	1 70	1 70
Davis.....	2 75	2 75
Williams.....	4 70	4 25
Willows.....	5 70	5 00
Red Bluff.....	7 65	6 45
Redding.....	9 05	7 50
Siscons.....	13 80	10 65
Coles.....	17 60	13 25
Sacramento.....	3 30	3 30
Marysville.....	5 10	4 60
Chico.....	6 85	5 90
Auburn.....	4 50	4 10
Colfax.....	5 65	5 05
Truckee.....	9 55	8 30
Reno.....	12 05	10 05

Between Sacramento and—	Now.	From 1887.
San Francisco.....	\$ 3 30	\$ 3 30
San Jose.....	3 30	3 30
Santa Cruz (via S. Jose).....	6 30	5 05
Monterey (via San Jose).....	6 35	5 05
Templeton (via San Jose).....	9 55	8 45
Livermore.....	3 25	3 15
Lathrop.....	2 30	2 00
Merced.....	4 60	3 75
Fresno.....	6 80	5 40
Tulare.....	8 60	6 75
Sumner.....	11 10	8 60
Santa Barbara.....	22 35	15 00
Los Angeles.....	20 90	15 00
Colton.....	23 20	16 75
Banning.....	25 00	17 65
Napa.....	2 50	2 30
Calistoga.....	3 50	3 10
Suisun.....	1 65	1 65
Davis.....	2 55	2 55
Williams.....	2 50	2 05
Willows.....	3 50	2 80
Red Bluff.....	4 90	3 70
Redding.....	6 35	4 75
Siscons.....	11 35	7 70
Coles.....	14 95	10 50
Marysville.....	2 10	1 60
Chico.....	3 85	2 90
Auburn.....	1 50	1 10
Colfax.....	2 65	2 05
Truckee.....	6 55	5 30
Reno.....	9 95	7 05

Between Los Angeles and—	Now.	From 1887.
Newhall.....	\$ 1 45	\$ 0 90
Santa Paula.....	3 00	2 00
Santa Barbara.....	4 50	3 35
Mojave.....	5 70	3 75
Sumner.....	9 80	6 45
Tulare.....	12 30	8 35
Fresno.....	14 10	9 70
Lathrop.....	18 60	13 00
San Jose.....	21 45	15 00
San Francisco.....	21 70	15 00
Stockton.....	18 95	13 35
Marysville.....	23 00	16 65
Red Bluff.....	25 30	18 70
Redding.....	26 70	19 75
Coles.....	35 35	25 50
Colfax.....	23 55	17 05
Reno.....	29 95	22 05
Santa Ana.....	1 35	1 05
Pomona.....	1 30	1 00
Colton.....	2 30	1 75
Yuma.....	13 85	10 75
Tucson.....	34 90	23 15

The limited rate under the new schedule from San Francisco to Suisun will be \$1.50; from San Francisco to Davis, \$2.50; from Sacramento to San Francisco, \$2.50; Sacramento to Suisun, \$1.25; Sacramento to Davis, 90 cents.

CAUSE OF EYE DISEASE.—In an article by Dr. Dawson in the last RURAL, it is said that one of the sources of disease may be "ammoniacal gas from wine." It should have been gas from urine, not properly disposed of, thus giving rise to bad air in the stable, etc.

THE PROSPECTOR thinks that the red gravelly hills south of Tombstone, Ariz., furnish just the character of soil necessary for the successful cultivation of the grape. Water for irrigation could easily be procured anywhere below the Huachuca reservoir.

PERSONAL.—We had a pleasant call on Wednesday from Harry Brook, editor of the *Pacific Fruit-Grower*, who has been in the city on business.

From Tuolumne.

EDITORS PRESS:—As Tuolumne has not been represented for some time, we send you a few items. We are glad to note a steady advance in the general make-up of the farmer's friend, and hope you will be enabled to attain a higher degree of perfection in agricultural and horticultural science. It is hard to tell which has the most prominence. Of course, bread will stand at the top-round of man's natural wants, but horticulture has reached an eminence little dreamed of by pioneers and slow coaches.

It is a sight at this season to go into some of our fine gardens and look at the peach trees, loaded down with tempting fruit. Pear, plum, apple, and other species show the effects of high and intelligent cultivation, obtaining new varieties of marked excellence and large dimensions, year by year gaining in number, flavor and favor.

In this county we have all the conditions but one for making us more prosperous at home and looked after from abroad. The want of railroad facilities isolates us. Fruit falls from the trees and lies there to rot, which would grace any market, were means at hand to send it. Time will certainly bring us the rail, but it will be when, not a pioneer is left to greet its advent. Day by day the grizzled old fellows are being laid away to a well-earned rest, their names only known in history.

The fruit crop of the county is a good average, and far above what it has been for a few years past. The watermelon—which many question as to its being a desirable and healthy product—is brought in by the ton from Lodi and Merced river, and finds a ready sale. If some do feel bad effects from eating them, they are devoured, nevertheless, and pay well for cultivation. Lodi seems to be a natural paradise for water and muskmelons, which there attain rich flavor and huge dimensions.

The excessive heat has operated against the gardener to some extent, drying up springs so as to interfere with irrigation and making water scarce in some localities; but despite all the drawbacks, crops are good.

The thermometer registers 88° to-day—the coolest day for some time. The leaves are losing their bright green. Figs are just beginning to fall. The yield will not be quite so full as in former years, the great heat affecting the growth of the young shoots which produce the second crop; but growers in this county realized rather more than an average first crop.

Hay is not very plentiful and brings good prices—\$15 per ton about Chinese Camp, with an advance in Sonora, etc. The quality of the hay is superior; farmers understand how to save it from bleaching.

The mining interests of the county are in a prosperous condition—not by a boom, but in steady and sure results. Many claims are employing a large force of men, and reap a rich reward. The booms bursting all over the lower portions of the State have not been heard in these canyons and may not be for some time; but if many of these excited land-seekers were to stray among our foothills, enjoy our clear skies and pleasant, wholesome atmosphere, they would find that San Jose and Los Angeles are not the only favored spots in this broad and diversified land.

JOHN TAYLOR.
Chinese Camp, Aug. 26, 1887.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in DEWEY & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING AUGUST 23, 1887.
368,708.—CHURN—M. V. Ensley, McMinnville, Oregon.
368,884.—DREDGE—H. O. Geiger, Tacoma, W. T.
368,587.—INKSTAND—P. D. Horton, Oakland, Cal.
368,588.—TOY CATAPULT—P. D. Horton, Oakland, Cal.
368,589.—PEN-WIPER—P. D. & G. Horton, Oakland, Cal.
368,601.—BRIDLE—E. McEvers, Susanville, Cal.
368,683.—ORE CONCENTRATOR—J. H. Pemberton, Los Angeles, Cal.
368,785.—NUT LOCK—G. W. Roberts, Walla W. T.
368,627.—SYRINGE—T. Threlfall, S. F., Cal.
368,793.—SEWER GAS TRAP—John Tilton, S. F., Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates and in the shortest possible time.

COGSWELL POLYTECHNIC COLLEGE.—The corner-stone of the Cogswell Polytechnic college was laid in San Francisco, August 27th, at the corner of Twenty-sixth and Folsom streets. Several hundred spectators were present. Rev. Dr. Barrows opened the exercises with prayer. Mayor Pond presided and made a short address, and Col. Stuart M. Taylor delivered an oration, which drew warm and frequent plaudits.

PERSONAL.—E. J. Breen, one of the Donner party, now a resident of San Juan, recently visited the spot where the fated party camped. He is now a large and successful farmer and stock-raiser. His ranch of 24,000 acres, near "Topo," is stocked with fine beef cattle.

PACIFIC COAST WEATHER FOR THE WEEK.

(Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.)

DATE.	Portland.			Red Bluff.			Sacramento.			S. Francisco.			Los Angeles.			San Diego.								
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.				
Aug. 25-31																								
Thursday.....	.00	64	NW	Sy.	.00	80	SE	Cl.	.00	68	S	Cl.	.00	54	SW	Cy.	.00	78	W	Cl.	.00	68	W	Cl.
Friday.....	.00	66	NW	Sy.	.00	84	SE	Cl.	.00	70	SW	Hy.	.00	61	SW	Cl.	.00	76	SW	Cl.	.00	68	W	Cl.
Saturday.....	.00	66	S	Cy.	.00	96	N	Cl.	.00	78	E	Hy.	.00	58	SW	Cy.	.00	78	SW	Cl.	.00	66	W	Cl.
Sunday.....	.00	64	NW	Fr.	.00	84	S	Cl.	.00	72	S	Cl.	.00	56	SW	Cy.	.00	73	W	Cl.	.00	68	W	Cl.
Monday.....	.00	64	NW	Cy.	.00	74	S	Fr.	.00	65	S	Cl.	.00	60	W	Fr.	.00	72	SW	Fr.	.00	70	SW	Cl.
Tuesday.....	.01	64	S	Cy.	.T	72	N	Cl.	.00	70	NW	Cl.	.00	65	W	Cl.	.00	70	SW	Cy.	.00	70	SW	Cl.
Wednesday.....	.44	58	S	Cy.	.00	76	N	Cl.	.00	74	NW	Cl.	.00	68	W	Cl.	.00	76	SW	Fr.	.00	68	W	Cl.
Total.....	.45				.T				.00				.00				.00				.00			

EXPLANATION.—Cl. for clear; Cy., cloudy; Fr., fair; Fy., foggy; — indicates too small to measure. Temperature. Wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

Santa Rosa Nurseries.

A RURAL representative made a visit to Luther Burbank's home nursery at Santa Rosa on the 27th inst. His olive plot is quite extensive, and he will be able to put on the market 125,000 of the Picholine variety. He has recently added six acres adjoining, to be set out and enlarge his nursery. His Sebastopol nursery, we were informed, was in a very thriving condition, and no scale had made its appearance in any of his nurseries. Our representative was shown several varieties of imported trees, among which was a quince from France that was a very prolific bearer. He was informed by Mr. Burbank that he recently imported some new varieties from New Zealand.

As an enterprising and very successful nurseryman, Mr. Burbank has kept abreast and in advance of the times in securing and importing new varieties and standard fruit. Preparations that are being made to plant a large acreage in orchards and vineyards in different parts of the Pacific Coast will no doubt tax largely the immense stock that he has in several nurseries.

Only Thirty-six Per Cent

Of those who die from consumption inherit the disease. In all other cases it must either be contracted through carelessness, or, according to the new theory of tubercular parasites, received directly from others as an infectious disease. But in either case, Dr. Pierce's "Golden Medical Discovery" is a positive remedy for the disease in its early stages. It is delay that is dangerous. If you are troubled with shortness of breath, spitting of blood, night-sweats or a lingering cough, do not hesitate to procure this sovereign remedy at once.

The Splendor of Dress

And the artificial effects of cosmetics, no matter how deftly applied, can never make beautiful or attractive one who is subject to emaciation, nervous debility, or any form of female weakness. These must be reached by inward application, and not by outward attempts at concealment, and the ladies may take hope from the fact that thousands of their sisters have made themselves more radiant and beautiful by the use of Dr. Pierce's "Favorite Prescription" than they could ever hope to do by the aid of the appliances of the toilet.

The cleansing, antiseptic and healing qualities of Dr. Sage's Catarrh Remedy are unequalled.

CORN FESTIVAL.—In Sioux City, Iowa, says the *Quincy Whig*, arrangements have been completed for the erection of a corn palace, and a grand jubilee, in celebration of the immense crop of corn, will be held Oct. 5th to 8th. The corn palace will be a structure reared of corn. The principal streets will be arched and decorated with corn, ladies will wear corn as a decoration, and veritably corn will be king. The exhibition will not be confined to Iowa alone, but the great cornfields of Nebraska, Minnesota and Dakota will send their quota.

BERKSHIRE SALES.—The latest transcript from the *American Berkshire Record*, sent us by Phil. M. Springer of Springfield, Ill., has the following: Knight of Marin, 17,427, Frank H. Burke, Menlo Park, Cal.; to John N. Tyler, Point Reyes, Cal.; Uipoma, 17,435, Frank H. Burke to C. W. Merritt, Santa Maria, Cal.

"De man wot knows it all is alluz a-makin' change, a-buyin' ob experience." The man who does not think that he "knows it all" about Pumps can find out a great deal about them in *Grimshaw's PUMP CATECHISM*. By mail, postpaid, \$1. Dewey & Co., 220 Market St., S. F., Cal.

Important to Tree Planters.

One hundred and twenty-five thousand Fruit Trees for sale at a bargain, consisting of Apple, Pear, Peach, Apricot, soft and hard-shell Walnuts; also 2000 Fan-Leaf Palms. Sales will be made in lots, or the Nursery and stock will be sold on the most liberal terms as to price and payments, or will be exchanged for real estate. Inquire of J. M. Hixson, Real Estate Agent, 75 N. Spring street, Los Angeles, or address the proprietor, Milton Thomas, P. O. Box 304, Los Angeles, Cal.

COMMISSION FIRM.—A new card in our advertising columns bears the name of Cofer, Hills & Co. as commission merchants for the sale of dairy and general farm products and wholesale dealers in provisions. The firm is highly recommended to us by those who have opportunity to know the business standing of the members.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

JARED C. HOAG—California.
G. W. INGALLS—Arizona.
Geo. McDOWELL—Santa Clara Co.
W. J. FARREWAY—Nevada.
J. L. DOYLE—Nevada Co.
WILLIAM POOL—Fresno Co.
R. G. HUSTON—Butte, Montana.
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EDMUND WRIGHT—Shasta Co.
M. S. PRIME—Solano Co.
SILAS PRUDEN—Colusa Co.
B. R. McPHERSON—Santa Barbara Co.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and, as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription rate, \$3 a year. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

A WELL EARNED REST.—Mr. Hiram Corey of Salinas valley, Monterey county, has sold the Buena Vista rancho, consisting of 7000 acres of very rich and productive land, to a syndicate who will cut up the ranch in lots and parcels of from 80 to 200 acres suitable for farming and fruit-raising. His large, select and valuable herd of cattle will be sold at auction late in the fall if not disposed of before. This will be a rare chance for persons who wish to make a home, and add materially to the prosperity of this section of our State. Mr. Corey has made an ample fortune by a system of mixed farming, and intends to spend a year or more in travel for rest and recuperation after 20 years of close attention to a large business.

SCALDS and BURNS
Should have proper care or they may prove very dangerous and perhaps FATAL.

ACCIDENTS
are constantly happening. A kick of a horse or cow may cause a bad bruise; the slip of an axe or knife may result in a serious cut.

Any of these things may happen to one of YOUR family at any moment.

Have you a bottle of **PERRY DAVIS' PAIN KILLER** ready for use in such cases? It has no equal for the cure of Scalds, burns, cuts, swellings, bruises, sprains, sores, insect bites &c.—All Druggists sell it.

PERRY DAVIS & SON, PROVIDENCE, R. I.

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

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H. W. OWELL, Stockton, "Morrano Farm," breeder and importer (and agent for Leonard Bros., Mo.) of Aberdeen and Galloways. Young stock for sale.

J. A. BREWER, Centerville, Alameda Co. Short-horn Cattle and Grades. Young stock for sale.

T. E. MILLER, Beecher, Ill. Oldest and best herd Hereford Cattle in U. S. Cattle delivered in California.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R. P. O., Penn's Grove, Sonoma Co., Cal. Wilfred Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

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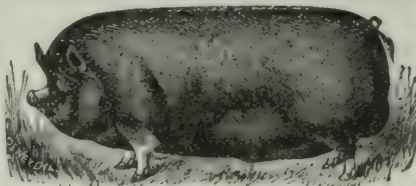
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Sell, Without Reserve, All

The Bulls, Heifers and Calves. These animals are all Thoroughbred and registered, and are all from choice prize-winners of deep milk and butter strains. These animals are of choice families, as the Aaggie's (the most celebrated in the world); the Netherlands (a great butter tribe); The Menlo (the greatest Holstein Show Cow in the world); The Jacobs (the only imported son of Mercedes, the holder of the milk record of the world); Twisk (holder of the butter record of the United States).

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AT 11 A. M. AT

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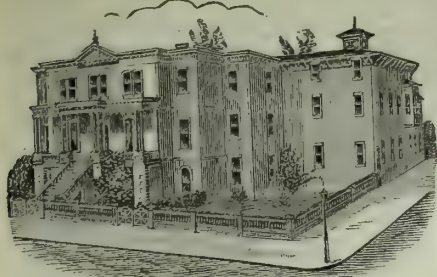
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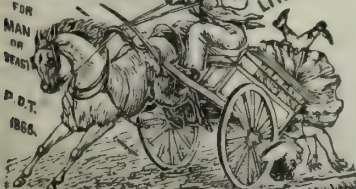
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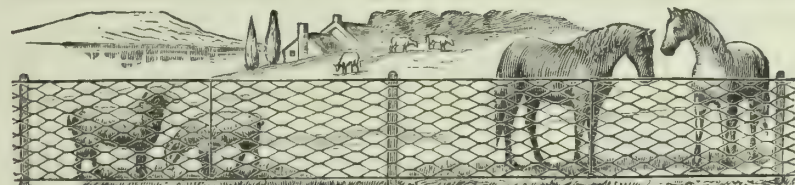
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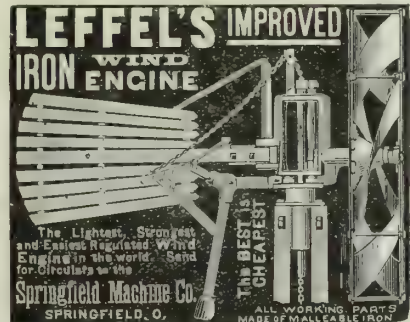
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S. H. MARKET REPORT

NOTE.—Our quotations are for Wednesday, not Saturday, the date the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, August 31, 1887.

Continued fair weather has allowed farmers to make free deliveries of all kind of products. The past week witnessed a better market for fruits, but a dull, weak market for wheat. At the East wheat fluctuated but did not recede, but in Europe prices went off. To-day's English cables are as follows:

LIVERPOOL, Aug. 31.—Wheat—Good demand for white, while red is depressed. California spot lots, 55 9d to 6s; off coast, 31s 6d; cargoes off coast, very slow; on passage, very inactive; Mark Lane wheat, quiet; French country markets, quiet but steady; wheat on passage to Continent, 351,000 qrs; wheat and flour on passage to U. K., 1,918,000 qrs; wheat and flour in Paris, rather easier.

Foreign Review.

LONDON, Aug. 29.—The *Mark Lane Express* in its weekly review of the British grain trade, says: The harvest progresses well, and the variability in the yield and quality of the crop becomes more pronounced. Trade values continue to droop. In the London market prices have fallen 6d to 1s, and in the provincial markets 1s. The sales of English wheat during the past week were 35,832 qrs. at 30s 10d per qr. against 36,363 qrs. at 33s 2d during the corresponding week last year. Country flour has fallen to 6d. Foreign wheat at Liverpool has declined 1d per cwt; flour is 6d cheaper. Linseed is down 3d. There were 24 arrivals of cargoes off the coast during the week. One cargo was sold, one was withdrawn and 9 remain. To-day trade in wheat was very slack. The values of new English were 6d to 1s lower; Duluth and Indian were unchanged; other kinds 6d to 10d lower. Flour was dull; country and foreign 6d lower. Linseed was 6d to 9d lower.

Eastern Wheat Markets

NEW YORK, Aug. 28.—Wheat options closed firm. Aug. 79½; Sept. 80; Oct. 81½; Nov. 82½; Feb. 86½; Mar. 87½; Apr. 88½; May 89½; June 90.

Crops at the East.

WASHINGTON, Aug. 28.—The weekly weather and crop bulletin issued by the Signal Office says: Reports indicate that the rain during the past week proved favorable for the growing crops in the corn region, although the yield in the principal corn-producing States will be materially reduced by the drought. The weather has been especially favorable for pastures and late planted potatoes.

Eastern Wool Markets.

BOSTON, Aug. 26.—Prices have declined further in nearly all grades—most noticeably on Ohio and Pennsylvania fleeces. Conservative hand-to-mouth purchasers are in the majority. Total sales of the week were 1,735,000 lbs. Territory wools are in large supply and offered at low prices. Sales include 50,000 lbs medium, and fine medium at 22½¢, 5000 lbs medium at 22¢, and 5000 lbs fine at 18 to 19¢. Eastern Oregon is in moderate demand, and sales are reported of 36,600 lbs at a wide range of prices. In California spring wool there have been small sales at 19¢. The sales include 21,000 lbs on private terms. Fall wool is dull and neglected at any price. Sales of scoured have been reported of 12,000 lbs at 50¢, 15,000 lbs scoured at 40 to 60¢, 2000 lbs California at 56¢, 40,000 lbs at 35 to 40¢, and 56,000 lbs on private terms.

NEW YORK, Aug. 27.—The general condition of the market remains unchanged. There has been nothing to stimulate purchases at interior points, and the demand shows no great improvement. Among sales were 5000 lbs Eastern Oregon at 23¢; 25,000 lbs Territory at 21 to 25¢.

The Philadelphia market is quiet, with the general demand light and unsatisfactory. Among sales were 30,000 lbs California defective at 19¢; 20,000 lbs fine Territory at 15 to 20¢; 1000 lbs Territory bucks at 10 to 12¢; 5000 lbs Territory one-fourth at 24¢; 27,000 lbs Territory fine medium at 19 to 22¢.

California Fruit at Chicago.

CHICAGO, Aug. 27.—The supply of grapes was heavy, and being Saturday, it was necessary to close out, for by Monday most of the stock would be worthless. California varieties showed a better demand than at any time this week. Muscats brought \$2.50 to \$2.75. Tokays \$2.75 to \$3. Pears continue in liberal supply with demand inadequate, and prices weak. Bartletts \$2.75 to \$3. Beurre Hardy \$1.75 to \$2. Clairgeau \$2 to \$2.50. A dull market was noted for peaches, for under existing circumstances dealers could not afford to let an opportunity to sell go by. Late Crawford and Orange Clings brought \$1.25 per box. Prunes sold well at \$1.30 to \$1.40 per box for German and Gros. Quinces \$2 to \$2.50.

CHICAGO, Aug. 29.—The California dried fruit market is firm and a good demand exists. Spot goods are scarce, consignments of all kinds of fruits being placed upon arrival, and sales are being made of fruits to arrive. Apricots, sun-dried, bleached, choice, 15 to 15½¢; do. sun-dried, bleached, prime, 14 to 14½¢; do. sun-dried, not bleached, 9½ to 11¢. Peaches, peeled, evaporated, good, 21 to 21½¢; do. unpeeled, evaporated, fancy, 14 to 16¢; do. unpeeled, evaporated, choice, 16 to 17¢; do. good 13 to 14¢; do. unpeeled, sun-dried, 9 to 10¢. Plums, pitted, new, 13 to 14¢. Raisins, loose Muscatel, old, per box, \$1.45; do. London layers, per box, \$1.55 to \$1.60.

CHICAGO, Aug. 30.—California fruits continue in good request. Choice fruits rule about steady. Pears are perhaps a little easier, owing to the large supply of Bartletts from near by. Grapes ruled weaker, because of large receipts of home-grown fruit of that variety. California varieties receive a better demand everywhere than home-grown fruits. The following prices were received for fruit in fine condition, all else being lower: Tokay grapes, \$2.50 to \$2.60 for double crates, and \$2.25 for Mus-

cats. Orange Cling and late Crawford peaches, \$1 to \$1.25. Bartlett pears, \$2.50 to \$2.75; Beurre Hardy do., \$1.75 to \$2; Clairgeau, \$1.25 to \$1.50; quinces, \$2 to \$2.25 per box.

California Fruit in New York.

NEW YORK, Aug. 25.—California fruits sold as follows to-day at auction: Pears, Bartlett and Del. 62½¢ to \$2.12 per bx, according to condition. 207 hi-bxs El Dorado Mountain peaches, \$1.10; 48 hi-bxs Orange Cling peaches, \$1.15; 28 do, \$1.10; 47 do, 70¢; 40 hi-bxs Freestone peaches, \$1.37½; 188 do, 45¢; 19 hi-bxs Muscat grapes, \$1.37½; 144 do, 75¢; 65 hi-bxs Tokay grapes, \$1.50; 30 crts do, \$3.50; 55 hi-bxs Golden Drop plums, \$2.05. Peaches come into competition with arrivals from near-by points, 30 carloads having been received this morning, and many Californians are in bad order. Pears are arriving dead ripe and no more should be sent. Tokay grapes are in good demand and give promise for later arrivals. Plums are also in good demand.

NEW YORK, Aug. 30.—Two carloads of California fruit were auctioned to-day as follows: Bartlett pears, \$1.37½ to \$2.12 per bx; peaches, \$1.20 to \$2.25 per hi-bx; Muscat grapes, 70¢ per crt; Tokay grapes, \$2.80 per crt, \$1.60 per hi-bx. The pears were rather small, but quite sound. There are too many in the market from up the Hudson river. Peaches are good. The Muscat grapes had decayed slightly.

Canned and Dried Fruit in New York.

NEW YORK, Aug. 27.—Canned—California pears, \$3.25. There have been large sales of pears during the past week, the prices of which will be agreed upon later. Dried Fruits—California and Malaga raisins are without special change; 2-crown \$1.25; 3-crown, \$1.40 to \$1.45.

Eastern Hop Markets.

NEW YORK, Aug. 27.—The market is quiet, with prices nominal and the tone of the market short of being firm. Coast crop, 1886, best, 16 to 17¢; same, common to good, 13 to 15¢; 1885, good to prime, 10¢.

Honey Crop.

NEW YORK, Aug. 30.—A dealer of long experience says: Honey will be high this year. Three leading honey-producing States—Illinois, Wisconsin and Michigan—have no honey at all, and in many parts of these States the bees are being fed on sugar to keep them from starving. Last year California sent honey to this market by the carload; this year they have scarcely enough for home consumption. New York is the only State having a good yield, but it does not produce enough to keep the price down.

Beans.

The Chicago *Grocer* says: It has recently been developed that the coming crop of beans in this country will be largely deficient, owing to the drought which has affected the principal bean-growing sections. This information has caused a much stronger feeling in the article and an advance of from 15 to 20 per cent. It is a little soon to give any definite information as to what the shortage will amount to. It is variously estimated at from 25 to 40 per cent short of an average crop. Cable advices from Europe also speak of the failure of the crop in Hungary, the principal bean-growing district of that country. The market on the other side, owing to the large call from the United States, is very much excited, and prices there have advanced in keeping with those of this country. It is safe to say that beans will rule much higher for the coming season than for a number of seasons past.

In the local market prices are strongly adhered to for all choice grades; some dealers are even asking an advance. At the close to-day there is quite a movement in whites, with higher prices ruling.

Local Markets.

BAGS—The pool is reported to be still taking up all the odd parcels put on the market. In lots, quotations for Calcuttas are as follows: 7½ to 7¾ on spot.

BARLEY—The unsettled condition of wheat in consequence of the entire collapse of the wheat pool, affects, unfavorably, barley. Receipts continue upon a liberal scale, with sellers more or less urgent. It is claimed that a higher range will obtain soon, owing to farmers having stored. On Call options were more or less steady throughout the week. To-day's sales were as follows:

Morning Session: Buyer 1887—100 tons, \$1.03½ per cwt.

BUTTER—Choice grades are strongly held at full prices. The demand is both locally and for shipping. The local trade is running chiefly on pickled.

CHEESE—The market is steady, with a strong undertone. The demand is both shipping and local.

EGGS—Strictly choice fresh laid are in request at full figures. Other qualities show more firmness.

FLOUR—In sympathy with wheat the market is lower. At the lower prices there is a good export demand.

WHEAT—The market has been more or less unsettled the past week, owing to the utter collapse of the pool. Their final failure will throw large quantities of wheat on the market, and, as usual in such cases, buyers are sending prices to too low figures. Sales of sample parcels were made the past week at our quotations. To-day's Call Board sales were as follows:

Morning Session: Buyer season—100 tons, \$1.42; 400, \$1.42½. Seller 1887—200 tons, \$1.22½; 100, \$1.22½ per cwt.

[COMMUNICATED.]

Market Information.

Cereals.

The *Mark Lane Express* makes the wheat crop of the United Kingdom 70,800,000 bu—about 8,000,000 bu in excess of last year.

Only one-fourth of the barley crop of Germany will be of really fine quality.

A St. Petersburg dispatch says: Official returns of the condition of the Russian winter wheat crop from 35 districts and of summer wheat from 4 districts are very favorable, and from the remaining 23 winter wheat and 18 summer wheat districts the reports make a fair showing.

From *Beerbohm's*, Aug. 12, the following is obtained: The weather in England has continued of

an exceptionally favorable character for the harvest, although the temperature has been cooler since Wednesday. Heavy rains are reported from the extreme north of Europe, but so far the United Kingdom has been practically free, and the new wheat is being rapidly secured in fine condition; what promised, therefore, to be a late harvest, has proved, under the influence of phenomenally fine weather, to be actually 10 to 15 days earlier than last year. The same is the case in France, where the harvest is in a very forward state, and where new wheat is now freely offered in the country markets. In Germany wheat-cutting is also in progress, and a good crop is expected, but concerning the yield of rye there are numerous complaints. In Hungary the wheat crop is proving to be a very good one—better than for some years past; and in Roumania the prospects are equally favorable. The Russian wheat crop is also reported to be exceptionally good in some districts, and very satisfactory in almost all other parts of the country. From Spain and Italy the reports are rather unfavorable.

The London *Times*, just to hand, contains the following: In what is pre-eminently a wheat season we are not reaping a great harvest. Discounting the deficiency of the wheat yields on certain soils, considering the many failures of barley, not fully compensated for by the quality of what may be harvested in case the in-gathering should meet with a favorable time, and taking into account the generally poor return of the oat crop, we are prepared to find, upon detailed examination, that the total cereal produce of 1887 turns out only moderate in quantity. Once again will be realized the general law of wheat production in Britain—namely, that the yield per acre is proportional to the summer temperature, with the modifying conditions of rainfall, prevalence of cloud, character of the weather at blossoming time and during harvest, and the state of growth of the plant at the commencement of the summer. The paramount influence of a high or low thermometer during the two principal months of filling or ripening the wheat ear is again established, but we do not look for an abundance comparable to the harvest of 1863, or to that of the hot season of 1868, when the mean temperature of July and August was 4 degrees above the average; or surpassing the yield of 1870, when a very fine sunny season, with very favorable blooming period, followed by a hot harvest, exercised the greatest effect rather than a high mean temperature.

The final collapse of the wheat pool was announced on last Saturday, taking all by surprise, for on the preceding day considerable money was paid out by Messrs. Dresbach and Rosenfeld to margin down wheat. They claim that further declines in the Liverpool wheat market and the closeness of the money market in this city were against them, and being unable to obtain further loans on wheat they had to suspend. Their suspension sent down the price of wheat both in the open market and for options. At the lower prices very little trading is done, as the market is virtually in the hands of English export buyers, and they were never known to pay good prices. Farmers have to thank bear dealers in this city for this condition of affairs. They fought the bulls, broke them, and now there is a low depressed market.

There was not a vessel chartered the past week to load wheat at this port for Europe.

Under heavy receipts, barley has ruled weak and in buyers' favor throughout the week. The consumption continues large, while the shipping demand is increasing. It is claimed that the market will begin to improve soon, owing to farmers having stored their grain not being disposed to sell.

Oats are weak and in buyers' favor, under free receipts and liberal supplies, with dealers and consumers only buying in a small way.

Rye holds to firm prices, under a good demand and light obtainable supplies.

Buckwheat is without essential change—dull and heavy.

Feedstuff.

Hay continues steady, with a firm tone, under moderate receipts and a good demand. There is a growing impression that the supply will not equal this winter's demand, particularly if the winter is severe, which it is likely to prove, owing to the open character of the two preceding winters.

Brans and middlings are low, but more active at the decline. Now that the mills are running on longer time, prices are expected to go still lower. Ground barley is weak and in buyers' favor. The demand is good.

Fruits.

Apples continue in liberal supply, with the more choice varieties showing better. The demand is improving.

Apricots are going out, consequently prices are more or less nominal.

Choice peaches are wanted, and fetch an advance on last week's prices. Canners are still in the market.

Choice pears are growing scarcer. They fetch full prices, with both the trade and canners buying.

All kinds of berries are higher, with raspberries going out.

Choice table grapes are in better request, with a slight advance in prices obtainable. Wine grapes are offering more freely, causing some shading in prices.

Eastern advices report the market for raisins well cleaned up, but as yet dealers are not willing to name prices for this year's Californian. Choice, well-selected and well-packed raisins will be in good request this winter.

Dried fruits are in increasing demand for shipping overland, with the market very firm at full prices. Several kinds are higher, and at the advance find ready buyers.

Vegetables.

Potatoes continue to come forward freely, but the demand is also good. Prices do not show any signs of advancing yet, but many claim that values are liable to go higher soon, but on what the opinion is founded, the writer is not able to learn.

Onions, if choice and well selected, have a firmer tone, but no advancing tendency, although it is not at all unlikely that a higher range will obtain before long.

Tomatoes are in good request for canning, but as the supply exceeds the demand, the market favors buyers.

Seasonable vegetables are without essential change, but prices for those going out are stronger for the better qualities.

It is claimed that owing to the drought last

month at the West, heavier and earlier shipments of cabbages will be made overland this winter.

Live-Stock.

Beef cattle are barely steady, owing to continued free offerings. The demand is only fair. Mutton sheep are offering more freely, but prices are well maintained. Hogs are weaker. It is claimed that a lower range will rule when farmers take them off the stubble. In horses there is nothing new to report.

The following are the wholesale rates of slaughterers to butchers:

BEEF—Extra, 7 to 7½¢; first grade, grass fed, 6½ to 6¾¢ per lb.; second grade, 5½ to 6¢; third grade, 4½ to 5¢.

MUTTON—Ewes, 5½ to 6¢; wethers, 6 to 6½¢.

LAMB—Spring, 7 to 8¢.

VENISON—Large, 6 to 7¢; small, 6 to 8¢.

PORK—Live hogs, 4½ to 4¾¢ for heavy and medium; hard dressed, 7 to 7½¢ per lb.; light, 4½ to 4¾¢; dressed, 7 to 7½¢; soft hogs, live, 3½ to 4¢. On foot, one-third less for grain or stall fed, and one-half less for stock running out.

Miscellaneous.

The tonnage movement compares with last year at this date as follows:

	1887.	1886.
On the way.....	301,879	304,537
In port, disengaged.....	54,692	59,554
In port, engaged.....	24,883	70,871

Totals..... 381,444 435,962

The above gives a carrying capacity as follows: 1887, 621,459 short tons; 1886, 704,963 short tons; showing a decrease compared with last year of 83,504 tons.

Fall wools are coming in very freely, with the grades showing to better demand. Sales of burry and defective are reported made as follows: Southern 90 to 12½¢; middle, 100 to 13½¢; clean and medium to fine from 2½¢ to 50¢ per lb. higher.

In hops there is nothing new to report. The inquiry is freer, but no supplies are coming forward yet.

Poultry has ruled fairly steady throughout the week.

In seeds there is nothing new to report. Dealers expect another advance in grass seeds.

San Francisco, August 31, 1887.

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, Aug. 31, 1887.

Apples, hi. com.	30 to 50	Figs, loose	4 to 6
do. choice	50 to 125	Nectarines	8 to 10
Apricots, 100	—	do. evaporated	16 to 18
Bananas, bunch, 1 50	to 3 00	Peaches	12 to 12½
Blackberries, ch. 4 00	to 6 00	do. pared	—
Cant. loaves, cr. 50	to 60	do. evaporated	24 to 25
Cherries, white, hi. 50	to 60	Pears, sliced	5 to 6
do. black, hi. 50	to 60	do. grid	—
do. Royal Ann	—	do. evaporated	8 to 10
Cherry plums	—	Plums, evapd	13 to 13½
Crabapples	—	do. unpitted	3 to 5
Cranberries	100 to 12 50	Prunes	10 to 12
Currants, ch.	—	do. French	11 to 14
Gooseberries	—	Zante Currants	8 to 10
Grapes, hi. com.	40 to 60	RAISINS	—
do. white, hi. 30	to 40	Delmas Clus, fcy 2 40	to 2 60
Grapes, white	25 to 35	Imperial Calif.	—
do. black	35 to 40	do. fancy	1 75 to —
do. Rose Perle	40 to 60	Crown London	—
do. Muscat	50 to 60	Layers, fcy 1 50	to —
do. Tokays	50 to 75	do. Loose Muscatels	1 40 to —
Isabel	—	do. Loose Muscatels	1 35 to —
Wine, Zinfandel	15 to 20	do. Valencia	1 25 to —
do. Mission	15 to 20	do. Layers	1 25 to —
James, Mex.	10 to 15	do. Sultanas	1 25 to —
do. Cal. box	—	do. Fraction come 25, 50 and 75	cents higher for halves, quarters and eighths
Lemons, Cal. box	8 00 to 10 00	VEGETABLES	—
do. Sicily, box	8 00 to 10 00	Artichokes, doz	—
do. Australian	—	Asparagus, doz	—
Nectarines, box	50 to 75	do. extra choice	—
Oranges, com. box	—	do. do. choice	—
do. choice	—	Okra, dry, lb.	15 to 20
do. Navel	—	do. green lb.	5 to 8
do. Pausma	—	Parsnips, old	1 50 to —
Peaches, hi. 40	to 60	Peas, dry lb.	10 to 12
do. black	—	do. green, box	25 to 50
Crawford, hi. 50	to 75	Pumpkins, prton	—
do. black	—	Squash, Marrow	—
do. choice	—	fat, 100	—
do. Bartlett, hi. 50	to 1 25	do. Summer bx	4 to 65
Pears, com. box	—	do. Spring bx	13 to 20
Pineapples, doz.	4 00 to 5 00	Tomatoes, box	15 to 20
Plums, hi. 20	to 30	do. choice	20 to 40
Pomegranates, b	—	Turnips, doz	25 to 30
Prunes, hi. 25	to 35	Beets, sk	30 to 60
Quinces, hi. 75	to 100	Cabbage, 100 lbs	50 to —
Raspberries, ch.	—	Carrots, sk	35 to 40
Strawberries, ch.	3 50 to 6 00	Eggplants, 3 lb.	35 to 60
Watermelons, 100	3 00 to 7 50	Garlic, lb.	14 to 3
GREEN CORN	—	Green Corn, cr.	50 to 75
Apples, sliced, lb.	—	do. sweet cr.	75 to 1 25
do. evaporated	12½ to 13½	do. large box	1 00 to 1 50
do. quartered	13 to 14	Green peas, lb.	10 to 12
Apricots	10 to 12	Sweet Peas, lb.	2 to 3½
do. evaporated	16 to 18	Lettuce, doz	2 to 6
Blackberries	13 to 15	Lima Beans, lb.	8 to 20
Citron	25 to 30	Mushrooms, lb.	8 to 20
Dates	9 to 10	Rhubarb, bx	—
Figs, pressed	6 to 7½		

DRIED FRUIT.

Apples continue in liberal supply, with the more choice varieties showing better. The demand is improving.

Apricots are going out, consequently prices are more or less nominal.

Choice peaches are wanted, and fetch an advance on last week's prices. Canners are still in the market.

Choice pears are growing scarcer. They fetch full prices, with both the trade and canners buying.

All kinds of berries are higher, with raspberries going out.

Choice table grapes are in better request, with a slight advance in prices obtainable. Wine grapes are offering more freely, causing some shading in prices.

Eastern advices report the market for raisins well cleaned up, but as yet dealers are not willing to name prices for this year's Californian. Choice, well-selected and well-packed raisins will be in good request this winter.

Dried fruits are in increasing demand for shipping overland, with the market very firm at full prices. Several kinds are higher, and at the advance find ready buyers.

Potatoes continue to come forward freely, but the demand is also good. Prices do not show any signs of advancing yet, but many claim that values are liable to go higher soon, but on what the opinion is founded, the writer is

Cornmeal.....	28 00 @	Doves.....	— @	—	
Gr'd Barley ton.	21 00 @	23 00	Quail.....	— @	—
Hay.....	10 00 @	16 50	Rabbits.....	1 00 @	—
Middlings.....	17 50 @	19 00	Hare.....	1 25 @	—
Oil Cake Meal.	26 50 @	28 50	Venison.....	1 @	—
Straw, bale.....	35 @	50	PROVISIONS.		
FLOUR.			Cal. Bacon.....	9 1/2 @	10 1/2
Extra, City Mills	4 50 @	5 00	Heavy, lb.....	10 @	11
do Co'ntry Mills	4 25 @	4 75	Medium.....	11 @	12
Superfine.....	3 75 @	4 10	Light.....	11 @	12
GRAIN, ETC.			Extra Light.....	12 @	13
Barley, feed, cbl.	90 @	95	Lard.....	8 @	12
do Brewing.....	1 10 @	1 25	Cal Smoked Beef	1 1/4 @	1 1/2
Oregon.....	1 50 @	1 65	Hams, Cal.....	12 @	14
do Coast.....	1 @	1 10	do Eastern.....	14 @	16
Buckwheat.....	1 00 @	1 20	SEEDS.		
Corn, White.....	1 15 @	1 25	Alfalfa.....	8 @	9
Yellow.....	1 15 @	1 25	Canary.....	3 1/2 @	4
Small Round.....	1 20 @	1 30	Olive oil.....	17 @	18
Nebraska.....	1 07 1/2 @	1 15	White.....	20 @	22
Oats, milling.....	1 50 @	1 60	Cotton.....	20 @	22
Choice feed.....	1 40 @	1 45	Flaxseed.....	2 @	3
do good.....	1 37 1/2 @	1 40	Hemp.....	4 @	4 1/2
do fair.....	1 20 @	1 30	Italian Rye Grass	10 @	11
do black.....	— @	—	Perennial.....	7 @	8
do Oregon.....	1 25 @	1 50	Millet, German.....	5 @	6
Rye.....	1 25 @	1 50	do Common.....	5 @	6
Wheat, milling.....	1 40 @	1 50	Mustard, white.....	3 @	3 1/2
Gilt edged.....	1 40 @	—	Brown.....	3 @	3 1/2
do choice.....	1 35 @	—	Rape.....	1 1/2 @	2
do fair to good	1 25 @	1 30	Ky. Blue Grass.....	15 @	17
Shipping choice	1 25 @	1 30	2d quality.....	13 @	15
do good.....	1 40 @	1 45	Sweet V. Grass.....	17 @	18
do fair.....	1 32 1/2 @	1 37 1/2	Orchard.....	17 @	18
HIDES.			Red Top.....	9 @	10
Dry.....	14 @	16	Hungarian.....	30 @	40
Wet salted.....	7 1/2 @	8 1/2	Lawn.....	8 @	9
HONEY, ETC.			Mesquit.....	8 @	9
Beeswax, lb.....	20 @	22	Timothy.....	7 @	7 1/2
Honey in comb.	11 1/2 @	14	TALLOW.		
Honey in comb, fancy.....	14 @	16	Crude, lb.....	2 @	—
Extracted, light.	5 @	6	Refined.....	6 @	—
do dark.....	4 @	5 1/2	WOOL, ETC.		
HOPS.			Spring.....	18 @	18 1/2
Oregon.....	17 1/2 @	22 1/2	Humboldt and Mendocino.....	21 @	26
California.....	15 @	20	Sacramento valley.....	18 @	24
ONIONS.			Free Mountain.....	21 @	26
Pickling.....	50 @	75	Nbern defective.....	— @	—
Red.....	25 @	50	S Joaquin valley	13 @	19
Silver skins.....	50 @	65	do mountain.....	16 @	21
NUTS—JOBBER.			Cava'y & Ft. L. 16 @	21 1/2	
Walnuts, Cal. lb	13 1/2 @	14	Oregon Eastern.....	18 @	25
do Chile.....	8 @	10	do valley.....	20 @	27
Almonds, hdsbl.	5 @	7	Southern Coast.....	11 @	18
Soft shell.....	18 @	19 1/2			

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I have found the Machine (No. 3) very simple, and it does the work to perfection. Parties who have larger Driers of different makes say they cannot turn out superior fruit (apricots and peaches) to mine. Vacaville, June 12, 1887. I. W. A. GILMORE.

I found the Machine (No. 2) good, and can truly subscribe to all the merits claimed for it. I have sent apples to Santa Rosa and they sold as first-class. Laguna, July 15, 1887. W. H. J. AITKEN.

Evaporator came safe to hand (No. 3). Have tried apricots with good success. E. C. CLEWES. Stockton Nursery, July 15, 1887.

Before writing I wanted to test the Drier also on peaches, apples and pears. Am now doing so with the very best results. Upon the whole, I am greatly pleased with the Drier. (REV. DR.) W. ALEXANDER. Batavia, July 29, 1887.

I am doing fine work with the Drier (No. 3). I bought it in company with Mr. A. J. Lay, and he, after trying it, takes it all. You can refer to me and I will try to sell more. C. C. MARTIN. Glenwood, August 5, 1887.

I have been using a Zimmerman (No. 3) Evaporator on my apricots this season, and cheerfully attest the fact that its performance is fully up to its promise. Its simplicity is such that, although novices, we have succeeded in turning out admirable work, and its economy and facility are quite remarkable. JAS. PALACHE, August 9, 1887. (Of Kittle & Co., S. F.) Send for descriptive pamphlet to

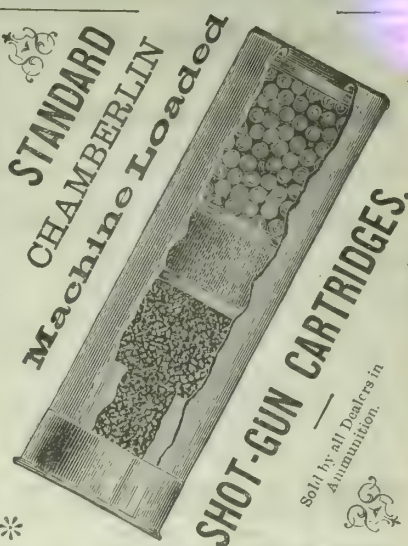
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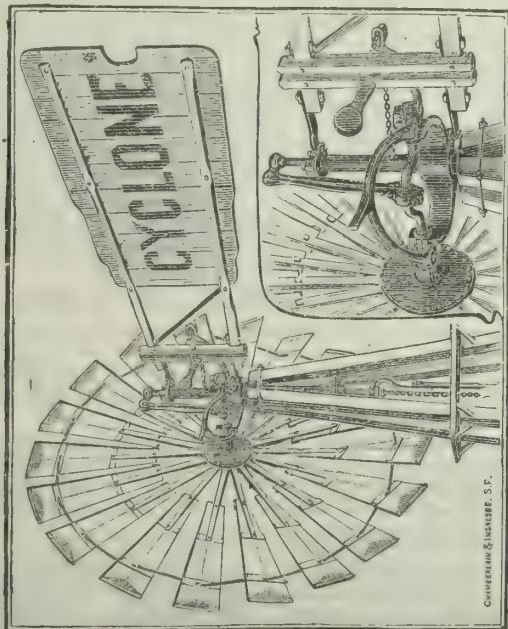
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
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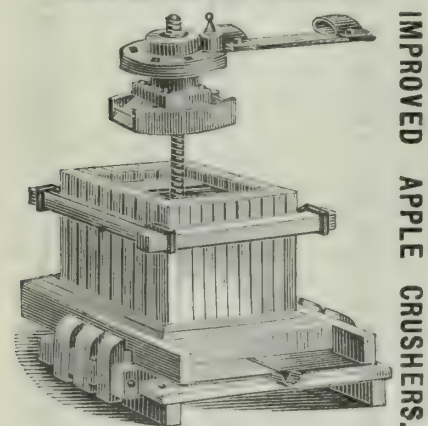
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AT PRICES THAT ALL CAN AFFORD TO PLANT.

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Soluble Phosphoric Acid.....	12.90 per cent
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Insoluble Phosphoric Acid.....	2.83 "
Potash.....	2.23 "
Ammonia.....	1.87 "
Nitric Acid.....	2.95 "

The above amount of Nitric Acid is equal to 0.85 per cent Ammonia, therefore, total of Nitrogen calculated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vineyards, orchards, gardens, farms, and I recommend its use by the cultivators of the soil generally, in California. Yours truly,

DR. E. A. SCHNEIDER.

University of California, College of Agriculture.
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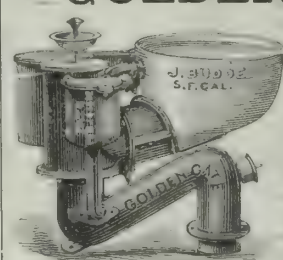
In ordinary soils the following quantities will be found sufficient: For Wheat, Barley, Corn and Oats, 300 to 350 pounds per acre. For Grass, Sugar Beets and Vegetables, 250 to 300 pounds per acre. For Vines, Fruit Trees, from 1 pound to 1 pound each. For Flower Gardens, Lawns, House Plants, etc., a light top dressing, applied at any time, will be found very beneficial.

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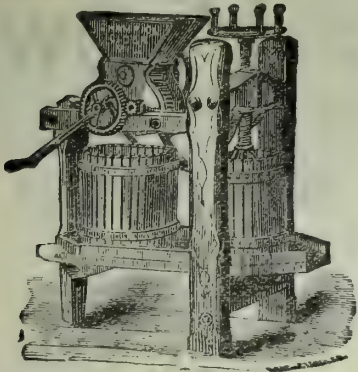


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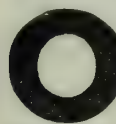
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It is the most economical and durable Feed Mill in use. I am sole manufacturer of the Corrugated Roller Mill. The Mills are all ready to mount on wagons.

GRAINLAND,
BUTTE CO., CAL., June 9, 1887.
Mr. M. L. Mery—DEAR SIR: We have used one No. 2 Roller Barley Crusher now for eight years and have used it steady during that time; have crushed 45 tons a day, and the crusher is as good to-day as when it came out of your shop. I am satisfied that it is the best mill made. You may reconstruct this testimonial to the best advantage for you and sign our names, for you cannot overrate the merits of your mill.
F. E. REAM,
JOHN P. SUTTON.

DURHAM, May 21, 1887.
Mr. M. L. Mery—DEAR SIR: In reply to yours of the 19th, would say that I crushed from two to two and a half tons per hour, but could crush three and a half tons per hour if my elevators were large enough to carry the barley from the machine. The No. 1 machine I used at Gridley was run on a sack a minute, but if we got behind we could run through five tons an hour, and do good work. The machine I use here is a No. 2.
Yours,
WM. M. TAYLOR.

I thank the public for the kind patronage received thus far, and hope for a continuance of the same.

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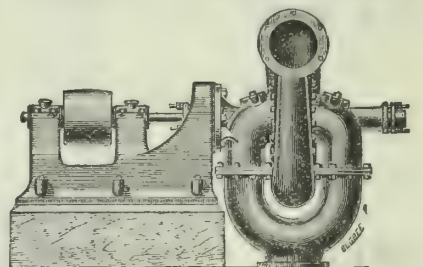
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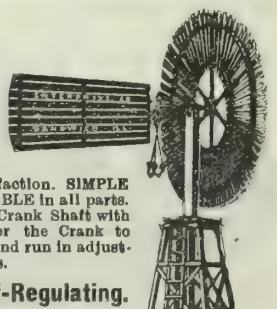
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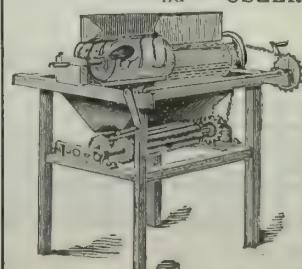
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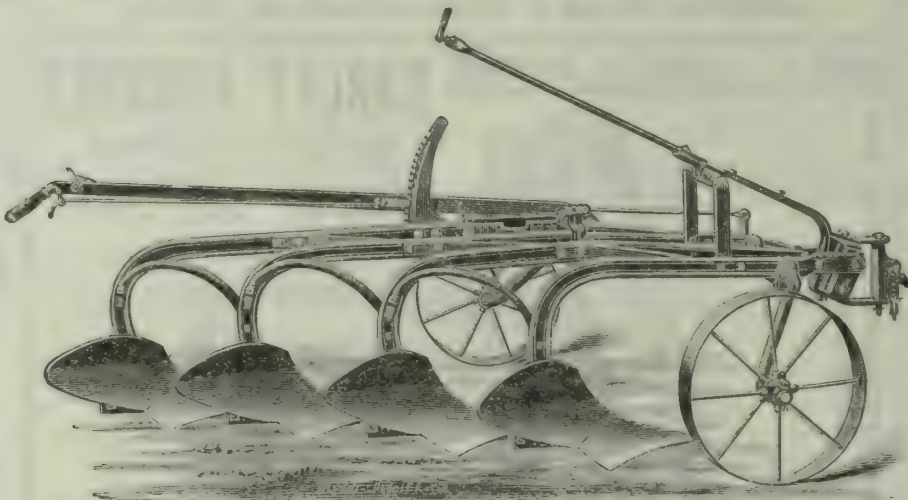
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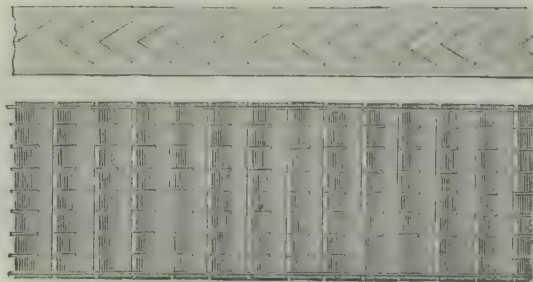
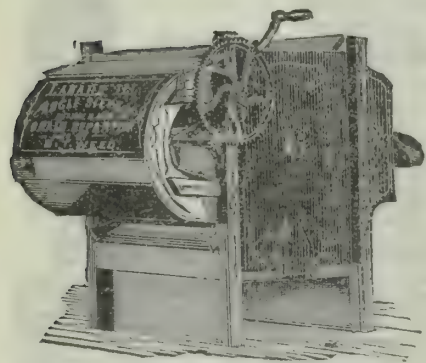
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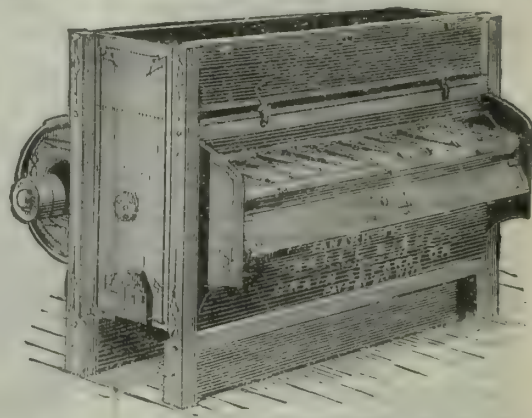
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Manufactured by the Stockton Combined Harvester & Agricultural Works, Stockton, Cal.



THE ANGLE SIEVE,

For Cleaning Oats, Sticks and Weeds from Wheat, Barley or Flax, or Seeds of any kind, it Excels any Side-Shake Gang Sieve Cleaner on this Coast.



The Angle Sieve is a New Feature on the Pacific Coast,

But the Leading Cleaner East of the Rocky Mountains. The peculiar construction of the ANGLE SIEVE with longitudinal ribs running through it with V < > shaped angle, is so arranged and put together as to prevent Oats from going through and yet let the Wheat and Barley through readily. It has a back and upward movement, at the same time giving grain a throw at every motion, compelling it to travel up grade over the sieve instead of down grade, as all other machines do. Oats, being a longer grain than Wheat or Barley, is unable to make the turn and is thrown out, making a

COMPLETE SEPARATION.

The general construction of most Cleaners depends upon either Blast or Suction to make the separation; experience teaches that neither will make it complete. As all kinds of grain are not of the same size and that whenever sufficient blast or suction is applied to remove the heavier grain, such as Oats from Wheat or Barley, the smaller grains of Wheat or Barley will also follow, and in like manner so it will be with any kind of grain.

SIZES OF SIEVES.

We make and furnish different sizes of sieves to suit the sizes of grain which is desired to be cleaned. We make the Angle Sieve out of tin, which is cut and pressed into a V shape, and slotted at the same time, so as to allow the flat strips to be run in and form the cup to the angle.

No Grain Dealer, Miller, Maltster or Farmer can afford to be without this machine, as it will handle grain as no other machine can with going once through the Cleaner.

Our prices on warehouse machines are very low, being only one-half the price other Wheat or Barley Cleaners sell for.

All power machines are complete with tight and loose pulleys, and possess the eccentric motion.

THE ANGLE SIEVE GRAIN CLEANER

Is extensively used in Illinois, Iowa, Wisconsin, Minnesota and Dakota and is fast supplanting all others, cleaning all kinds of grain successfully and without waste, and supplying the greatest need of a grain-growing country. It has been thoroughly tested in California, and its merit is bringing it to the front as superior to all others.

Different Sizes of Machines.

We manufacture these machines in different sizes to suit the wants of purchasers. They are numbered 1, 2, 3 and 4. Nos. 1 and 2 are for hand power, yet No. 2 can, if so stated in order, be built for power. Nos. 3 and 4 are to be run only by power.

The No. 2 Power Cleaner is made stronger than the No. 2 hand machine, and has 1-inch Fan shaft.

The No. 3 Cleaner is made still stronger, has 1 1/2-inch Fan shaft.

The No. 4 is still heavier and stronger, has 2-inch Fan shaft.

To see the work accomplished by the Angle Sieve Grain Cleaner and Separator will convince the most skeptical that it is the true principle for cleaning grain. There is no other Cleaner manufactured in California or the East that has or can do as good work, and for a Stationary Cleaner it has no equal.

DIMENSIONS OF MACHINES.

No. of Machine.	Capacity. Bushels Per Hour.	Extreme Height.	Space on Floor Over All.	Size of Pulley.		Rev. per Minute.
				Diam.	Face.	
1.....	35 to 60	3 feet 4 inches.	2 feet 6 inches by 4 feet.	6	2 1/2	350
2. Hand.	75 to 150	3 feet 8 inches.	4 feet 1 inch by 4 feet 7 inches.	6	2 1/2	380
2. Power	75 to 150	3 feet 8 inches.	4 feet 1 inch by 4 feet 7 inches.	6	2 1/2	380
3.....	150 to 250	4 feet 11 inches.	5 feet 9 inches by 4 feet 7 inches.	8	2 1/2	380
4.....	250 to 400	4 feet 11 inches.	7 feet 4 inches by 4 feet 11 inches.	8	2 1/2	380

A thorough test of the Angle Sieve Grain Cleaner was made at the Transfer and Grain Warehouse of the California Steam Navigation Co., Stockton, by the Manager, H. W. Weaver, and others, as will be seen by their

TESTIMONIAL.

Stockton, Cal., August 6, 1887.

S. C. H. & A. WORKS—GENTLEMEN: We take pleasure in certifying to the merits of the Angle Sieve Grain Cleaner and Separator, manufactured by you, which we have seen work, examined and given a thorough trial. The work performed is convincing proof that the Angle Sieve, so peculiar in construction, is the best Cleaner and Separator for California grain that we have ever seen or used, and we recommend its use and adoption by our farmers and in grain warehouses.

J. L. BECKER,
 SMITH & WRIGHT.

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PACIFIC RURAL PRESS

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Vol. XXXIV.—No. 11.

SAN FRANCISCO, SATURDAY, SEPTEMBER 10, 1887.

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SINGLE COPIES, 10 CTS.

Glacier Point, Yosemite Valley.

The name Yosemite is Indian, and means "Big Grizzly Bear." The valley lies very near the center of the State, reckoning north and south; about one-fifth the way across from east to west, and almost exactly in the middle of the high Sierras, which inclose it. It is about 140 miles from San Francisco, in an air line. The main valley is seven miles long, and the bottom of the valley is about 4000 feet above the level of the sea. It is really a huge sink or cleft in a tangle of rock mountains; a gigantic trough, not scooped or hollowed out from above, but sunk straight down, as if the bottom had dropped plumb toward the center, having both walls so high that if either should fall its top would reach clear across the valley and crash against the opposite cliff several hundred feet above its base.

This cluster of marvels has been photographed by Taber, painted by Hill and Bierstadt, described by several eminent writers, and yet the traveler will say—as the Queen of Sheba, when she beheld the glory of Solomon—the half has not been told. The central figure of this group of wonders is, of course, the great Yosemite Fall itself. It is the loftiest waterfall yet known on the face of the earth, a cataract from heaven to earth, plunging from the clouds to bury itself among the trees. It awes the beholder into silence. Please say nothing about figures. When one is overwhelmed with emotions of sublimity to hurl statistics at him would be as disagreeable as a bath in ice-water. After a while, when his enthusiasm has cooled down a little, the cold calculator may venture to poke his mathematics into his face, and then he will learn that, according to the coast survey, the height is 2641 feet—a full half mile and one foot more. Gracefully swaying from side to side, in rhythmical vibration, swelling into grandeur in earlier spring, and shrinking into beauty under the ardency of summer heat; towering above all other cataracts, calmly abides this undisputed monarch of the world's marvels.

Horace Greeley, who entered the valley by moonlight, pays tribute to this type of eternal massiveness as follows: "That first, full, deliberate gaze up the opposite height! Can I ever forget it? The valley here is scarcely half a mile wide, while

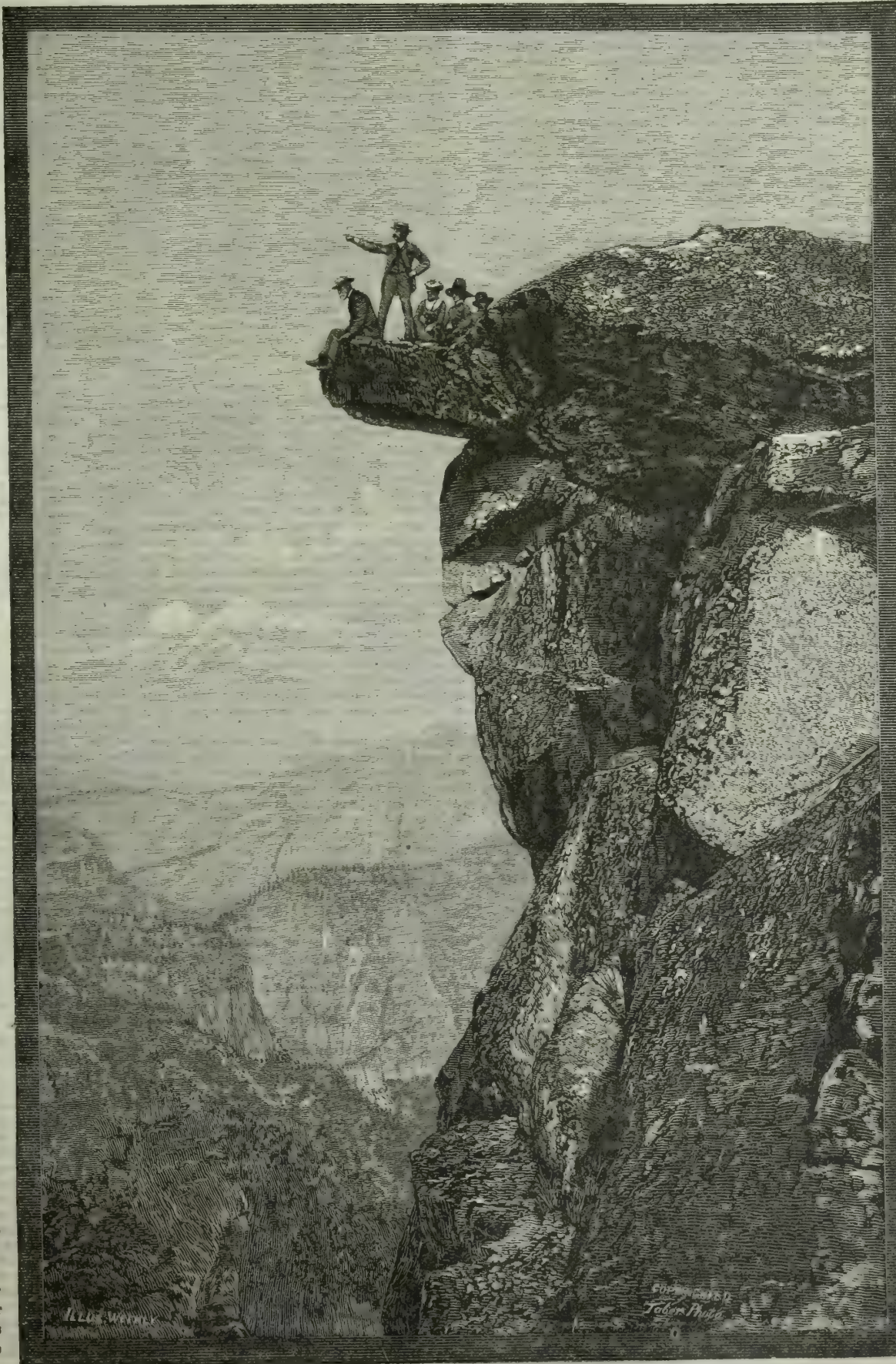
its northern wall of mainly naked, perpendicular granite is at least 4000 feet high, probably more. But the modicum of moonlight that fell into this awful gorge gave to that precipice a

vagueness of outline and indefinite vastness, a ghostly and weird spirituality."

We present our readers with a view of one of these magnificent clusters as photographed by

partaken. One of them was valued at \$500. Owners of valuable stock may take warning.

THE raisin crop will be large.



GLACIER POINT, FROM RAYMOND ROAD.

Taber, from the standpoint of the Raymond road. It overbrows the valley and commands a very extensive view that for grandeur and variety no pen can depict, and only the magic of the artist can limn to the eye. The persons seen on the verge of the dizzy promontory are Mr. J. M. Hutchins, the well-known pioneer of Yosemite valley, sitting on the edge of the precipice peering into the depths below; Mr. I. W. Taber, the noted artist and photographer, is standing with his right arm extended in the direction of one of the waterfalls higher up the valley.

Others of the party may be seen seated upon the dizzy height. To this extreme point a zigzag road has been cut up the mountains by Mr. James McCauley, so that it is safely attainable by those who can command their heads in such situations.

The Yosemite valley is about 4000 feet above the sea. Its general course is northeasterly and southwesterly. The main Merced river runs through it. In many instances the walls of the valley are nearly vertical. The mountains surrounding it will average 4000 feet in height.

THE PACIFIC RURAL PRESS is conceded to be the leading California agricultural journal, and it puts forth every possible effort to secure the fullest and most trustworthy information concerning California lands and their practical working. Thus it becomes the leading source of knowledge concerning the pursuit of agricultural arts under the peculiar conditions which prevail here. We make this statement for the benefit of any new-comer who may receive a copy of our journal at the fairs or otherwise, and for proof of the truth of what we say, we refer to any regular subscriber. Our subscribers are our best friends, and the State is full of them.

BEWARE OF WILD PARSNIPS.—The Santa Rosa Democrat mentions the fact that two of M. L. McDonald's finest horses were recently found dead in their pasture. The only cause to which their death could be assigned was the presence in the field of the poison parsnip plant, of which they must have

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Ojai Valley, Ventura County.

EDITORS PRESS:—On leaving San Buenaventura for the Ojai country, we drive up the narrow valley of the Buenaventura river, along that beautiful among all roads, "The Avenue." For about seven miles we are surrounded by handsome residences and orchards of various kinds of nut-bearing trees and fruits, the principal being the European walnut and the apricot.

About one mile north of San Buenaventura, we halt and have the pleasure of shaking hands with our good friend, H. P. Flint. Mr. F. used to take much pride in rearing and keeping Spanish merino sheep, and we have in our possession photographs of some very fine sheep—bucks, ewes and lambs—raised by him years ago, when he triumphed in the production of the very finest and best. We are shown a small remnant of his once fine flock, consisting of one ram, Theo Tilton, aged three years, and a few ewes, all showing the finest type of the Spanish merino. These are only kept as a kind of luxury, land on the Buenaventura river, this near the county seat, having become of too much value to admit of Mr. Flint's indulging, at this place, in one of his favorite pursuits, that of rearing first-class sheep of best blood.

Points About the Ojai.

We enter the valley of the Ojai from the southwest, at about 15 miles north of San Buenaventura. The whole valley is about eight miles long and 1½ to two miles wide. Its general trend is nearly east and west, and it is divided into the upper and lower valleys, the lower or western being at an altitude of from 800 to 900 feet, and the upper being, perhaps, over 100 feet higher.

We are struck with the beauties of the valleys: its grand features; its park-like appearance; its hills and dales; its slopes, all here and there partially covered with trees and groves of live and white oak. Mountains grandly rise on either side of the valley, those to the south belonging to the noted Sulphur range, imposing in their majesty, those to the north being members of the long Coast Range system, at this place rising to an altitude of more than 4000 feet, and opposite the upper valley, culminating in the lofty, rocky summits of Mount Topo-topo.

The air seems balmy and health-inspiring. Heavy fogs are not often attracted to this high valley, and the place is considered remarkable for its healthfulness.

The soil of the lower Ojai is a sandy loam and slightly reddish in color. That of the upper is mostly adobe, of black color and quite rich. While fruit trees of various kinds thrive and bear well in places in the upper valley, the most remarkable yield is in grain, as high as 50 or 60 bushels per acre of wheat having been harvested. While the lower valley may not be quite so rich, yet its wider range of products gives it some compensating advantages.

Citrus Fruits.

In the lower valley, at what is known as the Lyndencroft ranch, some three miles north of San Buenaventura, at an altitude of about 900 feet, Prof. F. S. S. Buckman and wife have shown the capabilities of the neighborhood in the production of oranges and lemons, and lemons, and have gone far toward establishing a reputation for the valley in the successful culture of many other fruits.

Besides other kinds, their orchard comprises about 600 orange trees in bearing. The varieties are the Washington Navel, Mediterranean Sweet, Havanna Sweet, Konah, Malta Blood and Lyndencroft seedling. The last-named is a new seedling, very large and round, with thin skin, and having a bright, rich orange color, of very excellent flavor, already celebrated in the markets of the State and sold at the highest prices. Oranges from this orchard generally retail at orchard, Nordhoff or San Buenaventura, for 50 cents per doz. Boxes of select fruit bring from \$5.50 to \$6 per box, and Mrs. B. informed us that their oranges never sell for less than \$4.50 per box.

The trees as yet appear to be perfectly free from scale or other pests, and we see no rust on the fruit. We believe it was never our lot to witness more healthy trees and fruit. A healthy orange tree laden with large golden fruit is ever an interesting object; but we have to specially mention the stately trees and handsome fruit of the Lyndencroft seedling. It would seem from what we see of this variety, that it deserves particular attention of orange-growers, at least in such situations as we have here, and it might turn out to be an important variety, at any place in this State where the orange is successfully grown.

The lemons are of the Sicily and Eureka varieties, both very thin-skinned. Professor B. ships to Dalton Bros., S. F., and they report that his Sicily lemons are nearer the imported Sicily lemon than any California raised of that variety that they have ever handled. His sales were \$2 50 per box.

They have at this place sufficient water for irrigation of the orchard, an advantage not enjoyed by a great many places in the valley,

and a consideration of vital importance in the selection of a citrus fruit-ranch.

Mrs. B. informs us that of fruits that do well at this place, we may mention apples, pears, peaches and cherries; that cherries have borne good crops three successive years, but then had to be cut down to give place to oranges, which are considered a more important fruit.

Experiments With the Cherry.

As the cherry is not grown with success in most places in this and Santa Barbara counties, the question suggests itself, might not this valuable and popular fruit be made a very profitable subject of cultivation, in a place having the proper conditions for its growth and fruitfulness? The orchards of the Ojai valley are generally young, and but little is yet known of the capabilities of the locality for cherry-growing. The orchardists here have the discouraging failures in most parts of the county confronting them, and, as far as our observation extends, the cherry has, thus far, received but little attention.

They have French prunes in this orchard, but most of them too young to bear. Three older trees, however, have borne heavily for three years in succession.

Among the small fruits, they have succeeded well with currants. They have one acre planted to blackberries—the Lawton and the Kitchinny—reported to be very large and sweet and in good bearing every year. Three-fourths of an acre are devoted to the strawberry—Wilson's Albany—which is cultivated in rows, and proves to be very prolific.

Ten acres of the Muscatel grape for raisins, five years old last spring, have now borne three years. The last year was the first attempt at raisin-making. All are sun-dried, the atmospheric conditions in the fall of the year being very favorable to this process of curing.

Apricots.

B. F. Spencer, living one mile east of Nordhoff, has apricot trees of the Royal and Large Early varieties this season too full of fruit. Last year they were too young to bear well but had on them half a crop. Peaches and nectarines with him promise to be a great success, bearing from one year up. French prunes look vigorous but are too young to bear fruit. Figs do well as far as tried in the neighborhood. Some others have commenced to cultivate raisin grapes and the success attending the curing in 1886 is very encouraging.

The water supply of the valley is insufficient for much irrigation, but, considering the success thus far attending the cultivation of many crops, the prospect for the future is very encouraging. The conditions for grain-raising are in some places very superior while the fruits that may be grown are of most excellent flavor. Citrus and other fruits requiring irrigation may be successfully and profitably grown in many places where water in sufficient quantities for irrigation purposes is obtainable.

It would seem, from what is known of the condition necessary to the growth and fruitage of the olive, that this valley might be made a great olive-growing district. The olive may do without irrigation and the soil and climate would seem to be most favorable.

The Apiary.

During many years bee culture may be engaged in with profit. S. C. Gridley, on the high slope of the north side of the lower valley, has quite an apiary, and is very successful in its management. The mountain-sides abound in honey-yielding plants, nonproductive this year, however, as they are all over this country.

Nordhoff and Vicinity.

Nordhoff is a small town of good appearance, situated at the west end of the lower valley, about 18 miles from San Buenaventura, with a well-graded road leading to that place, and with which it is connected by daily stage; has a postoffice, two commodious hotels, and the usual supply of stores, shops, etc., also a good churchhouse and school.

We spent a day some two miles east of Nordhoff, at the residence of A. C. Rynerson, situated on the slope, south side of the valley at the foot of the mountains, enjoying the hospitalities extended by his generous family, and will long remember that serene day with its fresh air, and the time we spent sitting under the ample shades of the great live oaks standing near the dwelling, enjoying the delightful view of the beautiful valley and the partially wooded slopes, and the mountains standing in their imposing grandeur opposite. Mr. Rynerson's is a new place, his orchard young, and the capabilities of his grounds, as yet almost untested, but considering the dark, rich soil and the luxuriant growth of things planted and reared thus far, and furthermore his supply of good water, sufficient for all ordinary purposes, and other useful and attractive features that may be included, we may fairly congratulate him and family on their having obtained a place by nature so well fitted for a permanent home.

Ventura Co.

McD.

The Southward Coast.

EDITORS PRESS:—The region lying between Lompoc and San Luis Obispo, between the coast and high mountains, and including the hilly sections, is sure to become rich and prosperous and a land of beautiful homes. The cutting-up process has commenced on some of the great ranches, and as land values advance

it will be likely to continue and increase in activity.

In the above section many important improvements have been commenced since last fall. A large hotel is projected at San Luis Obispo. A new town, called "Grover-by-the-Sea," has been laid out, many lots sold and a large hotel is soon to be built there also, two schooners having already discharged their cargoes of lumber.

At Arroyo Grande they are organizing an agricultural association, and I suppose will soon have a park with race-track and pavilion for holding fairs.

Some lands in and about the town are to be divided into residence lots, and as they are choice, will no doubt be disposed of very quickly.

The town of Nipomo, on the great Nipomo ranch, began a rapid growth last winter, and now there are many new dwellings and quite a population, where last fall there was no store nor even postoffice. Beside the many dwellings, a much larger schoolhouse will soon be built to cost about \$6000.

A wooden block of business-houses is now in process of erection, which will have a frontage of about 100 feet.

A company has already been organized to pipe water through the streets. Several carloads of pipe are now here for that purpose, and much of the ditching has been done.

At Santa Maria the real estate market seems quite active, and some building is now going on, a large schoolhouse having just been started.

At Los Alamos and Santa Inez also the work is going on, large tracts having been bought for the purpose of subdivision.

So all along the line, from Santa Barbara northward, we can see increased activity. This is a good country, and it is bound to be a rich country.

G. R. STONE.

Nipomo, Aug. 19, 1887.

The Foothills of Tehama.

EDITORS PRESS:—In my recent rambles in the foothills of Tehama county I was forcibly reminded of the saying: "The first shall be last and the last first." A section of these foothills, some of it unpleasantly rocky, and other portions thickly covered with brush, which has until recently been given over to the browsing bovine is rapidly, and by its own merits alone—having had no meretricious aid from the professional boomer,—coming to the front as a place especially fitted by nature for self-sustaining small farms. Most of the settlers in this locality—the forks of Battle creek—have been here but a short time; yet if they should be cut off by any means from the rest of the world, they would need only to make looms and spinning wheels, make up their wool, flax and cotton into clothes, dispense with tea and coffee, and would then lack nothing that would be felt as a serious deprivation, barring perhaps the news from the outside world with its tales of murders, thefts, suicides, divorces, and such like delightful newspaper mental fodder.

An elevation of 1000 to 2000 feet gives superb climate, a deep red ferruginous loamy soil assures fertility, an abundance of springs, and dancing mountain streams laugh at droughts, and insure a yield of products that varies only as the labor and care bestowed upon them varies.

It is several years since, as a stockman I used to travel through this belt, and though I then recognized its possibilities, I doubted if in my time enough of the energy required to bring it into cultivation would be brought to bear. To see it now is a surprise—a revelation. Make a complete list of California's products, and but few, and they of the most tropical kinds, need be excluded from what can be grown here.

A pioneer of this locality, W. E. Hazen, commenced in a small way to test its suitability for fruit culture by planting a few apple trees some 10 or 12 years ago. They are now 15 inches in diameter. The rapidity of growth pleased and astonished him. He has since occasionally added more trees and more varieties. He has now all the staple fruits except those of the citrus family, and their present condition as to size and healthfulness is something of which he may well be proud.

His French prunes and apples, planted in the spring of 1885, have a circumference of 12 to 15 inches of trunk. The crops that help the young settlers along until their fruit trees bear are the redoubtable bean, the excellent spud, and alfalfa "til you can't rest." It is estimated that this neighborhood will spare about 3000 sacks of beans this season. Besides these, they have now growing fine crops of corn, cabbages, tomatoes, and everything usually grown in a well-regulated garden. There is plenty of this land for sale at very low prices.

Following this mountain stream to the river we come to a few of the oldest-settled farms in this county, and of a quality of land that has no superior in the State, if in the world. Here A. C. Nunes has corn, unirrigated, 14 feet in height, with great ears eight feet from the ground; alfalfa as prolific as can be found anywhere; fruit trees and vines of astonishing size, and a great variety of garden products that "can't be beat."

E. W.

Red Bluff, Aug. 31.

THE boring of artesian wells in Sierra Valley has been attended with success and some heavy producing ones have been found. This will guarantee a heavy increase in the acreage of cultivated lands next season.

THE VETERINARIAN.

An Infectious Mouth Disease.

EDITORS PRESS:—Although the word "actinomycosis" may seem to some people rather long, it is expressive. By it we understand that oxen are subject to a disease due to the work of vegetable parasites, which, from their eccentric radiating structure, have received the aforesaid name. The tongue becomes indurated, and tumors are seen on it and the mouth. Many stock-farmers will have noticed beasts so affected without being able to give it a name or discover the cause. Attention is first called to it by the animal "slavering" profusely, champing and chewing all hard fodder, and dropping it again, utterly incapable of masticating it. "Something wrong with the teeth," is generally decided upon as the cause, but when the mouth is examined, the tongue is found to be enlarged and imbedded with indurated yellow nodules, either toward the tip, or more often at the middle third, or, in some cases, the bottom jaw underneath the tongue is the part affected. In some parts of the world, of late years, this disease has been very prevalent, and it has been satisfactorily demonstrated that it is due to this interesting vegetable parasite. Botanists have not yet satisfied themselves as to the class to which it belongs, and it has been described as belonging both to the "moulds" and to the same order as the rust and smut in wheat. The fungus is contained in tufts within the yellow nodules, which, on being cut through, seem of a soft cheesy structure, though others are gritty to the touch, and this is said to be due to their impregnation with lime salts. The disease is infectious, and generally more than one case is found to exist upon the same farm. Once established in any situation, the actinomycosis spread by the development of spores which disseminate, fructify and produce more nodules. Its transmission from one animal to another is supposed to be by the spores, gaining entrance to a wound, abrasion or fissure in the tongue or mouth.

It is also said that the animals most affected are those fed on straw or chaff, this, by its roughness, is calculated to injure the mouth and provide an abraded surface by which the spores may gain entrance. Besides straw is often mouldy and infested with vegetable parasites, and this fact may account for its introduction. These tumors are not absolutely confined to the tongue and mouth, although they are generally met with, or at least are more readily recognized in that situation. The spores may gain entrance and fructify in the windpipe, lungs, stomach, and intestines, and have been found in the skin, muscular tissue, and also in the udder of the cow.

Treatment.

Until within a year or two ago, the disease was deemed incurable, and the custom was to destroy the animal as not likely to do any good, the inability to feed rendering fattening for the butcher a tedious if not an impossible process. If the animal is in good beef condition, there is no doubt that immediate slaughter is the most economical course to take, even now, since the cure is a long and troublesome matter. But in the case of pedigree and lean stock, treatment should be undertaken, and if persevered in, there is every prospect of success. Superficial applications are altogether useless, and the animal should be cast and secured, and the nodules cut into, a free incision being made, and then dressed with iodized phenol, which is generally made by mixing equal parts of tincture of iodine and carbonic acid. The injection of the substance of the mass with the same mixture with a hypodermic syringe, has been tried with success; but when the disease has been situated far back it is impossible to reach it thus. During the treatment the strength and condition must be maintained with soft nutritious food, such as mash and linseed gruel.

A Suggestion to Breeders.

Wholly apart from the foregoing there is one point in reference to breeding that I intend particularly to touch upon, and I very much wish that other practical men would discuss the subject. I refer to the fact of the exhaustion of the male being the frequent cause of mares not proving in foal, and thereby causing great loss and much disappointment. Owners of valuable stallions often use them too frequently for breeding purposes. Of course, it is not easy to lay down any hard and fast rules, but most breeders know how many mares may be served by an individual horse during the season without detriment. At any rate, any reasonable man knows that stimulants and excess are injurious, and, although a few extra dollars may be made, it is like "killing the goose that lays the golden eggs." Some owners appear to imagine that they can, by feeding and drugging, immensely increase the secretion, but nature will be avenged; and, admitting that it is possible somewhat to hasten the formation of this fluid, yet it is at the expense of some other organs and general harm to the constitution, and possibly, if the mare is impregnated, the offspring will be puny and delicate.

ROBERT J. DAWSON,
Veterinary Surgeon,

225 Geary St., Aug. 30, 1887.

SHEEP AND WOOL.

Thoroughbred Merinos.

Whether the Darwinian theory of development is correct or not, the experiments made by that scientist to show how readily the different types of birds and animals are changed by the process of selection and environment have been of great use to those interested in the improvement of our domestic animals, and additional examples are being constantly furnished by intelligent breeders. The gradual lowering of the record of our trotting horses is conclusive evidence that the mating of sires and dams having the trotting tendency produces a considerable percentage of colts that have the disposition to move rapidly in the unnaturally fast gait of the modern trotting horse. The same principle applied to the improvement of that useful little quadruped, the sheep, has produced results as marked as the changes made in any other domestic animal, but without attracting the public attention, that is caught by the lowering of the record by the produce of some great sire of trotting or running horses.

Our engraving of a group of thoroughbred merino ewes, which is furnished us by Messrs. Kirkpatrick and Whittaker, of Stockton, illustrates our argument. The beautiful models of sheep which the portrait presents show what vast improvement has been made during the present generation in the character of the thoroughbred merino sheep as compared with the bare-headed, slim-necked, long-legged creature which is pictured in the Patent Office reports of forty years ago as typical of the Spanish merino. Messrs. Kirkpatrick and Whittaker have made the breeding and care of thoroughbred sheep their lifelong study, and the prominence attained by their flock has been justly earned by their perseverance through the years of depression that has borne most heavily on the owners of stud flocks.

During the dull times the average sheep-man neglects all improvement, and especially when the rise in the value of land is great, and the grazing area from various causes is constantly being curtailed, as is the case in California, there is not the same interest taken in breeding up a flock as there has been under other conditions.

In spite of all drawbacks these gentlemen have held to their thoroughbred sheep, selecting their stock rams out of the famous flocks in the East, and improving them mostly by changing their indolent disposition, acquired by the pampered care given them by Eastern breeders, to the more useful quality, to the range flock-master, of rustling for themselves. As the thoroughbred horse shows greater powers of endurance than the cold-blooded animal, we suspect that under proper development the same results would obtain in the breeding of thoroughbred merinos. Be that as it may, the general satisfaction given by their stock to those purchasing, and the wide reputation they enjoy, has made a demand for their rams that extends even to South America, two shipments having been made to Buenos Ayres the present season and the prospect is good for future exports in the same direction.

Successful breeding, intelligent management, enterprise and push in extending the market for their stock, must develop a business that will be reasonably profitable to the owners as well as advantageous to the wool-growers of the entire Pacific Coast.

Protection to the Wool Industry.

The Ohio Wool-Growers' Association, at a meeting in Columbus, Ohio, September 1, adopted a series of resolutions respecting the correspondence had between the president of the association and the president of the Association of Wool Manufacturers, and fully indorsed the action of the president of the former asso-

ciation. The resolutions cite that the manufacturers who consume large quantities of foreign wool are not in sympathy with the domestic producers and are unwilling to see them protected by National legislation, so as to enable them to compete with the products of foreign nations, and that it was by their advice that the tariff legislation of 1883 was initiated and consummated. By this act they claim that sheep husbandry in the United States has ceased to be remunerative. They therefore resolve that it is the sense of this association that the wool-growers of Ohio desire the prosperity of the wool manufacturers, and therefore favor such economic national legislation as will fully protect their important

most earnest and diligent promoter of the mohair industry. Visitors at the Mechanic's Fair in this city will find one of Mr. Bailey's Angoras in a neat little pavilion in the Santa Clara county exhibit, the pavilion being covered and adorned with goat products of all kinds, which will give one an opportunity to study the many and elegant uses to which the skin and hair of the goat are being put. There will also be fine Angoras on exhibition at the State Fair by different breeders. All interested therein should attend the State Fair and the goat-breeders' meeting which will be held during the fair, as per notice by the secretary, which may be found below. We take pleasure in attending these meetings, as they are very



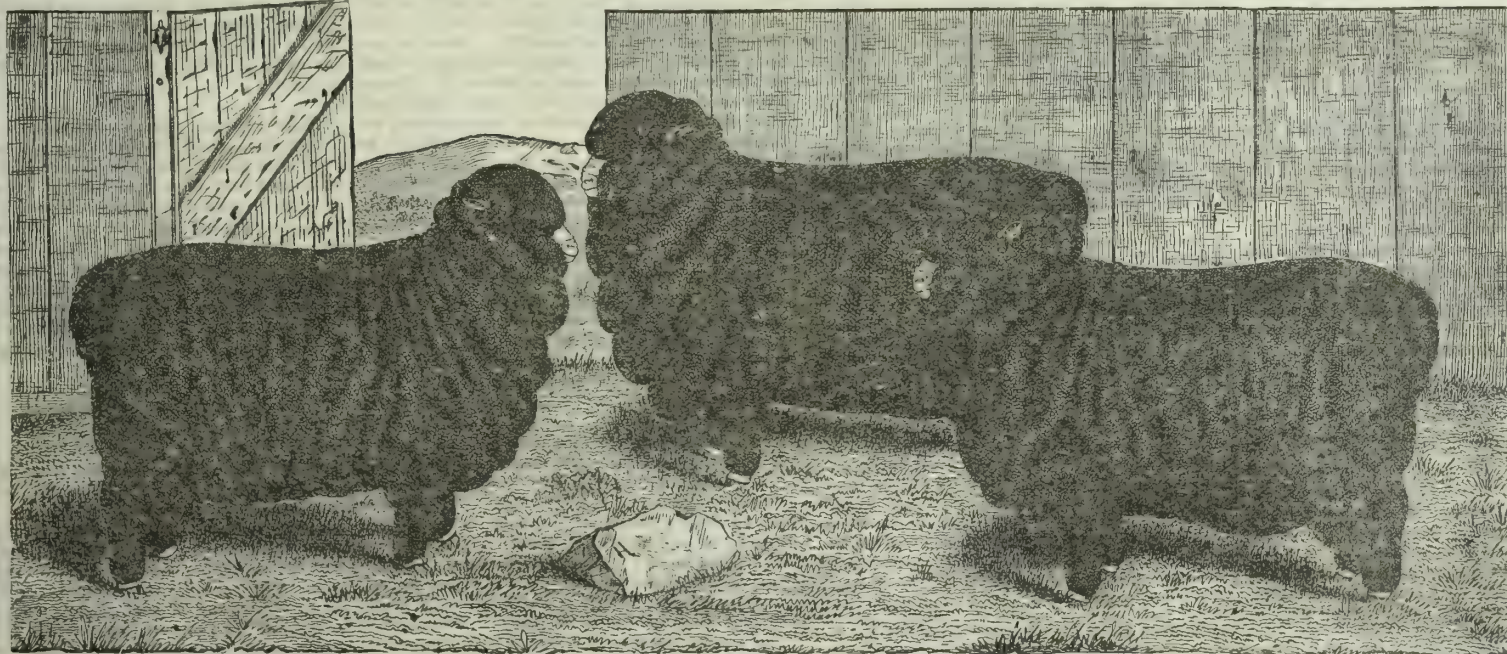
YEARLING ANGORA BUCK ALTAI, OWNED BY C. P. BAILEY OF SAN JOSE.

industry, and such just rulings by the Treasury Department as will give legitimate force and effect to all laws in aid of the same, and that in the opinion of the association all manufacturers of wool who do not consume considerable quantities of foreign production are fully in sympathy with the producers of wool in the United States, and are willing to see domestic wools fully protected.

interesting, and we advise all goat-breeders to avail themselves of the opportunity given for consultation and friendly conference.

Sheep, Goats and Forestry.

EDITORS PRESS:—I have just been reading in your valuable paper the report of the conference of the State Board of Forestry.



GROUP OF THOROUGHbred MERINO EWES OWNED BY KIRKPATRICK & WHITTAKER OF STOCKTON.

The resolutions concur in all resolutions adopted at the St. Louis convention, and especially the one proposing that a committee be selected by the president of the National Wool-growers' Association to confer with a committee of the wool manufacturers, the National President and the president of the Ohio association to visit the East and ascertain if the manufacturers are willing to co-operate in harmony with the producers.

A Fine Angora Buck.

We give on this page a portrait of the fine yearling Angora buck Altai, bred and owned by C. P. Bailey, of San Jose, well-known to our readers as the largest owner of Angora goats, and one of the oldest breeders in the United States. Altai has yielded a fleece which weighed seven and one-half pounds washed mohair, and is a fine representative of the breed. Altai was bred and raised on this Coast. Mr. Bailey has now about 10,000 head of Angora goats on his three ranges which are at Battle Mountain, Nevada, and in Monterey and Mariposa counties, in this State. He is a

Those who have spent a great part of their lifetime in the forests of California, and have had in charge bands of sheep and goats, will have to differ from Mr. Magee in regard to these valuable animals destroying the young forests, for we know that the conifers are not the food of either sheep or goats—in fact, these animals save forests by destroying the chaparral and other useless undergrowth, and making trails and tramping the litter so that great fires cannot burn so fast and are not so liable to catch.

There are hundreds of acres of waste lands in the State, covered by brush and timber, that would be worse than worthless if not used as pasture for sheep and goats for about four or five months of the year.

A great amount of the food and clothing of the State is derived from sheep and goats, and to close (our) Uncle Sam's vacant hand against their use would reduce the production to a very great extent and would stop the production of mohair in its infancy after long years of hard work and study by the pioneers of the industry, for the mountains are the home of the goat.

We do hope that the Honorable Board of

Forestry will not advise the passage of that will reduce the growing of food and clothing unless they are sure that it would be for the best interests of the greatest number.

Newville, Colusa Co. M. L. CONKLIN.

Goat-Breeders' Meeting.

The Angora Goat-breeders' Association will hold its annual meeting on Thursday, Sept. 22, next, at Pioneer hall, at Sacramento. Members and breeders invited to attend.

JULIUS WEYAND.

Sept 1, 1887. Sec'y A. G. B. Ass'n of Cal.

POULTRY YARD.

Chickens and Eggs in Southern California.

EDITORS PRESS:—Let me give you a few facts and figures on raising chickens and egg in Southern California.

On December 23, 1885, Miss Jennie Higgins, who was in poor health and wished more outdoor exercise, concluded to attend to the chickens and eggs and see how much ready cash she could get in one year. The following is the summary:

Eggs sold from Dec. 23, '85, to Dec. 31, 1886 \$158 00
Chickens sold during same time 77 80
Total cash receipt of 235 80

She commenced with 75 hens of mixed breed, some black, some yellow, some white and some speckled. About that time I bought five Plymouth Rock roosters of good size and color, and at the end of the year Miss Jennie had 80 nice young pullets all showing the Plymouth Rock markings, and a nicer lot of young hens it would be hard to find.

Now for the first eight months of 1887:

Eggs sold \$134 80
Chickens sold, same period 46 60

She still has on hand some 40 hens, from one to two years old, and some 300 young chickens from a few days to eight months old. This was over and above what was used to supply a family of ten persons, with all the eggs and chickens used during the 20 months, which we think would much more than pay for the feed consumed.

We find that, summing up, Miss Jennie started out with 80 chickens, worth \$40, and has sold in the last 20 months \$417.20 worth of chickens and eggs, and has on hand 340 hens and chickens, worth \$120, from which deduct

\$40 and we have \$497.20 as pay for her work and trouble. She uses no incubator, but has made the hens do all the hatching. What young lady in the east, north or south can make a better showing in the poultry business? We would be glad to hear from others.

P. C. H. Carpinteriu.

FEEDING FOR FLAVOR. —Ever and anon some enthusiastic breeder of thoroughbred fowls descants upon the merits of his favorite breed — "their tender, juicy

flesh and rich, highly flavored eggs, not to be compared with the dunghills long ago discarded" — forgetting that the dunghills were truly named, and that from hard scratching for a living in the barnyard, they produced the small, tough bodies and ill flavored eggs complained of, while his thoroughbreds have a yard to themselves, are fed on the choicest grain and grasses, have nothing but pure water to drink, and all the "delicacies of the season," from the dinner table. What breeder has not noticed the difference in flavor of the eggs from his best yards and from the general flock running at large? Instinctively, the best fowls receive the best food and most careful attention, and the result is richer and better flavored eggs. Feeding for flavor must sooner or later become one of the high arts of poultry culture.

THE San Luis Obispo Mirror says: The subscriptions toward purchasing the McCoppin tract for the purpose of an agricultural association already amount to \$13,000, and enough additional is assured to warrant the members of the Park Association to immediately begin improvements on the exhibition houses,

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Temescal Grange.

This Grange worked in the first and second degree on Saturday last. The meeting was favored by the presence of Judge Blackwood of Haywards and Bro. J. V. Webster from San Luis Obispo county.

Judge Blackwood being called upon, spoke of the importance of the approaching State Grange meeting, saying that he believed it would be one of the most interesting and important ever held. Among other questions likely to come before the members would be that of taxation and the tariff question. He stated that we all know that the price of the farmers' wheat is governed by the rates in Liverpool, and queried why farmers should pay a tariff on the importation of bags which principally were used to return again to the foreign market for conveying the grain. In his mind, parties wishing protection by tariff should be able to inform us what they intended to give us in return for such protection. Why should anybody be protected unless they returned some benefit. He hoped the attendance would be large at the State Grange and all be well prepared to act.

Brother Goodenough stated that in some instances projectors of new enterprises, of benefit and importance to our country, were protected in order that, as home manufacturers, they could get a footing to compete with those of foreign countries, and thus establish a home trade that would show benefit to our people.

Bro. Webster asserted, very forcibly, that the greatest difficulty in securing legislation and justice to farming interests arises from the fact that farmers always stick closer to party lines than to each other. When this difficulty is overcome we can look for more justice and impartiality from our law-givers. He showed that farmers were taxed item by item, while merchants give their stock in in a bulk statement, whereby they are comparatively much less taxed. Judge Blackwood stated that in England, which has free trade, rates of labor have increased within a few years 40 per cent. In Germany, where everything is protected by tariff, the rates of labor have been, in the meantime, greatly reduced.

Bro. Webster, who is home on a short visit, stated his regret at not expecting to be able to attend the State Grange, which was much regretted. All hope he may do better than he promises and be present yet.

The members of Temescal and Eden Grange will remember the pleasant visits made their Grange some years ago by Brother and Sister D. Woodman from Michigan. All were sorry to learn that Sister Woodman had recently died. Secretary Babcock read a series of beautiful resolutions adopted by her local Grange, which were listened to with much interest. Temescal Grange instructed its secretary to express the sincere sympathy of its members with Brother Woodman, his family and Grange, for their great loss.

Miss Lucy Blackwood, residing in East Oakland, daughter of Judge Blackwood, is expected to receive the third and fourth degree on Saturday, September 17th, when the usual Harvest Feast will be celebrated. The meeting will take place at 10 A. M. Eden Grange and other Patrons are cordially invited.

State Grange.

The State Grange meeting will commence the first Tuesday in October. There will be a large attendance. All who have not visited the healthful, beautiful city of Santa Rosa should improve the opportunity to attend the State Grange.

There will be a liberal reduction in railroad rates from San Francisco, and all the hotels have agreed to reduce prices, which will be published next week.

Let every person who expects to attend the State Grange keep an eye on the RURAL PRESS and the California Patron, for through these the news will be furnished.

BRO. W. L. OVERHISER of Stockton, W. O. of the State Grange, met with a painful accident on Sunday, August 28th, by which his only servicable eye was entirely blinded for the time being. Accompanied by Sister Overhiser he came to San Francisco Tuesday, and placed himself under the care of Dr. Pardee, the eminent oculist, who encourages him to look for a perfect cure. Meanwhile, however, he is compelled to give up most of his work for the beloved Order, and to forego a deal of sight-seeing at the autumnal fairs. But he prizes the friendship and sympathy of his brother Patrons in this season of deprivation, which all will join us in earnestly hoping may prove as brief as possible.

GRANGE ALTERNATES.—Every Grange should choose alternate representatives to the State Grange who will act in case of the non-attendance or possible disability of the Master or his wife during the session. Granges whose Worthy Master is unmarried, should take special care to elect alternates to the State Grange.

Grange Work and Progress.

[Prepared Weekly by M. WHITEHEAD, National Lecturer.]

"The prosperity of the South is, without doubt, confined almost exclusively to the cities. The farmer's condition does not improve." This item from a Southern paper really gives the condition of affairs over the whole country. As proved by the U. S. Census and all later statistics, the depression of agriculture is growing greater with every passing year. The value of the farm and its crops is constantly shrinking. And yet the country was never increasing in wealth so rapidly as now. Why should agriculture be the only interest that is going backward? What are the causes? What the remedy? These are questions that should be discussed by every Grange in the land. Would it not help if farmers were as well organized as the manufacturers and other city interests? Would not "protection" for our products, in proportion to the protection given other industries, help us? If "protection" has built up these other industries and made them prosperous, would it not be well to build up agriculture in the same way and put good tariffs on fruits, hides, eggs, vegetables and other products now admitted free, and larger tariffs on hay, lumber, potatoes, wool, tobacco, sugar, etc.? True, we have a large surplus revenue now. If more than is needed for expenses of the National Government, why not divide it up among the States to run the State Governments (as was done when Andrew Jackson was President) and so save State taxes; or, if necessary, divide again among the counties and so save county taxes? Some recommend free trade, but would it help farmers to pull manufacturers down to the farmers' depressed, almost free-trade basis?

To protect her farmers, France has tariff on beef, pork and grain, so high that it is prohibitory, and last winter the French Congress increased the tariff on raw sugar at the very time our Congress was discussing free raw sugar (and all "free" raw materials). Spain increased her tariff on cereals last winter 25 per cent. Statistics tell us that over 16,000,000 dozen foreign eggs (largely from France) landed in this country last year free of all duties. If France and Spain, by tariff, close their markets for our beef, pork and grain, let us close ours in the same way against their pauper hens. Let us try a tariff of 78 per cent on eggs (the average on manufactured goods) and see if you cannot build up this "American Industry."

"ACCOMPLISHED its mission, I suppose," was the reply in one of our leading newspapers recently to the inquiry, "What has become of the Grange?" "Accomplished its mission!" When farmers cease to know want, and become independent of human sympathy and fraternal counsels; when their isolated homes shall have been brought into union with teeming companionship; when farmers shall have ceased to be hewers of wood, etc., to other callings, and peace and plenty crown their boards, and the lion and the lamb among mortals lie down together in the evergreen pasture of mutual rights, then may we talk of mission accomplished. There is an urgent necessity for just such an organization as the Grange now as in former years, and every true Patron will echo the earnest wish that every farmer in the Union would join the Grange. Its teachings rest their foundation upon the "Book of Books," and as well tell us the church militant has accomplished its mission. Erase, if you please, the name of Grange from the lexicon of time, and the thousand syndicates which it has formed in the hearts of its faithful adherents will find as many tongues to utter its praise.—Farmers' Home Journal.

To make the Grange fill its mission, there must be active fathers and mothers, who have the love of man and country at heart. In order to wield an influence, they must co-operate in the same manner that we do to carry on a church or school. They will soon perceive that their sons and daughters are essential personages to carry out their objects. Get American people to talking over a matter, and they will ferret out the truth. If, then, there is right in the matter, agitation will bring it out, and agitation brings action. Let farmers come to the Grange, and profit by experience.—H. E. Hayes, Oregon.

THERE is a great work before the Grange throughout our country and the whole world, in combatting the twin evils of monopoly and socialism. "Twin evils," I say, for a Jay Gould or any man who does his stealing under cover of law, sows dragon's teeth from which spring up not only armed men, but men fearing neither God nor man, men who would overturn all government, reduce order to chaos, blot out civilization and bring back a worse barbarism than that which our forefathers found here, when they first came ashore from the Mayflower. But Jay Gould and the class of which he is a worthy representative and the socialists are alike, are in fact all off the same piece, in that they all want ten hours pay for eight hours work; or to sum it up concisely, they want to obtain the things they desire without rendering therefor a just equivalent. The Grange is non-partisan, and God grant that it may always remain so! It is must stand firmly for honest pay, for honest work, and set its face as a flint against all injustice.—E. M. Gillard, Connecticut.

THE Master of the Vermont State Grange says: "We are steadily gaining ground, and there seems to be a strong popular sentiment in favor of the Grange in all parts of the State. In several sections there is a call for organization and reorganization."

THE Grange Insurance Co., at Lime Ridge, Pa., has insured the buildings of its patrons at the cost of \$1.16 for each \$1000 per year, or \$5.83 per \$1000 for each five years' term.

SANTA ROSA GRANGE will confer the third and fourth degrees on Saturday, Sept. 10, 1887, at 10 A. M. They will celebrate the Harvest Feast and have a grand time. The members are all busy preparing for the State Grange.

Equitable Taxation.

At the last convention of the Farmers' Alliance in Syracuse, N. Y., the following preamble and resolution were adopted:

WHEREAS, 89 per cent of all taxes is now raised on real estate and only 11 per cent on personal property; therefore, be it

Resolved, That the laws be changed to make the distribution of taxes just and equitable, and that all persons be made to disclose the amount of their personal property to be subject to taxation.

Whereupon the S. F. Call makes these comments: If the preamble to the resolution is correct, there is but little for the United Labor party to do. If 89 per cent of the taxes is levied on land, the United Labor party have but to proceed a little further in the same direction. But the preamble probably refers to direct taxation. The taxes to support the National Government are placed on articles of consumption, and are included in the price of such articles. A man cannot pay his own way and not contribute to the support of the Government. There is a measure of justice in the demand of the Farmers' Alliance. Personal property in all the States conceals itself from the tax-gatherer. It is more easy to denounce such concealment than to prevent it. Land and improvements are always in sight, but bonds are hard to find. The true theory of taxation is to assess property on its full cash valuation without regard to the form it takes. The practice of assessing property at 30 to 40 per cent of its valuation, and money and bonds at their face value has been the cause of much of the deception practiced to conceal property.

COME, BOYS AND GIRLS.—"We offer you the Grange with its pure associations and influences. We offer you the educational, the social and the material advantages of association with those who have for years labored with tongue, pen and brain for your elevation." Come, then, boys and girls, to the Grange; come for your own good and for our pleasure. We have no selfish ideas, no sinister motives. We feel that you cannot afford to stay away. Time is too precious, youth is too short, the responsibilities of life are too great to admit of delay. Here we will give you amusement without temptation to evil, recreation without frivolity, instruction without tediousness, and all the advantages of social intercourse with none of those evil communications which corrupt good manners. Come, then, and take your places in the line; you cannot afford to stand aloof. Soon you are to go upon the market, and generally you are to be sold upon your merits. We offer you, in the Grange, the information and education that will fit you for life's duties. The exigencies of the times demand men and women of well-informed minds, of well-trained ideas, of incorruptible integrity. No organization, association nor fraternity is doing so much as the Grange to give such to the world. Then, Patrons and Farmers, bring your boys and girls to the Grange, and thus let your most intimate associations be with those who are to be their associates through life.—D. H. Thing, P. M. Maine State Grange.

APPEARANCES WERE DECEITFUL.—Editor Reed of the Gridley Herald has recently been rusticiating among the Lassen hills, and the Mail tells a little story of what befell, while he was standing in front of the Stewart house one morning. Reed stood there, enjoying his pipe, when he was approached by a sheep-owner who wanted to hire some shearers, and asked if he wanted work. "Yes, I want work," said Reed: "How much do you pay?" "Dollar a day and board. You will make a good shearer, I think; you look like one now." "You won't rob yourself by paying \$1 a day and board?" "Oh, no; that's the regular price." "Well, I've got \$1.50 left and don't propose to work until that is gone," answered Reed. "That's just like you whelps! You stand around, claiming you can't find work, and when a man asks you to work you ain't on it. The authorities ought to put you in the chain-gang." The farmer was waxing wrath and a crowd began to gather, when a friend stepped up and introduced the granger. "Thunder! Why didn't you say who you were?" And then everybody smiled.

BRO. J. W. MACKIE sent us a note from Tulare last week, saying that he had been quite ill, and so prevented from writing for the RURAL and discussing questions before the Grange. This week, however, we have had the pleasure of seeing him here in San Francisco, in better spirits and improving health.

DR. C. E. STONE, the newly chosen president of the Anti-debris Association, is a well-known pioneer of Yuba county, and has been Mayor of Marysville. He has been from the outset a radical opponent of hydraulic mining, and is distinguished for integrity and firmness of character.

WORTHY OVERSEER OVERHISER and Brother E. Kelsey expect to be present at the re-organization of Merced Grange, Sept. 17th.

It is hoped there will be a full attendance at Tulare Grange which meets on Saturday, Sept. 17th.

FORTY couples enjoyed the Grange festival at Danville and report a good time.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

PRODUCTS OF PARADISE.—Record-Union, Aug. 29: A sample of Stillson peaches has been sent to Sacramento from Paradise, to show the quality of fruit raised at that altitude. They were picked from trees which have been out but three years, and excel in flavor, size and marketable appearance. Mr. B. Russell, who sent them, states that apples, pears, plums and prunes do equally well there.

Contra Costa.

TREASURING STRAW.—San Ramon Cor. Item: Many of our farmers are stacking their straw. It may seem a little old fashioned to prepare for winter in this way, but it is a good thing for the stock. The rainy season has been uncertain of late years, and straw helps stock tide over the hard pulls when grazing is poor.

Fresno.

IRRIGATION PROJECT.—Expositor, Aug. 24: County Surveyor Davis has been surveying a preliminary route for a new irrigation canal. The plan is to take the water from Kings river at the point where the new channel takes out, carry it across on an embankment from 25 to 30 feet high in the lowest places and to the West Side lands. One branch of the ditch will be led south on the west side of Tulare lake, irrigating over 100 sections of land, while the main canal will be led south, and will cover about 400 sections of land. The canal will be 100 feet wide and 8 feet deep. After striking the West Side plain it will go out about three miles and then follow the contour of the country down to a point opposite Firebaugh's. The length of the canal will be about 70 miles. As soon as the preliminary surveys are completed they will be submitted to the projectors, who are from Watsonville and San Francisco, for their approval. There is little doubt that the work will be put ahead at an early date.

Mendocino.

POINT ARENA ITEMS.—Cor. Ukiah Press, Aug. 27: The hay crop is heavy and of extra quality. Baled is worth \$10 per ton. The grain crop is extra good in quantity and quality. A field of oats on W. H. Kent's place near Bridgeport, it is estimated, will yield 100 bushels per acre; other fields are estimated at 95 and 80 bushels per acre. The toot-toot of the thrashing engines can be heard from the coast to the foothills. Potatoes are looking finely, and no appearance of the dreaded blight up to this time. The crop is too far advanced to be injured should it come. Butter has boomed up to 32½ cts. per lb. in August, and may reach 40 cts. in September. As a natural consequence, the dairymen are walking around jingling their coin. Cows are about dry. A majority of the dairymen prefer half-bred Jersey cows for butter-making; the full bloods are so small.

Napa.

CROP NOTES.—Napa Register, Sept. 2: Wheat in general in the valley has turned out very well as regards both quality and quantity. The same may be said of barley. Oats that in the early season promised well were damaged from one-third to one-half by hot winds when the grain was in the soft dough. Since prices of grain declined a few weeks ago, farmers are disposed to hold for higher figures. Most of the hay has been baled, and considerable straw. The crop of hay was an exceptionally good one, and much of it has been stored either in town or on farms.

Placer.

PLACER PEACHES.—Republican, Aug. 31: Geo. Perkins sent up to office from his Newcastle ranch last Friday a six-inch box filled with 36 Chili cling peaches. They were from a two-year-old tree, and averaged as large as any seen this year, being 11 and 12 inches in circumference. Their quality would make a New Jersey man want to move into the U. S. Dr. H. H. Clark had three cling peaches the other day, each of which measured 13½ inches. Some specimens of free stones from his ranch measured 10, 11½ and 11½ inches. But there is not a peach orchard in the county which has not this year produced some remarkable fruit. If the Republican were to report every 12 inch peach the list would fill a column. Next year anything under 14 inches will not be considered worth mentioning.

Sacramento.

SECOND-CROP BARLEY.—Record-Union, Sept. 2: P. J. Van Loben Sels, manager of the S. F. Savings Union lands in the Pearson Reclamation District on the Sacramento river, was in the city yesterday, and had samples of the second crop of barley now ripening on their lands. The first crop yielded an average of from 60 to 70 bushels per acre, and the second crop will go from 50 to 60 bushels per acre. The second crop comes from volunteer sowing, the fallen seed from first crop having been simply harrowed over to scatter it upon the ground, and then plowed under. This crop will be ready for cutting in about two weeks.

NECTARINES.—Geo. B. Katzenstein [brought to the Bee office the other day several magnificent nectarines, picked from a tree in his yard on O street. They were of beautiful color and delicious flavor, and averaged 9½ inches in circumference.

A FIELD FOR CANNERS AND DRIERS.—Galt Gazette: On the McClaughry place there are

tons of fruit that will not pay for boxing and shipping. Henry Adams, an extensive fruit-grower, near Elliott, is under contract with a Sacramento cannery to box and deliver his peach crop at the cannery at \$20 per ton. Dr. Harvey's large orchard is full of fruit of the best quality, but as it will not pay him to ship it, the hogs will get what he does not dry and give away. Others who have fruit find great difficulty in disposing of it at a profit. There is only one way we can see out of the dilemma, and that is for an enterprising man to establish a cannery in Galt. There would then be a demand for all the fruit raised here, and an industry would be added to the town that would give employment to many of the young folks during the fruit season.

San Bernardino.

CHECKING DEFORESTATION.—Lugonia Citro-graph, Aug. 27: E. L. Collins of Oakland, a special agent appointed by the State Board of Forestry, has been traveling over our mountains, inquiring into the cause of our forest fires and the illegal cutting of timber on Government lands. The latter does not interest our people nearly so much as the former. Mountain fires have become a serious menace to the life of our perennial springs and artesian well basin, and must be stopped at whatever cost. All good citizens will join hands with the Forestry Commission and assist them by every means in their power.

San Diego.

POWAY PLUMS.—The Union is in receipt of a box of Kelsey's Japan plums, grown by J. S. Higby on his ranch near Poway. They are magnificent fruit—the largest measured eight inches in circumference—and are but another substantiation of the fact that San Diego's "back country" cannot be excelled as a fruit-growing region.

CAMPO CULLINGS.—Cor. Union, Aug. 27: Sheep-shearing is in full blast in the vicinity of Campo, yesterday and to-day upward of 13,000 being shorn. Coons are causing great damage to the corn and watermelon crops, and they seem to be almost as destructive as a band of hogs. On the 23d a forest fire was started near Potrero, and before its progress could be checked it had swept everything before it to this place, a distance of ten miles. No property other than valuable timber was destroyed. The flames drove dozens of fine large deer from the brush and quite a number have been killed.

San Joaquin.

HIS POTATOES KILLED HIM.—Stockton Independent, Aug. 30: Last Saturday evening Ah Lee, a prominent Chinese commission merchant, well known to steamboat men in this city, loaded several sacks of potatoes and other vegetables upon the steamer T. C. Walker, and embarked for S. F. with his goods, which were piled on the vessel's deck. Sunday morning, when the boat had reached her moorings at S. F., and the freight was being removed to the wharf, the dead body of Lee was found beneath a fallen tier of sacks of potatoes. The Chinaman had evidently crowded beneath the pile to sleep sheltered from the wind. His appearance indicated that death had resulted from suffocation.

Santa Cruz.

PAJARO VALLEY FAIR.—Pajaronian, Sept. 1: An adjourned meeting was held in the Grangers' hall on Saturday last, to consider and further the plans for holding a fair in Watsonville some time the ensuing fall. The attendance was quite large, many leading and influential citizens from both country and town being present, among whom was a large representation of ladies who manifested a lively interest in the movement. A. P. Roache was unanimously chosen chairman. H. S. Stipp was elected secretary. The Finance Committee reported contributions to the amount of \$118, with an encouraging prospect of increasing it to \$200 or \$250. The Committee on Hall in which to hold the fair reported that they had secured the Rink for that purpose. A motion that the time of the Pajaro Valley Fair be changed from September 15th, 16th and 17th to October 20th, 21st and 22d was carried. On motion of Mrs. A. P. Roache, it was voted that an Executive Committee of 12 be appointed, whose duty it shall be to take the entire charge and management of the fair. The following is the committee: Messrs. G. W. Sill, N. A. J. Dorn, H. S. Stipp, A. N. Judd, N. A. Uren, K. F. Redman and Mesdames Dr. Libbey, M. E. Tuttle, J. T. Porter, B. A. Osborne, L. V. Willits and A. P. Roache.

BARLEY CROP.—Among the heavy barley yields in Pajaro valley this season, a portion of the Atherton ranch, near Pajaro, yielded 119 bushels to the acre, while Thos. Kennedy's farm, also near Pajaro, harvested over 100 bushels to the acre. How do those returns show for a dry year?

Solano.

SOLANO AND NAPA FAIR.—Suisun Republican. The directors of the Twenty-fifth Agricultural District met at Vallejo August 20th. A. T. Hatch of Suisun moved that the fair be held at Vallejo. Seconded by Jas. Cline of Benicia, and carried unanimously. F. W. Loeber was elected permanent chairman, A. J. McPike permanent secretary, and the Vallejo Savings and Commercial Bank treasurer. The board of directors then turned all arrangements for the fair over to an association to be immediately formed, and adjourned. After their adjournment a number of citizens met and instituted the Solano and Napa Agricultural Fair Association and organized by electing Alex. Scott, Jr.,

president, Thos. Smith vice-president, A. J. McPike secretary, and the Vallejo Savings and Commercial Bank treasurer. It was decided to hold the fair on the 4th, 5th, 6th and 7th of October—the races and stock exhibit at Agricultural park and the pavilion display at Armory hall.

AN EFFECTIVE BALER.—Geo. McDermott has a lightning hay press which does the prettiest work at baling we have ever seen. The power comes from a team of horses just in front of the press, and runs a derrier fork which throws the hay upon the table. From here it is thrown into the press by the tableman and pressed solid by the falling of a weight of 1100 pounds of iron. When there is enough in for a bale, the horse-power presses it down with such force as to make a bale half the size of one coming from a Petaluma press and weighing about 350 pounds. Wire is used to bale with, to make bales of that weight, but rope can be used when the bales are not pressed so tight.

Sonoma.

PLANTING OLIVES.—Santa Rosa Democrat, Sept. 3: Luther Burbank, the nurseryman, states that the trade in olive trees is rapidly increasing. Large areas of valuable land are being set out in young olive plants every season. The Pichaline variety is the favorite, and does better than the Mission. A number of new orchards are being set out in the vicinity of Forestville, where success has attended the experiments made in the cultivation of the fruit on a limited scale. One order has been received for 43,000 trees. An order for 6000 trees, from Adolph Flamant, has already been filled.

HOP CROP.—According to the latest reports from the hop districts, west of this city, the prophecies concerning the probable heavy yield and extra quality of the crop this season are likely to be verified. The growers are meeting with great difficulty in securing hands sufficient to harvest the crop properly. The Chinese are taking advantage of the condition of affairs and demanding higher wages. In a number of cases growers have been compelled to submit, and employ their Chinese hop-pickers by the day, at \$1.25. Were the crop ripening evenly, with the present scarcity of labor, heavy loss would be entailed. But fortunately the crop has not matured uniformly, and it is thought the loss will be slight. Those who were not well conditioned to wait for the market have contracted their crops at prices varying from 17 to 24 cents.

Tulare.

NECTARINES SEVEN WEEKS.—Visalia Times, Sept. 1: On the 11th of July I. H. Thomas commenced the shipment of the Lord Napier nectarine, and this week he picked the same kind of fruit in his orchard that would stand a shipment to distant parts. No other fruit has ever been known to continue on the market for such a length of time, about 50 days.

FINISHED THRASHING.—E. H. Perkins' thrashing machine completed its work for the season last Saturday. It was in operation for 58 days in the neighborhood of Stokes valley and Sand Creek, and during that time thrashed 59,520 sacks of grain. The largest number of sacks thrashed in one day was 1750. Frank Duran, the engineer, reports the grain thrashed as being of an excellent quality, very little shrunken wheat being found during the season.

Three District Fairs.

The fairs for the Fourth, Eighth and Thirtieth Agricultural Districts were held last week at Petaluma, Placerville and Marysville, respectively, and all, according to reports received, with great and gratifying measures of success.

Petaluma.

The Fourth District, as now constituted, includes only Marin and Sonoma counties, but no sooner had the date of this year's fair been fixed upon than applications for space in the pavilion came piling in upon Superintendent Byce until the demand far exceeded the room available. So the directors tried to get a large tent wherein the bulkier implements could be shown, and succeeded in furnishing half as much more space outside the building.

In the live-stock department, also, every stall was taken, a great number recently added having been engaged some time in advance, and the entries were not only numerous but of high quality. At the stock parade on Thursday, the line of choice animals reached over a mile, much to the satisfaction of older residents, and the amazement of newcomers and Eastern visitors. Prominent in the procession were a score of beautiful Holsteins, six bulls and 14 cows, belonging to J. H. White, of Lakeville. Seth Cook's polled Aberdeen Angus herd was again admired. Four Ayrshire bulls and half a dozen cows were shown by Geo. Bement of Redwood City. Nearly 30 fine Shorthorns came from the Rancho Cotate, of which Wilfred Page is manager. M. D. Hopkins exhibited Durhams for milking strains. I. R. Jewell also had a few Durhams. Jerseys were exhibited from the estate of W. D. Bliss and by Roy Bros.

But those who know anything of Petaluma would expect the equine display to outshine all the rest of the procession, as it appears it did. Besides the racing stock, there were the massive draft horses—Normans, black and dapple gray, and gray and bay Clydesdales—and fine roadsters and matched teams abounded. A Rural representative had his attention called to a three-year-old stallion, full brother to John

Fritsch's Nellie R., and her very counterpart in shape and size. It was remarked that the number of people viewing this parade was much greater than that which attended the races the day before.

The exhibit of sheep and swine was smaller than last year's, but comprised some very fine specimens.

The poultry display was excellent. Within the pavilion, beneath adornments of red, white and blue, and guiding banners hung at proper points, was a dense collection of the products of farm, orchard and factory.

The special exhibit of the Sonoma Pomona Grange, renewed from time to time as to its perishable portions, has come to be regarded as a standing yet progressive representative of the resources of the county. A new feature in it this year is a series of photographs, designed to give a notion of the country whence comes the output. There are cornfields, melon-patches, vineyards, orchards, canneries, and so forth.

A splendid showing of shrubs, plants, and cut-flowers was made by W. A. T. Stratton.

F. F. Ennis, who has a farm of five acres under high cultivation near Petaluma, made a display noteworthy on account of the diversity as well as the excellence of products shown. The table was laden with samples of 12 kinds of plums and prunes, several varieties of apples and pears, grapes, preserved cherries, nuts, etc. The little farm yielded a net profit last year of about \$700.

W. H. Pepper, the well-known nurseryman, made a citrus exhibit that must have surprised any visitors who did not already believe in a northern citrus belt. There were several large seedling oranges, "Climax," picked last March, besides plates of other oranges and lemons. Oranges and lemons were also included in the displays of the Pomona Grange, and of Morris Bros., of Sonoma.

Excellent olive oil and pickled olives were shown by Geo. F. Hooper of "Sobre Vista," Sonoma, whose success in this line has been repeatedly noticed in our columns this season.

The Santa Rosa Canning Company and the Petaluma Fruit Packing Company made elegant displays of preserved fruits, and admirable samples of sun-dried fruits were shown by a number of persons.

It is impossible for us to print anything like a complete list of the entries, but a few, taken as they come in the middle of a local report, will serve to show the varied and comprehensive nature of the pavilion output:

R. Crane, one sack Australian wheat, one sack barley, one sack shelled corn, one sheaf Australian wheat. D. Dickson, Mangel Wurzel. E. S. Charles, lot watermelons, muskmelons, cantaloupes, rutabagas, sheaf oats, corn on ear. C. S. Gibson, one sheaf barley, sugar-beets, Mangel Wurzel, six blood beets, one sheaf corn on stalk, watermelons, muskmelons, cantaloupes—display of products raised on one farm. C. Wightman, apples, quinces, English walnuts, almonds. Isaac Parker, collection fruits raised in one orchard, collection pears, six varieties apples. Rollin Andrews, collection pears, single variety pears, six varieties pears (five each). Mrs. J. C. Diamond, lot canned fruit, preserves, jellies. C. Wightman, kiln-dried fruits, apples, peaches, plums, raisins. Mrs. A. H. Patty, catsup, pickles, jellies. Mrs. N. K. French, jellies, pickles, preserves, canned fruits. E. P. Nisson, two cheeses. R. Crane, three hams, three sides bacon. D. Dickson, 10 rolls butter.

The De Laval cream separator in G. G. Wickson's exhibit of dairy machinery, drew about it a throng of observers.

Byce's 600-egg incubator and W. H. Worth's wine press, grape stemmer and ensilage cutter attracted much attention.

J. Cavanagh exhibited a redwood board 3x69 inches, 14 feet in length.

The vehicles made by Zartman & Co., the goods from Torr & Newburgh's woolen mills, and the stocking machine at its work, the display of saddlery and harness, the needle-work, the bread and cakes made by the young folks, and the paintings in the art gallery were all more or less noteworthy and creditable.

A valuable collection of curios from Japan, China and the East Indies, loaned by Eli F. Shepard of Glen Ellen, who resided a long time in the East, proved very interesting to many.

An eloquent address was delivered Thursday forenoon, by Rev. Arthur Crosby of San Rafael to a crowd of attentive listeners.

In the baby show the four-months-old son of J. Bloom of Chileno valley was awarded the premium.

The numbers of people who attended were, from the very outset, beyond all precedent; the receipts, and the complacency of the promoters and directors were naturally in proportion, and Saturday evening brought the close of "the most successful week's exhibition ever given by the Sonoma and Marin District Agricultural Association."

Placerville.

The Eighth District Fair, held at Placerville from Tuesday to Friday inclusive, had been carefully prepared for by the directory, and proved the most successful that has ever taken place in El Dorado county. The attendance was large at both the track and the pavilion. Although the most attractive fruits of the district had been shipped before the exhibition came off, many of the strangers present declared that the horticultural display was the finest they had ever witnessed anywhere. We find it impracticable to give a lengthy report, but intend to publish the list of awards in a future issue. One of the notable events was the address by Col. John P. Irish, which is spoken of as able, earnest and enthusiastic.

The Fair at Marysville.

[Written for the Rural Press by T. S. P.]

The fourth annual fair of the Thirtieth Agricultural District commenced at Marysville Aug. 30th, and continued five days. The exhibits at the park were highly interesting and included some very handsome and valuable specimens of live-stock. The track, which is considered one of the best in the State, was in excellent condition and the races during the week were highly satisfactory both to the management and to the visitors in attendance.

The Books at the Pavilion

Showed a very long list of entries, which abundantly testified to the skill, energy and industry of the people of the district during the year just past. The articles entered are too numerous to give in detail, so we must content ourselves with a general review and a mentioning of a few only of the more important exhibits.

There were something over 400 separate entries in the department of grains, fruits and vegetables, enumerating almost everything imaginable in the way of vegetable products. The fruit display was particularly fine, and almost every valuable variety of wheat was represented. Among those receiving the larger premiums may be mentioned T. B. Hull, A. F. Abbot, A. C. Gray, G. W. Hutchins, J. P. Oustott, R. C. Kells, Hugh Jones, W. M. Jeffers, Mrs. R. Keck, Mrs. M. Karr, Mrs. Jas. Taylor and George Thompson.

In the art, dry goods and fancy goods departments, the display was both grand and pleasing. The variety of articles, perhaps, exceeded that of any previous year, and the industry was only equaled by the skill displayed. In this department, the chief premium winners were Mrs. J. R. Garrett, Miss M. C. Fuller, Miss Linda Aulman, Mrs. R. A. Dupee, Mrs. L. C. Serrett, Mrs. Frank Parks.

Among other prize-winners were White, Cooley & Cutts, hardware; Peter Engel, jewelry; V. L. Earnshields, harness and saddles; P. W. Griffiths, photographs and views; Frost & Shaffer, furniture; Marysville Appeal, printing, and S. H. Bradley, wagons.

For St. Louis.

A large collection of the agricultural products exhibited will be shipped to St. Louis this week, to be placed on exhibition during the Grand Army Encampment. W. G. Murphy of Marysville will accompany the exhibit, and be manager for Sutter and Yuba counties. He goes under the auspices of the Immigration Bureau, and it is believed the trip will be productive of much good in behalf of the northern section of the State.

The following premiums were awarded Saturday:

Horses.

THOROUGHBRED.—J. B. Ramsey's stallion Monicas, \$25; and mare, Lady Cleveland, \$20.

GRADED.—Stallions—J. B. Ramsey's Gus Payne, \$20, and Alcantara, \$15; P. McCune's Alhambra, \$10; John Lopez's Dick, \$5; A. C. Gray's Ben Sterling, \$15. Mares—F. E. Griffith's Mayo, \$5.

HORSES OF ALL WORK.—Stallions—J. B. Ramsey's Wake-up-Jake, \$15; Ira Wood's Morgan, \$7.50. Mares—A. C. Gray's Bessie, \$5; S. E. Inlow's Nell, \$10.

DRAFT ANIMALS.—Stallions—John Seaward's Boneville, \$10, and Luneville, \$15; S. Grant's Young Normandy, \$7.50; N. D. Coombs' William R., \$5. Mares—J. Seaward's Magnolia, \$10, and Maggie, \$15; C. Matthews' Nell, \$10.

ROADSTERS.—Stallions—Wm. Doty's Billy, \$10; J. B. Ramsey's Alcantara, \$15; W. Gardner's Alpha, \$7.50. Mares—W. Gardner's Nadia, \$5; F. Grant's Knighthood, \$10.

CARRIAGE HORSES.—N. V. Nelson's black team, Frank and Billy, \$10.

SADDLE HORSES.—C. Glidden's brown gelding, \$5; S. E. Inlow's bay geldings, \$2.50.

COLTS.—B. B. Boulware's sucking horse colt, \$5; Ira Wood's yearling, Flora, \$8, and sucking mare colt, \$4; Geo. Ohleyer's yearling horse, Muldoon (special), \$2.50; J. Seaward's yearling, Earnest, \$5; John Seaward's yearling, Lothair, \$2.50; J. J. McGrath's sucking mare colt, \$5; S. E. Inlow's sucking colt, \$2.50; J. B. Ramsey's sucking horse colt, \$5; N. D. Coombs' yearling, Lucy, \$4; Frank Grant's Zinfandel (special), \$2.50; Robert Davis' horse colt, George, \$5.

SWEETSTAKES.—J. R. Ramsey's stallion, Alcantara, \$25; C. Matthews' mare, Young Nell, \$15.

Jacks and Mules.

JACKS.—E. H. Gould's Romeo, \$7.50, and Romeo, Jr., \$2.50. Jennets—E. H. Gould's Rose, \$5.

MULES.—Fred. Ohleyer's Gyp, \$5; J. B. Ramsey's span of draft mules, \$10.

Cattle.

JERSEY.—Bulls—V. C. Putman's Arthur, \$15; Dexter, \$8. Cows—C. Matthews' Rose, \$12.

HOLSTEIN.—R. C. Kells took all premiums.

GRADED.—Bulls—John Kimball's black bull, \$10; L. Coombs' calf, Tifty Rogue, Jr., \$3. Cows—R. C. Kells' calf, Phoebe, \$3.50.

POLLED ANGUS.—Bulls—J. Kimball's King William, \$8; calf, Sutter Boy, \$3. Cows—Marysville Live Stock Co.'s Bergamont, \$12; J. Kimball's calf, Rosa, \$3.

Swine.

BERKSHIRE.—James Farrell, best brood sow, \$5; best sow between 6 months and 1-year-old, \$4; C. Matthews, best boar under two years, \$4; best pigs under 6 months, \$3.

POLAND CHINAS.—R. C. Kell's Prince, boar, under 2 yrs, \$4; brood sow, Beauty, \$5.



Our Heroes of To-day.

Delivered by the Author at the Opening Exercises of the Exhibition of the Mechanics' Fair, San Francisco, at Grand Opera House Sept. 1, 1887.

I.
With high face held to her ultimate star,
With swift feet set to her mountains of gold,
This new-built world, where the wonders are,
She has built new ways from the ways of old.

II.
Her builders of worlds are workers with hands;
Her true world-builders are builders of these,
The engines, the plows; writing poems in sands
Of gold in our golden Hesperides.

III.
reckon these builders as gods among men;
I count them creators, creators who knew
The thrill of dominion, of conquest, as when
God set His stars spinning their spaces of blue.

IV.
A song for these soldiers of peace; and again
A song for the marvels these men have wrought;
Our gleamy snows, and their bredes of grain
If unrolled as a scroll could record them not.

V.
A song for the groove, and a song for the wheel,
And a roaring song for the rumbling car;
But away with the pomp of the soldier's steel,
And away forever with the trade of war.

VI.
The hero of Time is the hero of thought;
The hero who loves is the hero of peace;
And braver his battles than ever were fought,
From Shiloh back to the battles of Greece.

VII.
The hero of heroes is the engineer;
The hero of might and of gnome-built deep,
Whose only fear is the brave man's fear
That some one waiting at home might weep.

VIII.
The hero we love in this land to-day
Is the hero who lightens some fellow-man's load—
Who makes of the mountain some pleasant highway;
Who makes of the desert some blossom-sown road.

IX.
The Stanfords, the Sutros and the Hallidies,
And an hundred more with their names untold—
They are kinglier far in their uncrowned ways
Than ever were kings with their crowns of gold.

X.
Then huzzah! for the land of the golden downs,
For the fruitful land of the silver horn;
Her heroes have built her a thousand towns,
But never destroyed her one blade of corn.

—Joquin Miller.

Oakland, Cal., Aug. 30, 1887.

Talks to Mothers.

The Influence of Dress on Children.

Original. By FRANCES M. PAYSON.)

NUMBER I.

There is nothing like the sense of being well dressed to put a woman at ease. Given the consciousness of faultless attire, and all the staring and whispered conversation fail to move her serenity. If people stare she knows it is to admire; if they carry on a whispered conversation, so pointed as to be directly aimed at her, she rests placid in the belief that they are discussing the relative cost of this or that, or reckoning on the possibility of copying the style. If her boots are daintily new and well fitted, she is undisturbed by the fact; nay, rather pleased that they will show beneath her dress. If her eight or ten-button gloves are perfect, she rests supremely indifferent, her hands folded in her lap, conscious that everything is right as regards them.

It is when she has on last year's suit, made over at home, that she fidgets under supercilious glances, vaguely wondering if the over-dress hangs right, or if the loopings are out behind, and arranges herself as she passes store windows with an uneasy punch here and a pull there.

It is when her well-worn shoes are giving out at the sides that she pulls them back as far as possible to hide their age. It is when her gloves are worn threadbare that she holds her satchel or handkerchief awkwardly in front of her to hide her finger tips, and in place of easy repose feels awkwardly uncomfortable, wondering if those elegantly dressed ladies opposite are staring at that hole at the end of the thumb.

How often do we hear women say: "Well, I enjoy going if I can go well dressed, but

I'd rather stay at home than go looking shabby," which means that every woman knows and feels the ease good clothes give one, and realize their benefit.

Knowing and feeling this influence in yourselves, does it ever occur to you that your children—even the wee little ones—feel the same?

Mothers are too apt to dress their children neatly, if they do so, to gratify their own vanity, or because they are naturally neat themselves and like to see their children so. They dress them for their own company with the greatest care, but they are very apt to say: "Oh, that's plenty good enough for school," when the little ones object to some garment they particularly dislike, sending them off after a time of pouting without a thought that they are forcing the children to undergo a real trial. No mother will willfully hurt her child's feelings, yet very many in these small ways, these petty little tyrannies, which are so easily exercised by the older ones, hurt them some times to the extent of souring their disposition for life.

It is hard for older folks to realize how very real and heart-breaking these little trials are, or how things which seem so trivial to them can be of such moment to little ones.

When the little ones beg to be allowed to wear their best hat, "just for to-day, mamma," or cry for an apron they particu-

larly admire, stop and think whether it is possible to gratify them, or, if not, whether you can't give them something to take its place.

I tell you this child-world is nothing but society on a small scale. If you don't believe it, just put on your hat and coat some day and pay a short visit to the school your children attend. Go at recess, when all the scholars are out, and see how these miniature men and women stare at you, critically observing every item of your attire from your boots up.

Observe how Nellie B— looks keenly at your hat, just as Nellie B—'s mother examines it at church, till you feel an un-Christian desire to take it off and say: "There, now, just take it and look at it!" Notice how little Mamie W— is "taking in" the style of your drapery exactly as your mother does when she meets you on the street; see how little knots of children stand off and discuss your relative merits pro and con quite as rudely as their elders.

You don't care a bit for their little criticisms, of course not—they are but children; but just think how it would feel if you were one of them, and they comprised your little world as they do that of your boys and girls.

You will find, if you keep your ears open, that this boy has the name of "rag-tag," because his mother, being very busy, didn't take the time to mend the hole in his pants, and another goes by the pleasant epithet of "hatzy," because his mother thought his old torn hat was "plenty good enough to throw around the schoolyard."

That sort of thing wasn't a bit pleasant to have to bear, day after day, and these petty little insults are just as hard for little ones to bear from childish snobs as are those we take from grown-up ones.

Any child feels the influence of neat and tidy dress, and a self-respect arising from it which nothing else can give, and which, believe me, does a great deal toward keeping

them out of bad company. A fresh collar and tie and boots neatly blacked will do more than all the lecturing in the world to make them start the day with a happy face.

I remember one wise mother, who, having a large family of children, saw and realized this fact perfectly. Said she: "There come days sometimes when it seems as though the children are all out of sorts; they get tired of all their games and fret and quarrel till it is almost distracting. It's no use to whip or scold, and when they get to feeling like that, and everything else fails, I just make every one of 'em change their old clothes and put on the very best they have. I don't know why it is," she said, "unless it is because they feel a sort of self-respect when they are neat and nicely dressed; at any rate, 'tis the best cure I know of."

How often I have tried it with my own little ones, till I have become convinced that children are very susceptible to the influence of dress."

I know another mother who, being ambitious for her children, was much worried by her older boy's heedlessness, and the fact that he seemed to have lost all ambition at school. She went to work to study the cause. She had always kept him clean and neat—as neat as other children who went to the same country school, but she made up her mind that for him that was not enough—his pride needed rousing. He could keep up in his studies if he only tried, but he had



FANCY WORK-BAG.

accepted a low place and didn't seem to care to get higher. After a good deal of thinking she came to the conclusion that if his pride was not roused while he was young it never would be, and that his clothes were the only means of reaching it; so the first thing she did (he was ten years old and large for his age) was to put him into long pants, making them not baggy and straight, but neat and tight-fitting and belted at the bottom in the conventional style—a style which caused the other boys to enviously dub them the "dude pants" instantaneously. However, the pants did what all the coaxing or driving never could have done; they gave him ambition. The boys called him a "dude," but they envied him—envied him to the extent of covertly admitting it (what boy ever was proof against a genuine pair of bell-bottomed pants?) and the happy owner became the observed of all observers, the hero of the hour.

No boy with such manly attire, regarded as a hero, could long play the part of a lazy dunce, and the sly little mother smiled in her sleeve when she saw her big, rough, heedless boy come marching soberly home from school, his head carried high, as if to say, "I never missed a lesson to-day, and the boys all thought my pants was dandy."

As a consequence of pants (that little mother firmly believes it was nothing else) her boy stands at the head of his classes, proudly showing his monthly record away up at 90 and 100, the best boy in school, because ill manners and good clothes don't go easily together; the neatest, because clean collars, neat ties, smooth hair and neat finger-nails are the natural adjuncts of the balance of his costume.

Take a ride any time on the street car and notice children there. You may see little tots of three and four years eyeing one another shyly, the well-dressed one confident, the ill-dressed one diffident and awkward. The little miss, blest with frills and furbelows, lolls back with an exasper-

atingly fine ladylike air, placidly conscious of the admiring glances from Bridget O'Rourke's baby across the way. Bridget O'Rourke, Junior, has rough shoes with the shoe-strings hanging, coarse stockings wrinkled carelessly over the knees, a common dress and rough hat. Miss Baby feels this. She eyes her supercilious neighbor, scans the dainty stockings and boots, glances at her own rough ones, and pulls down her dress; that is the first sign of discomfort. Presently she notices the pretty pink-ringed hand of baby number one, and if you watch, you will see a glance of comparison at her own. Discomfort number two; she doubles up her dirty little fists under her apron. She keeps up her comparison, however—she can't help it, aided by conscious glances from little Miss Fashionable opposite, and having edged around, blushes a red baby blush, and finds her hands and feet, of a sudden, most uncomfortable appendages; she finally shrinks back behind her mother and sulks bashfully with her finger in her mouth.

Oh yes! human nature is the same the world over, and dress has its influence on manners and character, and always has had since Eve hunted all over the tree for a prettily shaped fig-leaf.

Little Bits of Natural History.

(Original—by ALLAN KARR CUSTIN.)

Natural history is such a beautiful study, but then it is so long and there are so many hard names, and life is so short, and there are so many other beautiful studies that natural history is apt to be rather neglected.

"How can a frog breathe under water?" my boy asked me the other day. "Why, you can drown a frog as well as a fish," I replied, "if you keep them long enough under water." But my boy demurred to this. So, thinking it easy to prove, I began to hunt for my authorities. But alas! after searching several large and celebrated works, I could not find a satisfactory answer; but oh! the beautiful world the search opened to the uninitiated! I had seen glimpses of this world before, both in books and nature, but in this study there is always something new, something interesting.

"Now I will begin at the beginning," I thought, and lo! and behold! the beautiful coral was presented as the number one in animal life, the beautiful coral that my wife wears on her breast, fashioned in the form of a lovely woman's head; and the poor man whose researches revealed the fact that the coral was an animal and not a plant, died in high dudgeon in the Antilles, a short time after his triumph was declared. He had retired there when the savants would not accept his theory. Coral branches several feet high are to be seen in the shell and curio and in most of the bird stores; also many other things that will help the student of natural history.

One of the lowest numbers in the ascending scale of animal life is the jelly-fish, that mass of transparency that when found lying on the beach the boys like to poke with a stick, but when this mass is swimming it is sometimes very beautiful, like a silver ribbon flashing through the water; then again, gliding slowly, silently, like a ghost, so that it is sometimes called the specter of the deep. The jelly-fish is quite an article of commerce on the Pacific Coast, being dried and sent to China in large quantities; there it is highly esteemed as a renewer of youth?

Who would imagine that the celebrated white chalk cliffs of "Merrie England" were mostly composed of little shells, so small that it requires a powerful microscope to see distinctly their elegant forms.

The ridge runs across the channel and partly over France. The sands of the beautiful bathing beaches, many high mountains, vast beds of limestone rock in Russia (formed by one species alone. There are six families, 60 genera, 16,000 species; grandmothers, daughters and grandchildren as it were) are all mostly composed of these little microscopic shellfish. And to think of Paris, beautiful, wonderful Paris, being built of the remains of these little things.

A patient scholar, M. d'Orbigny by name, discovered in a little bit of Paris chalk scarcely a cubit in size, the remains of 58,000 of these small creatures. The Pyramids are greatly composed of the giants of the species, the sea sands of the dwarfs.

What millions of years it must have taken to form such vast parts of the globe of these little—well, I hate to give you their name, it is so long and hard, unless you hear it pronounced; well, the scientific name Foraminifera, meaning full of holes, and out of these little holes they push tiny, transparent arms and fasten on to their prey, and hold it for

*After writing the above I found a similar illustration in a celebrated work in regard to Infusoria.

good and eat away to their heart's content. They can climb up the inside of a glass vase by putting out at will a little foot, like a man with spikes in his shoes climbing a telegraph pole; they are little villains, too, having no mercy on their prey, and paralyzing the poor little infusoria that happen to pass their way by throwing out a species of electricity. Some of the families or genera are now extinct, but enough remain to continue the wonderful part they have played in the formation of the world, for they are found all over the globe, and mountains, hills, valleys, caves, palaces, the Pyramids, are all in a great part composed of the tiny foraminifera. Remember their name because of these wonderful facts, and remember, also, the lesson it should teach of the value of little things, deeds, words, acts, for it is by the accumulation of these that such immense results—called history—are formed.

Bric-a-Brac.

THE Christian name of all beggars in Mexico is "pordioseras," "for God-sakes." As a translation of our word "tramp," it is rather poetic.—*Pittsburg Chronicle*.

THERE is a cute Yankee in an Illinois town who plants a sunflower seed in every hill of beans. The stalk serves for a bean pole, while the seed is utilized for chicken feed.

THE Rev. J. L. Jenkins, the well-known Congregational minister of Pittsfield, Mass., says there are "in Massachusetts alone 330 needless churches wasting the Lord's money." He thinks that Christian unity would end this waste.

REV. MR. LOWY, in a recent lecture in England, quoted a clause in a Jewish marriage contract, from the middle ages, in which the father of the bride besides promising to maintain the young couple for a year, also promised to have the bridegroom instructed in Hebrew for the same period. Fancy such a clause in a marriage contract of our day.—*Jewish Messenger*.

A DAKOTA horse was picked up by a little afternoon zephyr out there the other day, carried half a mile and left in an unrecognizable mass by the side of a ravine, and on the headstone which her kind master reared he inscribed these words:

This old family steed
Now no more we shall feed—
In life there could nothing go faster—
She was born at Hoboken,
And died all wind broken
By a breeze that couldn't get past her.
—*Duluth Paraphraser*.

Chaff.

ARTICLES of wide-spread popularity—Umbrellas.

SHOW the waste and drift of winter—The back garden.

WHY a man boots his dog and merely shoos his hen has never been precisely determined.

IT is true that doctors disagree, but they don't disagree half so much as their medicines do.

WHEN Gladstone is among the trees of his Hawarden farm they say he is a first-rate feller.

"I CONSIDER him a bold, arrogant man."
"Yes, I know he is, but he won't be very long." "And why not, I should like to know?"
"He is to be married next week."

BETWEEN dear friends: "Do you know that little Mrs. B. pretends to be a collector of antiquities? You don't believe she has any do you?" "Oh, yes—her certificate of birth to begin with."—*Judge*.

"HERE'S a hair on your shoulder," said his wife with ominous calmness.

"Oh—er—yes; I've been playing with the poodle."

"John, don't be silly. Flossie is not a brunette poodle."—*Washington Critic*.

Fancy Work-Bag.

The foundation of this bag is a small, round basket. Around the top is gathered the lower edge of the bag portion, which is composed of rows of fancy and plain ribbon. Each row of ribbon is of a different variety or shade, and some of the rows are gathered slightly along the side edges so as to produce an odd effect as possible. The top of each row is shaped in a point, and the bag is drawn in as closely as desired by a shirring some distance below the top, the points looking like tulip petals above the shirring. A wrinkled ribbon covers the shirring, and a large bow of ribbon is fastened where its ends meet. The top of the basket is decorated with ostrich tips alternating with groups of ripe-looking fruit. Flowers, leaves, moss, etc., may take the place of the tips and fruit. If the ribbons are neatly joined with over-and-over stitches the bag need not be lined.

YOUNG FOLKS' COLUMN.

Youthful Pleasures.

(Original—by M. B. D.)

Ever so long ago the grown-up young ladies of to-day were little girls and loved to swing and play with dolls so much that they would even blush now to think of it. And so one summer day of this time long ago, four or five of these little girls went to see another little miss who lived in a great, handsome white house set among groves of trees and a garden of lovely flowers. This little girl's papa had made a swing for her in a great old tree in one corner of the garden where she could go to amuse herself when she was alone. But she was always told not to swing high for fear the chains of which the swing was made might break, or she might fall; and Madge, who was usually very obedient and careful, always did just as she was told.

However, this day of summer in the by-gone years, Madge's playmates found her in one of the merriest moods, and dressed like a little fairy for their day's fun in a snowy lace-trimmed frock, with pink ribbons on her glossy brown curls and the daintiest pair of bronze slippers that could be imagined. The children spent a very happy afternoon, and as evening drew near they gathered in that out-of-the-way part of the garden where the old swing hung creaking on its heavy chains and looking very lonesome as it gently moved to and fro in each careless breeze that came sweeping by. They were in hilarious spirits with the prospect of the swing, and besides, the soft air heavy with the scent of primrose and honeysuckle in the garden, the reddening sunlight bursting through the openings in the trees, the crickets stirring up a shrill and quiet chirp in the grasses, and the dreamy sense of the purpling twilight coming, warned them that soon their play must end, so they made their final hour as joyous as possible. Last of all came little Madge's turn to swing, and she was so delighted that she bade all her friends swing her high up into the branches that bent downward, forgetful of her papa's commands. But alas, her wild joys were soon ended. Higher and higher she swung, each time as she neared the drooping boughs, trying to touch a twig or leaf with the toe of her little slipper, and at length succeeding so well that she could put her whole foot into a cool mass of soft green leaves; but as is usual when little girls are disobedient, something very unpleasant happened, for lo, when she thrust her foot into the leaves for the last time as she thought, something caught it, and then she was whirling about in the air, and the chains were clinking loudly and the children making little screams below, and the last of it all was that when the swing came down again she was desperately clinging to one chain that pinched her hands, her foot felt as if something had twisted and scratched it and her slipper was gone.

Madge was very tender-hearted, and this punishment came so suddenly and so swiftly that she broke down and cried bitterly and her day of pleasure ended very seriously. After she had said good-by to her little friends from her perch of snowy pillows piled up in a great arm-chair, her papa talked for a long time with her about her foolish conduct in forgetting his warning not to swing too high. "See," he said, taking a little slipper out of his pocket, "I found this tightly wedged in between two boughs where your foot was caught, and this was all that saved you from a terrible fall or from a broken limb; for if you had worn shoes to-day instead of slippers, your foot would not have got free at all from those branches that were grinding together with the straining motion of the swing, and I would have had no bright little daughter to sit here with me now and watch the sunset; besides, this was wholly an unforeseen peril. I never thought of such a one as this, for other very awful and disastrous accidents were far more likely to happen."

As I said before, Madge is now a grown-up young lady and often thinks of the happy days of her childhood; and she remembers with fullest joy that her accident in the swing taught her a very useful lesson which she has never forgotten, and even yet observes its teachings though she has to sacrifice herself very often to do it. Her old swing still hangs under the green tree in the quiet corner of the garden, associated with many merry hours, and she has the satisfaction to know it taught her early one of the hardest, yet most useful lessons—the lesson of obedience.

GOOD HEALTH.

Facts About Malaria.

The exact cause of malarial fever, writes a correspondent to the *Providence Journal*, may safely be left as an open question for discussion by scientists; however, there are those who think that they do know the cause, and have demonstrated to the satisfaction of others that they can produce the material which originates such fevers, and also by its use induce the disease in the human system. The following information in regard to the causes of malaria and the means of avoiding it is well worth a careful perusal.

It is known that malarial districts have existed in the New England States, to a limited extent, for a number of years; but there is a possibility that during the war of the rebellion the seeds of this disease were brought North by returning soldiers. Perhaps in the great outbreak of malaria in 1881, when streams and ponds were lower than for 50 years, there was then uncovered to the sun, and to propagation, germs of this disease, which already existed in such places, or a suitable place was then provided for them to develop from other sources.

In all old fever-stricken countries the inhabitants have learned by long experience what must be done to avoid malarial attacks, and they have formed habits which have become almost intuitive. In Rome, and generally in Italy, the Italians avoid walking in the sun; they have a saying which runs thus: "Only Englishmen and dogs walk in the sun." A difference of from 30 to 50 degrees occurs in the middle of the day between sun and shade. Also, all Italians enter the house just at sunset, coming out later. Going out at an early hour in the morning before eating or continuing from an early breakfast until a late dinner without a lunch, is condemned when there is any possible exposure. In Rome, Americans are much more subject to fever than the English, as the former trust to their habit of an ample breakfast to carry them through to a 6 o'clock dinner, whereas an English-born man or woman will have his or her lunch at mid-day. The fever germs taken into an empty stomach just at nightfall find a road open to enter into the circulation. It has been too well established to be questioned that fever germs may be taken into the stomach of a healthy person with impunity, because when proper food has been taken at regular times the digestive process will kill the germs. In Central America the natives cannot be induced to eat fruit after about 10 o'clock in the morning; up to that time the condition of the stomach is at its best for the proper digestion of fruit. Generally speaking, uncooked food is difficult of digestion, and the passage out of the stomach of a portion not digested may take through some of the malarial poison. The writer first learned this rule in Europe in 1874: "If exposed to the malaria, in no case eat either uncooked fruit or vegetables; also avoid drinking unboiled water."

Breathing wholly through the nose is of the utmost importance with respect to fever prevention. All air upon the land has more or less impurities and germ life. If the purpose of the nose, and its membranes, is not to strain and collect these poisons, then certainly the Creator might have omitted the nose and allowed us to breathe through the mouth. Taking air into the lungs partly through the mouth only tends to make the nose an unhealthy organ, a very breeding-place for disease. A very liberal use of handkerchiefs may be suggested as effectual aid to keep poisons out of the system. Parents should teach children to breathe through the nose; at night it should be seen that they are so placed that the tendency is to natural breathing, and to carefully and persistently close the lips to induce the habit of nose breathing.

A very important point with respect to fevers is the prevention of colds; this, after the consideration of good general health, is of the utmost importance. It is known that the pores act a very important part in the system in carrying off matter deleterious to health. When the pores are closed, malarial poisons accumulate in the system. The effort of nature to throw off this accumulation is the well-known ague or "shakes," followed by fever and the sweating. A return of this takes place when there is again a large accumulation of the malarial poison, making thus periodical returns. One of the surest means to prevent cold is the wearing of all wool next the body. The English Government made experiments running through a series of years, clothing soldiers and sailors in the several fabrics, cotton, linen and woolen. The result of these investigations was to clothe their soldiers and sailors in all wool the year round. All-wool underclothing protects the body from sudden chills—first, by carrying off moisture much more effectually than can be done by a vegetable fiber; second, wool fabrics, by their texture, make air spaces to act as a protecting shield. Cotton or linen, when damp from the moisture of the body, holds that moisture, which acts as a good medium to rapidly conduct away heat.

In the cure of malaria, what will operate to advantage as a medicine with some will with others have no good effect; but whatever the medicine, most carefully avoid any of the inducing causes which have been noticed.

Careful investigations made 20 years since in Ohio by Dr. Salisbury seemed to establish the

fact that the fever germ was a living organism—a self-dividing fungus, which, on entering the system, changed the blood after the manner of a poison. In 1879 Prof. Tommasi Crudeli fully confirmed the above view in an article in the *Atti della Reale Accademia dei Lincei*, at Rome. He named the germ *bacillus malarie*. Dr. Salisbury had collected the germs, and went so far in his experiments as to induce fever in individuals by exposing the germs in their sleeping-rooms.

It is believed that this germ rises on the heavy air at night, and falls again at or after sunrise.

It is known that no malarial fevers exist in the region of sulphur works.

The Abyssinians, when preparing to hunt the elephant in malarious districts, thoroughly fumigate themselves with sulphur. Sulphurous acid has been adopted by the Health Board of the General Government as the disinfectant to be used in case of an invasion by the cholera germ. In any district where malaria is localized, it would seem to be a very simple and effective way to kill the fever germs by burning sulphur just at nightfall. Sulphur is so very inexpensive that it would cost but a very few dollars to effectually try the experiment.

A few years since the writer was met with this alternative, to either tear down a house or render it tenable; 30 cents worth of roll sulphur burned in the building made it habitable.

The proposition to kill fever germs by burning sulphur in the open air may seem impracticable, but the object to be attained is certainly great enough to induce a trial under favorable conditions. The smoke of large cities and the campfires of an army are considered to act effectively in preventing malaria.

DOMESTIC ECONOMY.

WEDDING CAKE BAGS.—Pretty receptacles for wedding cake, instead of the small boxes so long in use, are now made in the form of tiny satin bags. Any delicate color of satin can be used, though white is much more to be preferred than any colors. Make the bags in the shape of miniature work-bags, just large enough to hold the cake without jamming; work or paint on one side the monogram of bride and groom. If made of white satin, lined with the same or bright gold satin, and the monogram worked in bright gold, they are especially dainty. Wrap the cake in confectioner's paper before putting into the bags.

TO PRESERVE CRAB-APPLES.—Sort your apples, and the perfect ones put by themselves, trim the stem (leaving about an inch on the apple) and scrape out the blossom end, wash them, put in a porcelain or other preserve kettle, cover with water, cook until you can run a straw through, skim out and weigh; to each pound take a pound of sugar and a cup of water, boil and skim, put in the apples and boil until clear, skim out, boil the syrup a few minutes, then pour over the apples. The water the apples were boiled in measure, and to each pint put a pound of white sugar, boil an hour, and it makes a beautiful jelly.

PICKLED PEACHES.—Four pounds of sugar, one pint of vinegar, to 12 pounds of fruit. Put sugar and vinegar together and boil, then add the fruit and let it come to a boiling point. The next day drain off the liquor and boil again. Do this three times and your pickles are delicious. Add cinnamon to the liquor and stick two or three cloves in each peach. Do not pare, but rub the fruit carefully with a flannel cloth, and put up in cans the same as any fruit, though they will keep a long time in jars.

SPICED GRAPES.—Seven pounds of grapes, three pounds of sugar, brown or white, one pint of good vinegar, two teaspoonfuls of ground cinnamon, one teaspoonful of ground allspice, one-half teaspoonful of ground cloves. Stem the grapes, weigh them, pulp them, at the same time taking out the seeds. Put the juice of grapes, sugar and vinegar into a preserving kettle. Let boil and skim, add spices, then grapes, skins and pulp. Let all get boiling hot, then remove from stove and can.

WATERMELON PRESERVES.—Cut and prepare the rind, boil very hard thirty or forty minutes in alum water quite strong, take out and put in clear, cold water, and allow them to stand over night; in the morning change the water, and put them to boil; let them cook until they have changed color and are quite soft. Then make a syrup, allowing one and one-half pounds of white sugar to a pound of fruit, then add fruit, which needs but little more cooking. Mace, ginger or lemon flavors nicely.

APPLE JELLY.—Take half a peck of juicy, tart apples, quarter and core, but do not pare them; put into a kettle with two lemons cut up with them, and cover well with water. Let them cook until reduced to a pulp, when strain through a flannel bag. To every tumbler of juice, add two-thirds of a tumbler of white sugar. Boil hard for 20 minutes; put in glasses and cover next day, using brandied paper next the jelly, and covering the glasses with paper wet with flour paste.

PRESERVED LEMON PEEL.—Make a thick syrup of white sugar; chop the lemon peel fine, and boil it in the syrup 10 minutes. Put in glass tumblers and paste paper over. A teaspoonful of this makes a loaf of cake or dish of sauce very nice.



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See Advertising Columns.

The Week.

Quite a general rain has fallen over the north-
ern half of the State. The downfall ranged
from a sprinkle up to three-fourths of an inch,
according to locality. The meteorologists tell
us this is not a winter rain, as it came from the
south instead of the north; but it was quite as
wet, as people who had grapes exposed and
dried fruit under dripping trays were not slow
to discover. It does not appear, however, that
much harm was done on the whole, although
some suffered. Thrashing was about over and
the crews disbanding, but some grain was left
too long in the fields, and may get stained. It

is not expected that more rain will follow im-
mediately, but it will be well for all to get their
goods under cover without further delay.

The rain, viewed from the tourist's standpoint,
will be highly prized. The dust will be some-
what moderated, if not quelled. The foliage is
bright and clear and the atmosphere delightful.
This will be a boon to the fair-goers.

A new thing in the fair line is being at-
tempted this week at Grass Valley. The
track and grand stand are lighted by electric
lights, and running, pacing and trotting are
to be done. It will be merciful to the horses
to have the cool air of the evening for their
supreme efforts. How the venture succeeds
we shall know next week.

The State Fair.

It is a good year for the fairs. The interest
in making California better known, which is
now actuating both individual and organized
effort, naturally finds in our great industrial
exhibitions a fine opportunity to get in effec-
tual work. The result is the unusual fullness
and excellence of the district fairs, which have
been held so far, the special attention given
this year to the Mechanic's Fair in this city,
which has crowded the main building and two
new annexes with important material, and we
expect another outcropping of the newly
awakened progressive spirit will be such a rally
of people and products at the State Fair as the
State has never seen before.

The State Fair will open at the grand pavil-
ion on the State capitol grounds in Sacramento,
and at the Agricultural park, on the eastern
edge of the city, on Monday, Sept. 12th. For two
weeks the display will be in progress, and there
is every reason to expect that in both park and
pavilion departments the exhibition will be
greater than ever held in California. Our progress
in the importation and breeding of live stock is
such that we lack no materials for showing the best
the world affords. Then there will be brought
together the finest and purest-blooded horses in
the State. Horses in whose veins courses the
fiery blood of the Arabian steeds and the high-
bred race-horse of England; horses for heavy
draft and the truck; horses for the road, car-
riage and farm; horses, in short, adapted to
every purpose for which that noble animal may
be used by man. We shall see the best breeds
of cattle in the world. The noble Durham,
Hereford, Angus and Galloway, for beef; the
beautiful Devon, suited to so many uses; the
dairy families of Durhams, the milk-giving Ayr-
shire, the cheese-making Holstein, the butter-
producing Alderney and Jersey. In the sheep-
pens we shall find some of the finest specimens
of French Merinos, Spanish Merinos, Cotswolds,
Southdowns, and all other various breeds that are
known. Swine will be shown in profusion, and
no doubt the beautiful Angora goats will win
the admiration of all. Poultry, too, in all the
excellence of the improved breeds will delight
the eye. It will give one new ideas of the ex-
cellence California has already attained to care-
fully study the exhibits made at the Park dur-
ing the State Fair.

In the pavilion there will be an unusually large
collection of county exhibits. Preparations
have been in progress for some time, and with the
aid which some of the county supervisors have
voted, it may be expected that for extent and
style many of the county displays will be notable.

The *Record-Union* says that the county ex-
hibits will be greater in number, better as ex-
positions of county products and more warmly
competitive. The many residents who con-
tribute materials will be interested to attend
the fair, and we would advise all who can to do
so. In view of the great interest in California
lands and their adaptations, and the throngs of
people who are going up and down seeking
homes and investments, it will be well for each
county to have a good talking force on hand in
the pavilion during the fair. The committee
which has charge of the material has usually
enough to do without much talking, and some
one should be present to give such accounts of
the land and its uses as only actual residents
can furnish. If the counties are to get the full
value of their displays, let them be sure and
have a good force of conscientious, intelligent
talkers on hand. "Blowers" are not desir-
able—except in the case of Yolo county, where
they really have a good one.

We anticipate much interest will pertain to
a new contest which the State Board of Agri-

culture has provided for this year's fair, in the
shape of awards for a sheaf display of cereals.
Forty sheaves, not less than 10 inches in diam-
eter, of 10 varieties of grain are called for; not
necessary that they be grown by exhibitor.
Notice was given early, and we hope many
samples were gathered during harvest and laid
away for exhibition. The idea of this award
was to make prominent our cereal products, and
it is a good one. Now that fruit is fashionable
and profitable, it is not wise to forget the
cereals which have done such stalwart service
for California and which will always figure
very largely in our agriculture. If these sheaf
collections are full, as they should be, they
will give a most excellent opportunity for valu-
able study. If this matter has been overlooked
so far, it may be possible even yet to make col-
lections by getting good specimens here and
there from different growers. Each grain
county exhibiting should have an entry in this
department.

In commenting upon this year's work of the
Board of Agriculture, the excellent annual re-
port recently issued should not be forgotten.
It is a document of great value in setting forth
the resources and agricultural achievements of
the State, and reflects much credit upon the
Secretary, Edwin F. Smith, who compiled it.
There are a number of notable contributions
in it, but perhaps the most important is the
study of California climate and meteorology by
Sergt. J. A. Barwick, the Signal Service ob-
server at Sacramento. We believe it is the
fullest collection of weather statistics ever
made in the State, and the deductions made
therefrom are so direct and intelligible that
the reader gets his fill of practical informa-
tion. If the State should issue this report in
cheap form by the hundred thousand for gen-
eral distribution, much good would result.

Mechanics' Fair.

Since our notes last week the Mechanics
Fair has made wonderful strides toward com-
pletion, and may now be said to be in first-
class shape throughout, except the last-built
annex, which will be complete by the time
this reaches the reader. As a whole, the fair
is a most gratifying success and a credit to all
who have contributed to it. Everything is
bright, new and beautiful, the whitening and
the new decorations serving as an excellent set-
ting for the unusual care and expenditure which
exhibitors have given to the preparation of
their displays this year.

The county displays are upon a scale and em-
bellished in a style not hitherto attempted.
Besides the counties enumerated in last week's
RURAL, quite a number more have appeared.
Occupying a commanding position, and first
greeting the eye of the entering visitor, is
Solano county, with a very well-selected and
arranged display. Next comes Stanislaus, also
well represented. Kern county occupies not a
large space, but for variety of material and
taste in its display, wins much praise. Contra
Costa shows fine products on two stands.
Placer county has a large space filled with
choice fruits. Nevada county, so far, has main-
ly a mineral exhibit. Sonoma county exhibit
(which is distinct from Sonoma valley exhibit
mentioned last week) occupies the greater part
of one of the new annexes, and is arranged in
fine style. Not all the material has yet come
in, but is daily expected.

In the second annex which is now being com-
pleted, Livermore has an extensive display of
products, and San Luis Obispo has part of her
vegetable collection spread in this room. Here
also is the cereal, fruit and plant exhibition of
the State University, which is arrayed in quite
a striking manner.

At some of the county exhibits some varieties
of peaches and other fruits now out of season
are shown—having been preserved by the Alle-
gretti process. The samples seem to be in
perfect condition.

These are but preliminary notes. We ex-
pect to give the agricultural features of the fair
closer attention hereafter.

DEATH OF C. M. HOVEY.—The death of
Charles Downing and Marshall P. Wilder is
followed close by the departure of others of the
old guard. C. M. Hovey, the veteran horti-
culturist, died at his home in Cambridge, Sept.
1st, aged about 77 years. Mr. Hovey was one
of the best-known American pomologists and
horticulturists. He was a native of Cambridge,

where early in life he established a nursery,
which he conducted to within a few weeks of
his death. In 1835 he founded the *Horticultur-
al Magazine*, and for 35 years was its editor.
In 1848 he began the publication of *Fruits of
America*. He has produced many beauti-
ful forms of flowers and valuable fruits, and
was especially devoted to the hybridization of
plants.

Buying Land at Booming Prices.

Truly the land furor rageth, the real estate
Dog Star blazeth, and things not predicted in
last year's almanac come to pass. But if any-
thing is to be bought at fancy prices it is land,
especially good agricultural land in California;
wherefore it may be well that people having
money to spare should so invest a portion of it,
even at the present land-selling rates. Buy-
ing land is not like buying stocks. It is not
like them, shadowy and uncertain. If prices
recede, and even go out of sight, there is always
something left—providing you pay for what
you buy. Land, as the old law phrase hath it,
"savoeth of the realty;" that is, it is fixed,
permanent, tangible. It cannot be burnt up
with fire, blown off by cyclones or washed
away by floods. Land, at least here in Califor-
nia, is not exposed to be sunk, shaken up or fis-
sured by earthquakes, nor yet to be half the
time hidden from sight by snow. The owner
of real estate naturally likes to see it more
than once a year.

As land in this country cannot be destroyed
or buried out of sight, so can it not be ab-
stracted or stolen. You do not have to lock it
up or take it in of a night. Where you leave
it on going to bed there you find it in the
morning. Excellent qualities, these, for any
property to possess. Buying good land in this
State is like laying up treasures on earth,
where moth doth not corrupt nor thieves break
through and steal. We sometimes hear people
say that it is a good thing to have a bit of
land to die on, which saying may be supplu-
mented by this other, that it is a good thing
to have a bit of land to live on. The only dis-
advantage attending proprietorship of real
estate is that it qualifies the owner to go on
bonds in criminal cases. But every bleas-
ing in this world is attended with some
drawbacks, and this which so attaches to land
ownership is not a very serious one. Then
there goes with the freehold a certain dignity
and sense of independence that more than com-
pensate for any inconvenience it may cause.
Yeomanry in former times conferred upon the
possessor not only social distinction but also
many political privileges then much coveted.
In most countries none but freeholders are al-
lowed to exercise the elective franchise, this
for a long time having been the case in some
States of the Union.

A California Affliction.

One of the most perplexing questions con-
nected with housekeeping in California is the
need of domestic help in the household. As to
the cause of the scarcity of intelligent labor in
this department, when there is an abundance
and a surplus in all the different departments of
woman's labor, and especially among girls who
work with the needle, we will not undertake to
assign the reason. If our society has been edu-
cated to think that domestic duties are vulgar
and degrading, and that the woman who knows
how to cook food properly is not the equal of
the girl who labors 16 hours a day with the
needle for a mere pittance, then we shall pro-
pose that some philanthropist shall endow an
institute for the sole purpose of teaching our
girls how to cook a meal. The burdens of the
household in city and county have become
unbearable. As an illustration of the afflic-
tion connected with housekeeping, one of our
well-known citizens procured from an intelli-
gent office, under a high recommendation, a
middle-aged woman for domestic service. The
mistress undertook the task of giving instruc-
tion, but soon found her patience exhausted
and gave up in disgust. The climax was
reached the following morning, when the
highly recommended woman was found making
desperate efforts in grinding coffee with a com-
mon grindstone used for sharpening the kitchen
knives, when there was a fine, large coffee-mill
within three feet of the grindstone.

SAN DIEGO exhibit at St. Louis will contain
a 600-pound turtle.

CENTRAL ARIZONA.

[NUMBER 2.]

Written for the RURAL PRESS by O. C. WHEELER, LL.D.]

Meteorology and Pluviology.

The accompanying meteorological table is compiled from the records of the United States Signal Service Station at Phoenix, which is near the center of the district under consideration. It gives the extremes of thermometrical readings for an entire year, and is, therefore, regarded as a fair indication of what may be expected, subject, of course, to ordinary variations. It is, however, suggested to the reader that in a climate where so very little rain falls during the year, and where absolutely no dew ever falls, the atmosphere is necessarily so dry that when Fahrenheit reads 100 degrees in the shade there will be less unpleasant effect on the human system than will be produced by a temperature of 80 degrees in an atmosphere kept moist by frequent rains and dews. Hence if we should conclude that, because the temperature in New England or the Carolinas would be unendurable at 115 degrees F., therefore we could not live in Arizona when the thermometer indicated the same, we should be laboring under a serious misapprehension, leading to conclusions quite unfair to the latter. Long experience and careful observation by intelligent and unprejudiced residents furnish indubitable evidence that the climate of Arizona is certainly quite as healthful as that of any State in the great interior of the nation or on the Atlantic seaboard.

Dec. 1, 1882, to Dec. 1, 1883, from records of the United States Signal Service Station at Phoenix, Arizona.

MONTH.	TEMPERATURE. (Fahr.)			WEATHER.		WIND.		
	Maximum	Minimum	Mean	Clear	Cloudy	Variable	Calms	Variable
Dec. 1882..	94.6	23.5	59.05	11	19	1	0	10
Jan. 1883..	86.7	13.2	49.95	6	22	1	2	12
February..	80.2	22.7	51.45	6	14	3	1	12
March.....	91.6	38.4	65	2	20	1	0	8
April.....	98.6	30.1	64.35	2	6	0	0	14
May.....	107.2	40.7	73.95	20	6	0	2	15
June.....	119	55.2	87.1	1	1	0	0	0
July.....	112	65	88.5	4	5	1	1	1
August....	116	68	92	3	10	2	1	1
September.	114	51	82.5	15	7	1	1	1
October...	96.7	33.6	64.85	18	2	4	1	1
November.	89.8	26.9	57.85	22	6	2	1	1

—No report. †Fifteen days no report. ‡Last 16 days no report.

SUMMARY.
Days, clear, 139; fair, 129; cloudy, 15; rainy 11; no report, 71. Wind, days, S., 67; W., 46; E., 9; variable, 7; calm, 52; no report, 124. Though the last six months of this table is deficient in its record of rains and winds, as a whole it is sufficient to give a fair idea of the character of the weather.

The rainfall in this district is as singular in its character as the effects of the temperature upon the human system are surprising. Farther north, where the elevation is much greater, and where heavy snows fall, the atmosphere is moistened as the snows melt; while in the central portion of the Territory, where the elevation is scarcely 2000 feet, and where snows never fall, they must depend for their rainfall upon the humid winds that come from the Pacific and the Gulf of California, across the northwest portion of Mexico (where they lose much of their moisture), reaching Arizona from the southwest about the first of July, between which and the middle of August the principal rains of the year fall. In some years there are slight precipitations in December and January, though they are so unreliable in time and so small in quantity that they are depended upon only to a very limited extent. In fact

the entire rainfall of the year is so slight (scarcely amounting to more than five or six inches) that no dependence is placed upon it for agricultural purposes. In Salt River valley, the largest and most important agricultural district in the Territory, the strange fact exists that no dew ever falls. A practical application of this phenomenon will be referred to in another part of this treatise.

Irrigation and Cultivation.
The law of balance and compensation is, in nature, universal; but nowhere more striking-

answers Nature's call to give new force to vegetative life. Without any depreciation of the wisdom of "Him who sendeth rain upon the just and the unjust," it is a fact so universally admitted as to call for no argument, that there are no other lands that can be relied upon for such extreme fertility as those which are supplied with water at such times as the vegetation thereon requires it. Hence it is true that lands under culture by well-directed irrigation are more sure to produce abundant crops, with absolute regularity, than the same lands can be

now coming into use, with the prospect of only meeting present demands, but an assurance that all possible requirements of the future will be abundantly supplied. With such a topography as has been described, large numbers of deep and sharp gorges and canyons and ravines must necessarily exist. These open into others of the same kind, or into the valleys, often having very narrow openings, which can be filled at a comparatively small cost, and thus confine at pleasure large bodies of water from the sheds above, to be used as the culturist may desire. And though the streams may, as they often do, "dry up" as is supposed (which is merely a sinking and running under the sand for a distance), these mountain reservoirs have a perennial supply from melting snows, which, in incalculable quantities, pile up every winter on the most elevated points and remain the entire year, giving a supply that absolutely cannot fail.

There are now in the Salt River valley, taking water from the south side of the river, the following canals:

Capacity, inches.	
The Wormser.....	500
Prescot.....	500
Jonesville.....	2,000
Mesa.....	2,000
Tempe.....	3,000

On the north side:	
Farmers.....	1,000
Salt River.....	3,000
Maricopa.....	3,000
Grand.....	7,000
Arizona.....	40,000

The latter is 40 miles in length, and proposes to furnish all the water needed to irrigate 100,000 acres. The company owning this canal sells no water rights except to the owners of land, which rights cannot thereafter be separated from the lands they cover. Hence there are no holdings or "rights" of water stock as articles of commerce; all as soon

as sold become inseparable from the land. These rights entitle the holder to have water (as long as the canal has water in it) at the stipulated price, which is \$1.25 per acre per year, for all the land he cultivates. A person owning land and without water rights cannot obtain water from this company at any price. This is a general rule in all irrigated districts depending upon ditches.

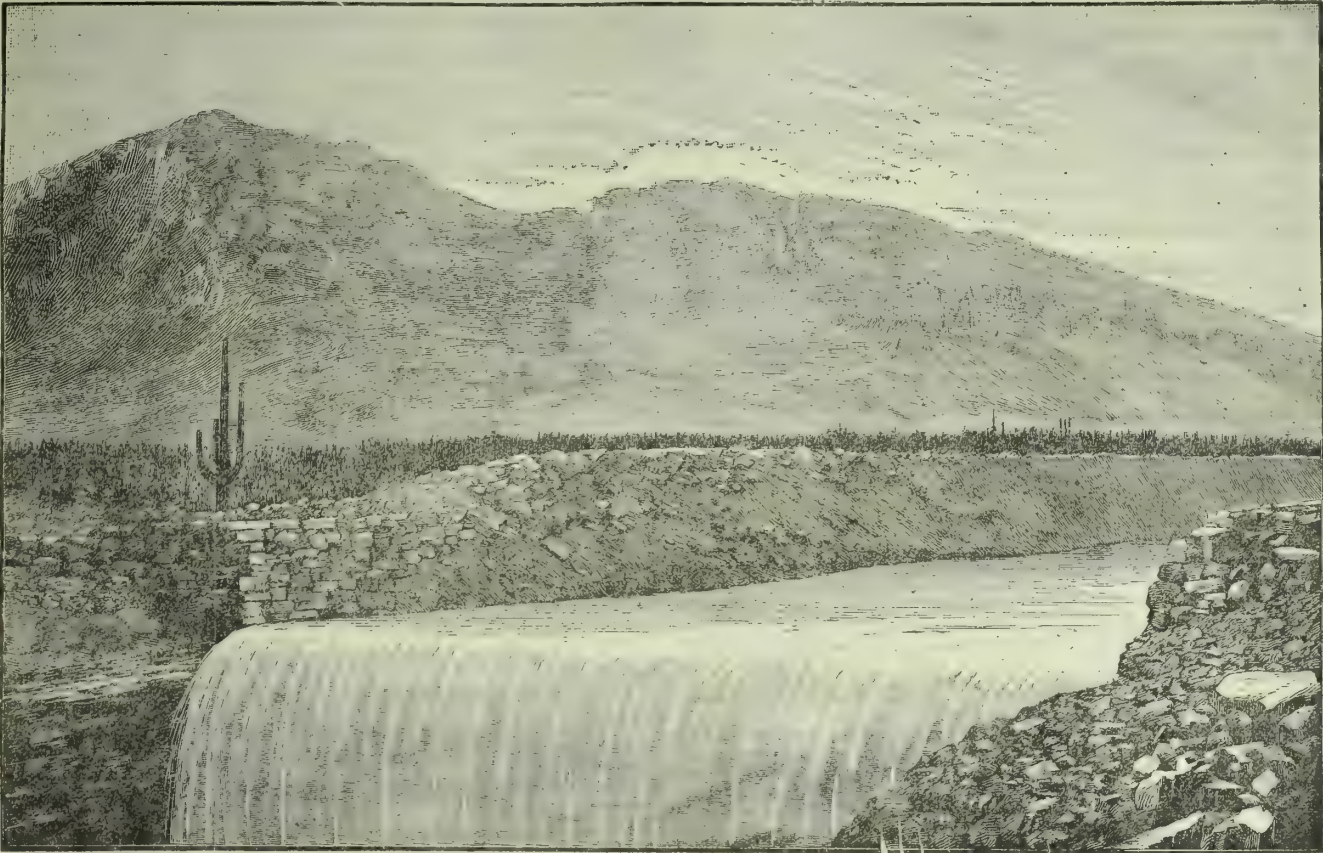
The canals, excepting Arizona, which is the most recently constructed, furnish water for about 45,000 acres now under successful cultivation.

The question of irrigation in Central Arizona is now settled; that is to say, the feasibility of irrigating, at reasonable cost, all or nearly all of the agricultural lands in the district, is beyond doubt. The large supplies from the rivers, through the several canals and ditches, supplemented by the perennial flow from the numerous storage ponds and lakes in the mountains, leave no room to doubt that every cultivator of the soil will find it easy to obtain all the water he may need.

The cultivation of nearly all the irrigable lands, especially in the two great valleys, the Gila and the Salt River, is less difficult than in most districts elsewhere. The soil has a sedimentary surface of several feet in depth, very light and porous, generally free from gravel or rocks and stones, such as are usually met with where land is, in any considerable degree, broken or rolling, and is exceedingly fertile. It is in support of this latter assertion that the Indians occupying the lands now included in the Pima and Gila reservation have cultivated wheat on the same soil where they now cultivate it, more than 200 years without once changing their seed, and their crop of last year was in character better than the average crop of the States in the upper Mississippi valley.

There are now under cultivation, in the Salt River valley and in its immediate vicinity, more than 50,000 acres, and the area is being enlarged with astonishing rapidity. So easy of cultivation is most of the land in this valley that it is no uncommon thing for it to be cleared of the little brush that it bears, and with nothing but the ordinary cultivator run once over it, and sowed to some kind of grass or grain, and in three or four months ripen a good crop without ever having been touched by a plow. The character of the soil is such and is so exactly alike, from the surface to the depth of several feet, that cuttings for raisin grapes are in many cases put into the ground, and make a rapid growth, without any preparation but a single furrow in which to place them. The description here given of the Salt River valley is equally applicable to the Gila and other adjacent valleys of this whole central portion of the Territory.

(To be Continued.)



ARIZONA CANAL—UPPER SECTION OF THE FALLS.

ly illustrated than in those districts where the want of moisture for lack of rainfall is compensated by irrigation.

Long cycles of ages roll by, and cloudless skies, giving no rain, leave vast plains in apparent physical death, producing nothing to please the eye, gratify the taste or support the life of man. Sandy plains is their name, and barren

relied upon to produce when supplied with moisture, only by uncertain rains.

The central portion of Arizona has two large valleys, the Gila and the Salt River, named for the rivers (the two principal ones in the Territory) that run through their length. From these rivers water is taken in ditches, at such times and places as are deemed desirable, and



ARIZONA CANAL—UPPER WASTEWAY.

deserts their cognomen. But the supply of water from nature's reservoirs, in accumulations of snow on tops and sides of broad and long ranges of elevated mountains, is, by the hand of man, not only conducted and spread over the surface of those wide wastes of weariness, transforming them into fertile fields of beauty and wealth, meeting every want of man, but so stored, held in check, controlled and moved at will as to be applied when, and only when, it

spread over the land, by ditch and by flow, so as to produce, under the influence of the clear skies and radiant sun that beam upon and overhang, almost perennially, a volume and wealth of vegetable growth seldom found anywhere outside of the torrid zone. This applies equally well to every production within the range of agriculture and pomology.

In addition to the great idea of ditches, from natural streams, the irrigation by "storage" is

THE STABLE.

State Fair Speed Programme and Entries.

The State Agricultural Society never had a more encouraging outlook than the present one for a successful fair. The space at both park and pavilion is entirely taken up with the most complete exhibition of stock and useful articles as well. The entries for the races are the best ever before offered, and are expected to prove the most exciting ever witnessed in the State. Besides the California list, there will be found quite an addition from over the "Rockies," which will attract attention from people who have never before attended the State Fair. Below will be found a complete list:

First Day, Sept. 15.—Trotting.

No. 1.—Occident Stake. Entries closed in 1885.
No. 2.—Trotting; purse, \$1000; 2:23 class.
W. F. Smith's blk. g. Thapsin, by Brlin-Lady-Hubbard.
Palo Alto Stock Farm's b. c., Rexford, by Electioneer-Rebecca by Gen. Benton.
Jno. E. Moore's b. m. Lotty M., by Nephew-Chieftain.
P. Farrell's b. s. Marin, by Quinn's Patchen-Emigrant.
A. McDowell's c. h. Maid of Oaks, by Duke McLennan-Oregon Nell.
H. Hitchcock's b. g. Black Diamond, by Melton's Goldust-Lady Taylor.
John A. Goldsmith's ch. m. Mamie Comet, by Nutwood-Sportsman.
John A. Goldsmith's b. m. Lillie Stanley, by Whippleton-Dolly McMahan.
B. W. Leven's ch. m. Daisy S., by Tilton Almont-Rattler.
J. H. Kelly's br. g. Valentine, by Farrel Clay-Queen.
Wm. Donathan's ch. m. Magdallah, by Primus-dam unknown.
L. J. Rose's b. s. Stamboul, by Sul an-Fleetwing.
O. A. Hickok's ch. g. John R. Wise, by Hambletonian Tramby-by Plantagenet.
PACIFIC.

No. 3.—Pacing; purse, \$600; 2:30 class.
W. W. Mendenhall's b. g., by Jim Lick.
Frank Weber's ch. g. Haverly.
H. P. Brown's g. g.
A. H. Hecox's br. m. Lela S. by C. P. Duane, by St. Clair.
Eug. Hart's b. g. Fred. Ross, sire and dam unknown.
Geo. Van Gordon's br. g. Home Stake, by Whippleton-dam unknown.
Jno. Warburton's blk. s. Robt. St. Clair, by Jack Roberts-St. Clair.
Durfee & Covarrubias' b. g. Arrow, by Richmond-Crichton.
J. Garrity's b. g. James L., sire and dam unknown.
Alex. Lewis' b. g. Travis, sire and dam unknown.
J. R. Hodson's b. g. Bracelet, by Nephew-by Mambrino.

Second Day, Sept. 16.—Running.

No. 4.—The Introductory Stake, for two-year-olds; \$25 entrance; \$10 forfeit; \$250 added, of which \$50 to second; third to save stake. Winner of any two-year-old race this year to carry 3 lbs.; of two or more, 5 lbs. extra. Three quarters of a mile.
L. H. Todhunter's ch. c. Phoenix, by King Alphonso-Fashionette.
Jas. B. Chase's ch. g. Kildare, by Kyrle Daly-Mistake.
Fairfax Stable's br. f., by Shannon-Tippary, by Tippary.
Fairfax Stable's ch. f. Question, by Monday-Foster, by Foster.
Rancho del Paso's b. g. Monterey, by Kyrle Daly-Comanche.
Rancho del Paso's b. f., by Kyrle Daly-Maid of Stockdale.
C. H. Eldred's b. f. Alma E., for Tricksy, by Joe Hooker-Abbie W.
W. M. Murray's ch. c. Peregrine, by Jumbo or Joe Hooker-Irene Harding.
W. M. Murray's b. c. Surinam, by Joe Hooker-Ada C.
Jas. Garland's ch. f. Snowdrop, by Joe Hooker-Laura Winston.
Owen Bros.' ch. f. Serpolett, by Norfolk-Mattie Glenn.
Laurel Wood Stable's ch. f. Carmen, by Wildidle-Nettie Brown.
Laurel Wood Stable's b. s. Kyrle D., by Kyrle Daly-Maggie S.
H. L. Samuel's b. c. Ed. McGinnis, by Grinstead-Jennie C.
Palo Alto Stock Farm's br. f. imp. George, by Isonomy-imp. Flirt, by The Hermit.
Palo Alto Stock Farm's b. c. Peel, by Monday-Precious, by Lever.
L. H. Todhunter's br. c. King Idle by Wildidle-Augusta E.
No. 5.—The California Breeders' Stakes, for foals of 1884. Closed in 1886, with 12 nominations; \$50 entrance, p. p.; \$300 added, of which \$100 to second; third to save stake. One mile and a quarter.
No. 6.—The Capital City Stake, for four-year-olds; \$50 entrance, h. f., or only \$15 if declared on or before September 1st; \$300 added, of which \$100 to the second; \$50 to the third. Weights, five pounds below the scale; winner of any race over one mile this year to carry rule weight. One mile and five-eighths.
W. P. Todhunter's b. m. May Blossom, by Joe Hooker-Maggie S.
John Wolfskill's br. m. Edelweiss, by Joe Hooker-Yolona.

C. H. Eldred's b. f. Moonlight, by Thad. Stevens-Twilight.
H. Harrison's ch. g. Hello, by Shannon-Marshra.
Laurel Wood Stable's b. m. Patti, by Wildidle-Nettie Brown.
L. H. Todhunter's ch. c. Monte Christo, by King Alphonso-Gailanthus.

No. 7.—Free Purse, \$150; winners of any race this year of the value of \$300 to carry five pounds; maidens allowed if three years old, five pounds; if four years or upwards, fifteen pounds. Mile heats.

W. L. Pritchard's ch. m. Lizzie Dunbar, by Ba-zaar-Tibbie Dunbar.
J. Cabrera's ch. g. Manzanita, by sire and dam unknown.
F. Depnister's br. c. Blackstone, by Wildidle-Monday.
W. P. Todhunter's ch. g. Rock, by Bob Wooley-Miss Stoner.
B. C. Holly's ch. f. Ninena, by Jim Brown-Nannie Hubbard.
Jas. Garland's ch. c. Elwood, by Norfolk-Ballinette.
Owen Bros.' b. s. Oro, by Norfolk-Golden Gate.
Laurel Wood Stable's ch. f. Laura Garden, by Jim Brown-Avail.
Laurel Wood Stable's b. m. Patti, by Wildidle-Nettie Brown.

No. 8.—Two-year-old trotting stake; \$50 entrance, of which \$10 must accompany nomination; \$15 payable July 1st, and remaining \$25 payable August 10, 1887; \$300 added by the society. Closed April 15th, with 18 nominations. Mile heats.

Third Day, Sept. 17.—Trotting.

No. 9.—Trotting; purse \$1000; 2:27 class.
J. A. McLeod's b. s. Mt. Vernon, by Nutwood-Chieftain.
Palo Alto Stock Farm's b. g. Howard, by Electioneer-Mamie by Hambletonian, Jr.
George W. Woodward's Alex. Button, by Alexander-Lady Button.
L. B. Lindsay's br. m. Jane L. by Hamb. Mambrino-by Paul Jones.
A. McDowell's ch. m. Maid of Oaks, by Duke McLennan-Oregon Nell.
H. Hitchcock's b. m. Luella, by Chickamauga.
John A. Goldsmith's b. m. Lillie Stanley, by Whippleton-Dolly McMahan.
J. A. Linscott's b. s. Adrian, by Reliance-Adriana.
A. L. Hind's b. g. Gus Wilkes, by Mamb. Wilkes-Bonner.
Lee Shaner's bl. m. Kate Ewing, by Berlin-Lady Washington.
J. N. Ayers' b. s. Bay Rose, by Sultan-by the Moor.
H. Whiting's b. m. Tempest, by Hawthorne-by Chieftain.
Peter Johnson's blk. g. Scandinavian, by Black Hawk-dam unknown.
W. B. Bradbury's b. g. Old Nick, by Electioneer-Stockton Maid.
L. J. Rose, Jr., b. m. Inez, by The Moor-Katydid.

No. 10.—Trotting; purse, \$1200; 2:17 class.
W. F. Smith's b. g. Adair, by Electioneer-Addie Lee.
I. De Turk's b. s. Anteco, by Electioneer-Columbine.
O. A. Hickok's b. g. Arab, by Arthurton-Lady Hamilton.

Fourth Day, Sept. 19.—Running.

No. 11.—The Premium Stake, for all ages; \$50 entrance, h. f., or only \$15 if declared on or before September 1st, with \$300 added, of which \$100 to second; third to save stake. Horses that have started and not won this year, allowed five pounds. Maidens if three years old allowed five pounds, if four years old or over, seven pounds. Three-quarters of a mile.
Matt. Storm's ch. h. Grover Cleveland, by Monday-Robin Girl.
Rancho Del Paso's br. g. Kenney, by Duke of Montrose-Virgil.
Rancho Del Paso's b. f., by Kyrle Daly-Lodi.
W. P. Todhunter's ch. h. Prince of Norfolk, by Norfolk-Marion.
Fairfax Stable's br. f., by Shannon-Tippary by Tippary.
Fairfax Stable's ch. f. Question, by Monday-Foster by Foster.
John Wolfskill's br. m. Edelweiss, by Joe Hooker-Yolona.
C. H. Eldred's ch. g. Tom Atchison, by Joe Hooker-Bay Kate.
B. C. Holly's ch. f. Fusilade's Last, by John W. Norton-Fusilade.
Geo. W. Trahern's c. m. Blue Bonnet, by Joe Hooker-Kate Carson by Joe Daniels.
James Garland's ch. c. Elwood, by Norfolk-Ballinette.
Owens Bros.' g. g. Johnny Gray, by Shiloh-Margery.
Laurel Wood Stable's ch. f. Carmen, by Wildidle-Nettie Brown.
M. F. Tarpey's ch. m. Not Idle, by Wildidle-Bonanza.
Cockrill Bros.' b. m. Daisy D., by Wheatley-Black Maria.
E. Flinter's b. m. Minnie R., by Scamperdown-Sallie Blair.
Thomas G. Jones' Ruth, by Joe Daniels-Queen Emma.
Thos. G. Jones' b. g. Applause, by Three Cheers-Alice N.
Alex. Lewis' ch. s. Rajah, by Euchre-Formosa.
No. 12.—The California Annual Stake, for foals of 1885; \$100 entrance; \$25 forfeit; \$250 added. Closed in 1886, with 24 nominations. One mile.
No. 13.—The La Rue Stake; handicap for all ages. Two and one-quarter miles.
W. P. Todhunter's b. m. May Blossom, by Joe Hooker-Maggie S.
W. L. Pritchard's ch. m. Lizzie Dunbar, by Ba-zaar-Tibbie Dunbar.
Matt. Storm's b. m. Narcola, by Norfolk-Addie C.
C. H. Eldred's b. f. Moonlight, by Thad Stevens-Twilight.

B. C. Holly's ch. f. Ninena, by Jim Brown-Nannie Hubbard.
G. W. Trahern's b. g. Dave Douglas, by Leinster-Lilly Simpson.
J. C. Simpson's br. c. Rathbone, by imp. Young Prince-Lady Amanda, by imp. Hannah.
Laurel Wood Stable's b. m. Patti, by Wildidle-Nettie Brown.
D. J. McCarty's ch. f. Adeline, by Enquirer-Analyne.
D. J. McCarty's ch. f. Laura Gardiner, by Jim Brown-Avail.
H. Whiting's blk. b. John A., by Monday-Lady Clara.
L. H. Todhunter's ch. c. Monte Cristo, by King Alfonso-Gailanthus.

No. 14.—Selling Purse. One mile and an eighth.
W. P. Todhunter's b. m. May Blossom, by Joe Hooker-Maggie S.
W. P. Todhunter's ch. g. Rock, by Bob Wooley-Miss Stoner.
P. Riley's b. h. Sir Thad, by Thad Stevens-Lady Amanda.
Rancho Del Paso's ch. g. Tom Daly, by Kyrle Daly-Columbia.
Rancho Del Paso's br. g. Kenney, by Duke of Montrose by Virgil.
Rancho Del Paso's —, by Kyrle Daly-Lodi.
Jas. Garland's ch. Elwood, by Norfolk-Ballinette.
Laurel Wood Stable's ch. f. Laura Gardner, by Jim Brown-Avail.
Laurel Wood Stable's b. c. Bolero, by Norfolk-Neapolitan.
E. Flinter's Oscar Wilde.
Frank Dodge's b. g. Bay Rum, by Baywater-a Norfolk mare.
Al. Lewis' ch. s. Rajah, by Euchre-Formosa.

Fifth Day—Sept. 20.

No. 15.—Three-year-old Trotting Stake, for all colts (except Ella, Soudan, Shamrock and Sable Wilkes.) Mile heats three in five. Closed April 15th with 14 nominations.

No. 16.—3:00 class.
Geo. W. Woodward's b. f. Rosie Mc, by Alex. Button-Rosedale.
Palo Alto Stock Farm's b. f. Gertrude Russel, by Electioneer-Winnie by Planet.
J. A. Goldsmith's b. g. Perihelion, by Admiral-Flora.
A. L. Hinds' b. h. Alpheus, by Mambrino Wilkes-Major Mono.
W. H. Seal's b. g. Alfred S., by Elmo-Nora Marshall.
A. C. Davenport's br. s. Alto, by Altoona-Nellie.
S. B. Emerson's br. m. Maggie E., by Nutwood-Geo. M. Patchen, Jr.
C. A. Durfee's b. g. Geronimo, by Inca-Sacramento.
No. 17.—2:20 class.
J. A. Goldsmith's b. m. Sister, by Admiral-Flora.
Lee Shaner's b. g. Lot Slocum, by Electioneer-a Mohawk mare.
William Dwyer's b. s. Menlo, by Nutwood-Hercules.
L. J. Rose's b. s. Stamboul, by Sultan-Fleetwing.
O. A. Hickok's ch. g. John R. Wise, by Hambletonian-Tramby-by Plantagenet.

Sixth Day—Sept. 21.

No. 18.—The Sunny Slope Stake, for two-year-old fillies. Five-eighths of a mile.
W. M. Murray's b. f. Orinda, by Monday-Longfellow.
Fairfax Stables' br. f. Shannon-Tippary, by Tippary.
Fairfax Stables' ch. g. Question, by Monday-Foster, by Foster.
Rancho Del Paso's b. f. by Kyrle Daly-Maid of Stockdale.
Rancho Del Paso's b. f. by Kyrle Daly-Lodi.
J. B. Chase's ch. f. Rosedale, by Joe Hooker-by Joe Daniels.
C. H. Eldred's b. f. Alma E. for Tricksy, by Joe Hooker-Abbie W.
G. W. Trahern's b. f. Sallie Hompton, by Boots-Kate Caren, by Joe Daniels.
James Garland's Snowdrop, by Joe Hooker-Laura Winston.
Owen Bros.' ch. f. Serpolett, by Norfolk-Mattie Glenn.
Laurel Wood Stable's Carmen, by Wildidle-Nettie Brown.
No. 19.—The Shafter Stake, for three-year-olds. One mile and a quarter.
Matt. Storm's b. m. Narcola, by Norfolk-Addie C.
Caleb Dorsey's ch. s. Fred. Archer, by Thad Stevens-imp. Hercules.
E. B. Johnston's ch. f. Etta W., by Joe Hooker-Foster.
Rancho Del Paso's br. g. Denney, by Duke of Montrose-Virgil.
Rancho Del Paso's ch. f. Agnes, by Onondaja-Skylight.
Davis Bros.' b. s. Jack Brady, by Wildidle-Unknown.
J. C. Simpson's br. c. Rathbone by Young Prince-Lady Amanda.
Jas. Garland's ch. c. Elwood, by Norfolk-Ballinette.
M. F. Tarpey's ch. f. Not Idle, by Wildidle-Bonanza.
D. J. McCarty's ch. f. Adeline, by Enquirer-Analyne.
H. Whiting's b. c. Wallace, by Joe Hooker-Countess Zeika.
Thomas G. Jones' b. g. Applause, by Three Cheers-Alice N.
No. 20.—The Del Paso Stake, for all ages. Three-quarter mile heats.
Wm. Cornell's b. h. Hancock, by California-Abbie W.
Rancho Del Paso's b. g. Acton, by Kyrle Daly-Bonnie Kate.
Matt. Storm's ch. h. Grover Cleveland, by Monday-Robin Girl.
C. H. Eldred's ch. g. Tom Atchison, by Joe Hooker-Bay Kate.
Owen Bros.' g. g. Johnny Gray, by Shiloh-Margery.

M. F. Tarpey's ch. f. Not Idle, by Wildidle-Bonanza.
D. J. McCarty's ch. f. Adeline, by Enquirer-Analyne.
Thomas G. Jones' b. m. Ruth, by Joe Daniels-Queen Emma.

No. 21.—Free purse, for all ages. One mile.
F. L. Smith's ch. g. Stanley, by Shannon-Frou-Frou.
W. P. Todhunter's ch. h. Prince of Norfolk, by Norfolk-Marion.
W. P. Todhunter's b. m. Mayblossom, by Joe Hooker-Maggie S.
John Wolfskill's b. m. Edelweiss, by Joe Hooker-Yolona.
C. Dorsey's ch. s. Cyclone, by St. Martin.
Rancho Del Paso's br. g. Kenney, by Duke of Montrose-Virgil.
Rancho Del Paso's b. f. by Kyrle Daly-Maid of Stockdale.
Rancho Del Paso's b. g. Monterey, by Kyrle Daly-Comanche.
W. L. Pritchard's ch. s. Annie Scott, by Leinster-Tibbie Dunbar.
C. H. Eldred's b. f. Moonlight, by Thad Stevens-Twilight.
James Garland's ch. c. Elwood, by Norfolk-Ballinette.
A. Harrison's ch. g. Hello, by Shannon-Marshra.
Owen Bros.' b. s. Oro, by Norfolk-Golden Gate.
Laurel Wood Stable's ch. f. Carmen, by Wildidle-Nettie Brown.
Laurel Wood Stable's b. s. Kyrle D., by Kyrle Daly-Maggie S.
Laurel Wood Stable's ch. f. Laura Gardner, by Jim Brown-Avail.
M. F. Tarpey's ch. f. Not Idle, by Wildidle-Bonanza.
H. L. Samuel's ch. c. Tahoe, by imp. Fletcher-Maritana.
Alex. Lewis' ch. s. Rajah, by Euchre-Formosa.

Seventh Day, Sept. 22.

No. 22.—Trotting purse, \$1000. 2:25 class.
J. A. McCloud's b. s. Mt. Vernon, by Nutwood-by Chieftain.
J. J. Reavis' ch. c. Ned Forrest, by Black Bird-unknown.
Palo Alto Stock Farm's b. g. Spry, by General Benton-Sprite.
B. C. Holly's ch. s. Woodnut by Nutwood-Addie C.
P. Fancee's b. s. Marin, by Quinn's Patchen-by Emigrant.
L. B. Lindsay's br. m. Jane L., by Hamb. Mambrino-by Paul Jones.
A. McDowell's ch. m. Maid of Oaks, by Duke McLennan-Oregon Nell.
San Mateo Stock Farm's b. g. Joe Arthurton, by Arthurton-Flora.
W. H. Seal's ch. g. Longfellow, by Hambletonian-unknown.
J. N. Ayres' b. s. Bay Rose, by Sultan-by The Moor.
No. 23.—Four-year-olds. Trotting stake. Closed April 15th with ten nominations.
No. 24.—Pacing purse, free for all.
P. Fitzgerald's br. s. Killarney, by Black Ralph imp. Eclipse.
W. M. Billup's br. s. Almont Patchen, by Juanita Gladiator.
H. Hitchcock's blk. s. L. C. Lee, by Elmo, Jr.-Kentucky Chief.
J. A. Goldsmith's ch. m. Pocohontas, by Washington-Glencoe.
Lee Shaner's b. g. Chapman.
Durfee & Covarrubias' b. g. Arrow, by Richmond-Crichton.

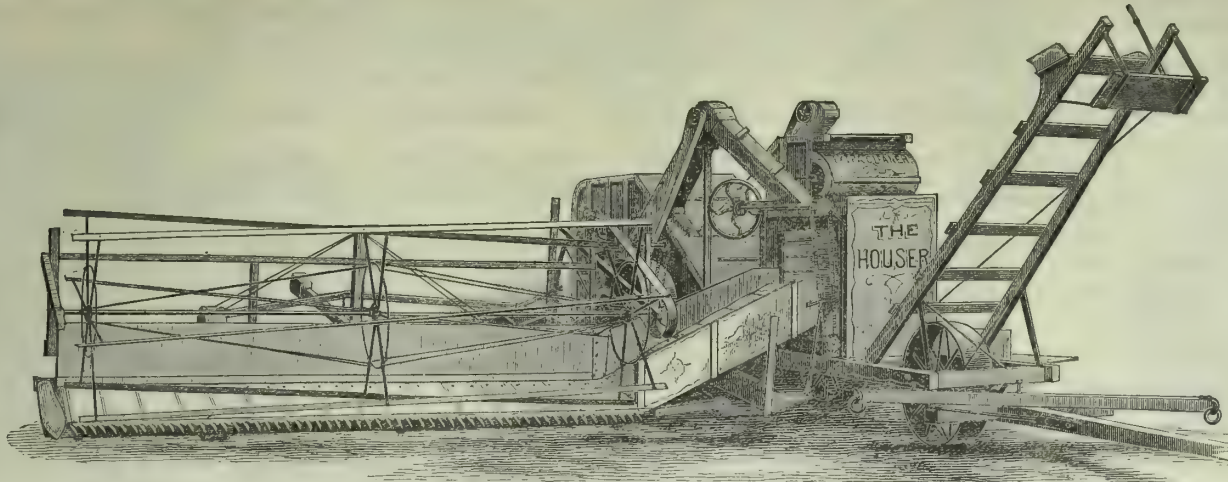
Eighth Day, Sept. 23.

No. 25.—California Derby Stake, for foals of 1884. Closed in 1885, with 17 nominations.
No. 26.—The Palo Alto Stake, for two-year-olds. One mile.
Rancho Del Paso's b. g. by Monterey, by Kyrle Daly-Comanche.
Rancho Del Paso's b. f. by Kyrle Daly-Maid of Stockdale.
W. M. Murry's ch. c. Peregrine, by Jumbo or Joe Hooker-Irene Harding.
Jas. Garland's ch. f. Snowdrop, by Joe Hooker-Laura Winston.
W. M. Murry's b. c. Surinam, by Hooker-Ada C.
Owen Bros.' b. f. Corona, by Norfolk-sister to Lottery.
Laurel Wood Stable's ch. f. Carmen, by Wildidle-Nettie Brown.
Laurel Wood Stable's b. s. Kyrle D., by Kyrle Daly-Maggie S.
D. J. McCarty's b. c. Bolero, by Norfolk-Neapolitan.
Palo Alto's Stock Farm's br. f. Gorgo, by Isonomy-imp. Flirt, by The Hermit.
Palo Alto Stock Farm's b. c. Peel, by Monday-Precious by Lever.
No. 27.—The Golden Gate Stake, for three-year-olds. One mile and three-quarters.
Matt. Storm's b. m. Narcola, by Norfolk-Addie C.
Davis Bros.' b. c. Jack Brady, by Wildidle-unknown.
J. C. Sampson's br. c. Rathbone, by Young Prince-Lady Amanda.
Jas. Garland's ch. c. Elwood, by Norfolk-Ballinette.
Laurel Wood Stable's ch. f. Adeline, by Enquirer-Analyne.
M. F. Tarpey's ch. f. Not Idle, by Wildidle-Bonanza.
Laurel Wood Stable's ch. f. Laura Gardiner, by Jim Brown-Avail.
H. L. Samuel's ch. c. Tahoe, by Imp. Fletcher-Maritana.
Thomas G. Jones' b. g. Applause, by Three Cheers-Alice N.

No. 28.—Nighthawk Stake, for all ages. One mile.
Rancho Del Paso's ch. f. Argus, by Onondaja-Skylight.
Rancho Del Paso's br. g. Kenney, by Duke of Montrose-Virgil.

(Continued on Page 210)

ALWAYS
Victorious
 —THE—
HOUSER
 Combined
HARVESTER
 AHEAD!



BOTH THE
 Large and Small
HOUSER
 Achieved
 —A—
VICTORY
 OVER ALL
 Competitors.

**THEIR SUPERIORITY HAS AGAIN BEEN PROVEN BY FIELD TRIALS.
 400 IN FIELD USE IN 1887 AND NO FAILURES!**

The past harvest season again demonstrated the fact that for all conditions of grain, light or heavy, standing or down, clean or weedy, the Houser was equal to every emergency and retained its supremacy, which it has held for 10 years past. There is no grain too heavy, weedy, or badly lodged for the Houser to handle.

THE EXTRA CLEANER

As Improved for the season of 1888 and thoroughly tested in 1887, did better work than any other cleaner in use. It excels all others used on Combined Harvesters. The Houser has 30-inch Cylinder, 42x46-inch Separator, Steel, Shafting and Gearing and Double Strap Brake; wide Header Draper, high, wide drive-wheels, and tire from 12 to 24 inches wide as ordered; has harvested grain which yielded 70 bushels per acre, and cut, thrashed, cleaned and sacked ready for market, from 200 to 500 sacks per day, in a good and satisfactory manner. It is so constructed that an Elevator to run the straw into Header Wagons can be attached, or a Dump, leaving the straw in small piles, or Dump Cart with Elevator, leaving it in large piles.

SMALL HOUSER.

To meet the demand for a Smaller, Lighter Harvester with narrower cut, adapted for Small Farms and Rolling Foothill land, and which can be run with three men and from 12 to 14 animals, we constructed a

LIGHT 10-FOOT CUT HOUSER HARVESTER. IN WEIGHT $\frac{1}{2}$ OF THE LARGE HOUSER.

A Pull and Belt Machine, strong and easily handled. The Header part is rigid, but can be readily detached.

HAS OUR IMPROVED 36-INCH DOUBLE SHOE CLEANER,

12-inch Cylinder Pulley; 33x8-inch front Lead Wheel Separator 37 inches and Cylinder 27 inches. It was given a thorough test in different conditions of soil and grain; cutting from 18 to 25 acres per day with 12 animals on hard lands, and gave satisfactory results in every respect.

Will Build Them to Order From 10 to 12 Feet Cut.

It is the machine for thousands of Farmers in this State.

As the Large Houser is the Leading Harvester for large grain fields, so will the Small Houser prove for small fields.

BOTH THE LARGE AND SMALL HOUSER WILL BE ON EXHIBITION AT THE STATE FAIR, SACRAMENTO, AND DISTRICT FAIR AT ST CKTON.

Send for Circulars. Correspondence solicited. For further information, prices, etc., address S. C. H. & A. W., Box M, Stockton, Cal., or

Stockton Combined Harvester & Agricultural Works, Stockton, San Joaquin Co., Cal.

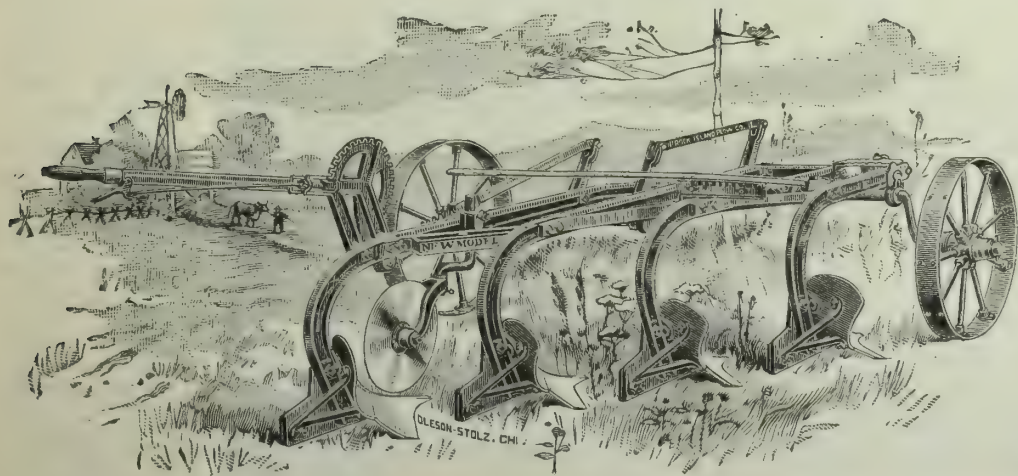
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SOLE PACIFIC COAST AGENTS FOR THE

NEW MODEL GANG PLOW! TWO, THREE AND FOUR FURROWS.



Is more easily handled, is lighter draft, and more readily adjusted than any other Gang.

Its patent lever is used on no other plow, and has no equal for perfect and easy control of the Gang.

The axles are adjustable, as well as the land, for which there is a special lever. The wheels are strong, with wide tires, and the beams are high, obviating all danger of choking.

The bottoms are similar to those used on the celebrated Rock Island Plows, and give the New Model the lightest draft of any Gang in the world.

In ordinary conditions of soil the New Model Gang will turn a 24-inch furrow with the same power (three horses) required on a 16-inch hand-plow or sulky, a saving of 50 per cent in labor and cost of plowing; in short, the New Model Plow will turn over more land per day, with less expenditure of horse and man power, than any other wheel plow in the market.

Its economy of operation, ease of handling, lightness of weight and draft, simplicity, durability, and cheapness, are points which cannot fail to attract attention, and convince every wide-awake farmer of its superiority and economy over any other plow ever placed in the market.

The New Model has been thoroughly tested throughout the San Joaquin and Sacramento Valleys, and with the valuable improvements for 1887-88, cannot be approached by any other plow.

BUGGIES, PHÆTONS, BUCKBOARDS, CARTS, HARNESS, ETC., ETC.,

Comprising every style of vehicle sold on the coast, and all grades. Send for Illustrated Catalogue and you will find just what you want.

Six Kinds of Buckboards.

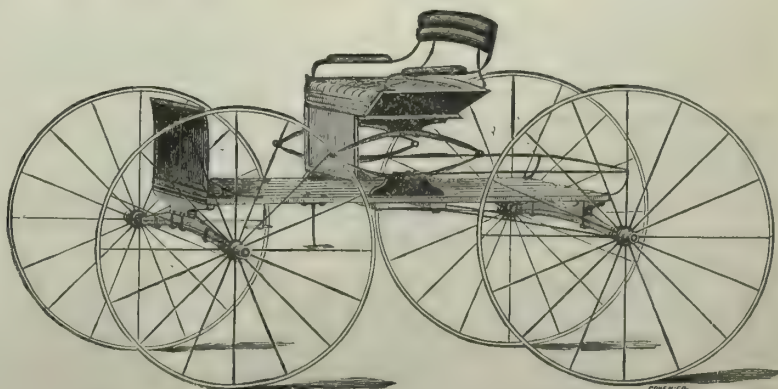
THE CELEBRATED FLINT ROADCART, "A" Grade.

The Strongest Built, Lightest, and Handsomest in the Market.

Double, Single Track, Livery and Ranch Harness.

And a full line of

AGRICULTURAL IMPLEMENTS, WAGONS, GARDEN TOOLS.



The Stockton Fair.

One cannot miss it by going to the Stockton fair this year. The exhibition will open Sept. 26th, and continue during the week. The new pavilion will be ready in time, and its opening is to be the occasion for a grand rally of the people to make the indoor display of field, orchard and garden products, domestic manufactures, and needle-work, and the fine arts, worthy of the district and of the handsome building which will inclose and shelter it. Our Stockton correspondent last week gave an intimation of what was proposed in this direction, and we trust that all will lend aid to the same ends.

We gave some weeks ago a large engraving of the new pavilion, and as the fair is now at hand we give the picture of the building in reduced form. The following interesting descriptive notes are from a letter to the *Bulletin* of last week:

The Agricultural Association's new pavilion, now being completed at Stockton, is one of the finest buildings of the kind on the coast, and is being built at a remarkably low figure—not more than \$60,000, including the extras. The nine grand pagoda towers now loom up the most prominent object in this prosperous city of 18,000 inhabitants, and can be seen for miles away from the various roads leading into town. The structure is in the form of a Greek cross and occupies the whole of the space of Washington square, around which a man must travel 1200 feet before he comes back to the starting point. The tops of the eight flag-staffs on the towers rise to an altitude of 126 feet, while the vein on top of the central tower attains a much higher level. In each of the four corners made by the intersection of the arms of the cross there is a glass conservatory, which serves a double purpose, that of lighting up the main floor and of displaying the varied and choice vegetation that flourishes almost without the care of man in the prolific soil and under the genial warmth of the great San Joaquin valley. The conservatories are 30x30 feet on the ground floor and have 40-foot ceilings. As will be observed by the illustration, these conservatories are very prettily shaped and impart a pleasing ornamental effect to the building.

The Great Hall.

There are three grand entrances to the structure, each 20 feet in width and 30 feet from the outer to the inner doors. Although the building covers all the ground in this square—300x300 feet—except a small patch at each of the four corners, no adequate idea of its size can be gained without an inspection of the interior. Standing in any one of the doorways the spectator sees a grand hall 300 feet long by the same width, following the arms of the cross, and encircled by a broad gallery at a distance of 20 feet from the floor. The gallery is prettily set off by a "cut-work" balustrade, while the walls of the hall gleam with polished panels of redwood and pine, set alternately and showing the full beauty of the natural grain of California's most valuable and abundant wood. Separated, but only technically, from the main floor, by arches, are an art gallery 80 by 90 feet, and two dancing-halls of similar dimensions. On each side of the San Joaquin-street entrance are the offices, reception-rooms, etc., seven in number, each 30 by 30 feet and with 13-foot ceilings in the clear. These apartments are all hard-finished and liberally lighted with frosted-glass windows. On what is called the third floor—for the second and third floors are only on the sides of the building, leaving the main hall clear from the floor to the center of the great dome—is an ice-cream and banqueting hall. This is 30x90 feet in dimensions. The building will be lighted with no less than 130 electric lights besides innumerable gas jets. The machinery to be placed on exhibition in the pavilion will be operated by a steam-engine in a room at the south end of the structure. The interior will comfortably seat from 10,000 to 12,000 people, cautious conserv-

ative persons fixing the number at 10,000, while others of good judgment say that a seating capacity of 12,000 would be nearer the truth.

The building will be painted in two colors on the outside, and this will give it a picturesque appearance. The eight towers are modeled somewhat after the manner of a Chinese pagoda, which makes the architecture at once unique and striking. Besides this the outside

dress drills, etc. The stock show and speed affair at the park will be quite up to the mark, as a long string of fine horses are entered, and several herds of live-stock will be shown.

A Pleasant Rural Dwelling.

We give on this page a view from a photograph of the residence of John T. Deming, situated in a picturesque spot on Carquinez



THE NEW AGRICULTURAL PAVILION AT STOCKTON.

of the edifice is embellished with Eastlake and bizarre millwork, giving the whole an appropriate holiday appearance.

D. Burns, the contractor and his foreman, Herbert Waite, say that the work will be finished and the building ready for occupancy before the 15th inst. Credit for the architectural designs is due to Charles Beaseley of Stockton.

The people of Stockton are justly proud of their new pavilion, an enterprise which they

straits, which has been appropriately named Glen Cove. The house is spacious and well planned, and the surroundings retired but not solitary, for the outlook is upon the narrow channel through which the waters of the Sacramento and San Joaquin find entrance to San Francisco bay, and upon these waters ply fleets of steamers and sailing vessels which seek the interior landings for freight and passengers. Across the strait, too, are the famous wheat-shipping wharves, the great mills and ware-

A Drive in Southern Humboldt.

EDITORS PRESS:—It is indeed a fine trip, presenting great variety of scenes, to leave Ferndale, with its rich alfalfa and red clover, which is growing all the year—the land of heavy fog, of sleek cattle and large dairy ranches, where they hardly ever stop milking—and to go along the base of the hills till you come to the beach; then, quitting the road, take six miles of beach drive.

The tide was high when I passed, and so was the sand on the buggy wheels and fetlocks of my "thoroughbred," but I made, without any exaggeration, a mile every two hours, more or less. Then, after having an excellent view of the fog and a few large boulders, and the heavy surf rolling in, we leave the beach at a large hill (where the road looks perpendicular or a little more so), rise some 250 feet in about an eighth of a mile, and find ourselves on a ridge where we can see the fog on one side; on the other, hill after hill. Every little way for this country, 15 or 20 miles we see a farmhouse.

Finally we start to descend the hill to Bear river (this is where the tax collector reports there are no men or dogs—only boys and pups. He found no one to collect taxes from, as they were all under age). It is a fine valley full of dairies. They will be milking till November. The station sets on the banks of the river, surrounded with trees—the first we have met—spruce, fir, pine and a few redwood.

We slowly ascend the hills, like the King of France, only to go down again, meeting with but one horse on the road (and as the Irishman said, that was a mile off) going to Cape Mendocino. The Signal Station is just above us. We descend to the beach again at the Ocean house and have another drive, this one being better than the last. We drive along and have really a grand view of the ocean, as the fog has lifted. In fact, they have but few foggy days this way. We slowly climb Zannoni hill, and when on top have a glorious prospect. Petrolia in the distance, lined with trees, flanked with green hills, the plain dotted with hay-stacks and buildings, the stubble on the ground, making a fine contrast.

Going through Petrolia, which is a growing town with many fine residences, but isolated, being 32 miles from Ferndale, we pass up the Mattole river. Crossing and recrossing five or six times, we come to Upper Mattole, and thence start to climb to Kenoyer's place, on top of Wilder Ridge. The road runs along among massive trees, the silence broken only by the chirp of quail and other birds. I found the woods on fire, and at one place had to wait till the fire burnt out, in order to get by, as the red tongues of flame were leaping up 20 feet, and a large spruce about five feet through, was burning from top to bottom.

Some five miles from Shelter Cove we again got a fine view of the ocean and hills in the distance. We left one hill only to climb another, until we reached the Mattole river near its headwaters, went through quite a large valley where they were busy haying, and finally reached Garberville, the land of the p

ranches. Coming down Eel river—the south fork—we pass through forests of redwood—fine straight timber. At Myers there is a nice orchard, some of the trees loaded with the finest peaches I ever saw, without any exception. I saw two that actually weighed one-half pound, a box (peach box), packed with only four wide, touching both sides of the box and striking top and bottom.

We start again—the hardest job we have struck yet! After passing a small mill, we cross the river at the junction with main Eel river, and continuing through bottoms with an occasional glimpse of the river and hills on the other side, the trees towering up tier above tier, till the hills seem to meet the sky in the distance.

At Springville I saw a field of grain that had been half cut, and the whole crop was eight inches high.

Eureka, August 1887.

E. C. S.



GLEN COVE, CARQUINEZ STRAITS, RESIDENCE OF JOHN F. DEMING, ESQ.

owe to L. U. Shippee, the leading banker and manufacturer and President of the District and State Agricultural Associations.

Two committees of citizens, one of 100 ladies and one of 100 gentlemen, have charge of the matter of superintending the display in the Pavilion.

The erection of this Pavilion marks a new era in the prosperity of San Joaquin county.

Arrangements for the Fair.

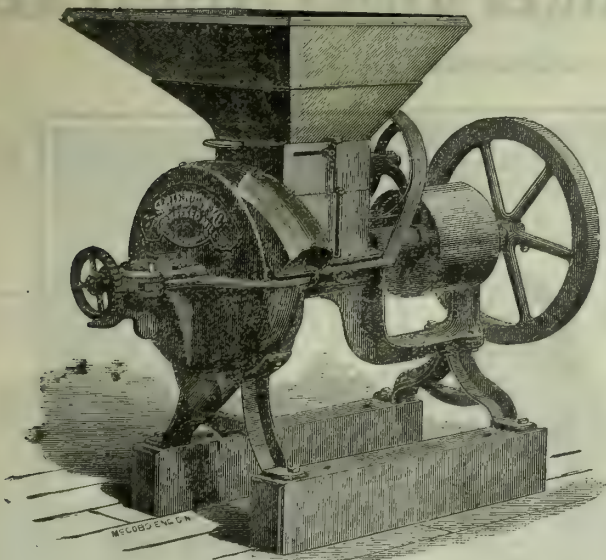
The fair at the park will last for six days, and the pavilion display will continue 11 days. Admission to the park before 10 A. M. will be 25 cents; during the daytime, entrance at the pavilion will be 25 cents and in the evening 50 cents. Especial effort will be made to make the evenings at the pavilion notable for brilliance and for pleasing entertainment aside from the study of the exhibits. The program will change every evening, and will include dancing, fancy-

houses which have given to Carquinez straits great prominence during the last few years. Here, too, the great overland traffic passes from both northern and southern routes. The present activity and great enterprises contemplated for the future make Glen Cove one of the most interesting and valuable situations in the State.

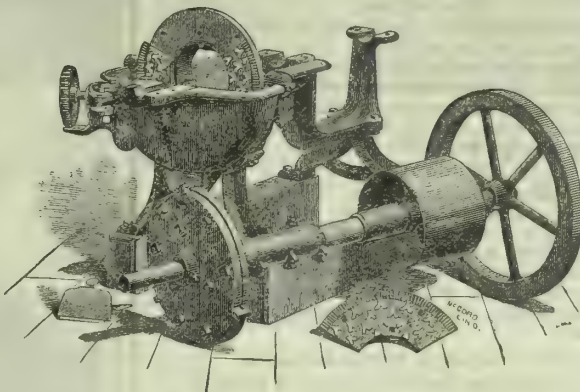
Glen Cove is a type of a limited number of commanding situations which will soon be sought out and held in high esteem as homes of country gentlemen. While there is almost any amount of good land in this State susceptible of improvement, the specially fine situations are comparatively few, and those who own them may honestly congratulate themselves. We are evidently on the eve of a great advancement in California which will benefit all good land and will make especially valuable all picturesque and commanding locations which are near centers of population and avenues of travel.

SCIENTIFIC FEED MILLS

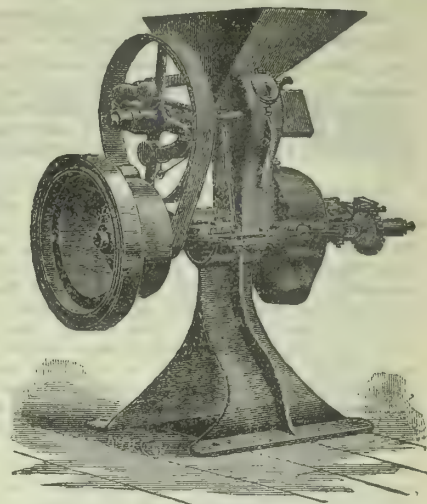
FOR GRINDING ALL KINDS OF GRAIN,
EAR CORN IN THE HUSK,
AND
Egyptian Corn in the Head.



No. 4, Mill Set Up.



No. 4, Mill Taken Apart.



No. 0 Junior Mill.

It is the only mill having all the following provisions, and is the most practical thing of the kind ever invented:

The Grinding Plates are a Special Metal, Hard as Steel guaranteed to grind 5000 to 8000 bushels before wearing out, and then easily and cheaply replaced.

All the Bearings are in one casting, consequently are always in line and cannot get out of true.

The Journals are habbitted with the best metal, and can be adjusted to take up the wear. The Main and only Shaft is of the finest cold-rolled steel of large size and perfectly true.

The Fly-Wheel and Pulley are turned and, with the RUNNING PLATE, are balanced accurately, so run perfectly true, without any shaking.

The High Discharge is most convenient for delivering the feed, and as it draws a current of air through, it prevents heating, as is frequently the case with Iron Mills.

The Pin Breaker provides against danger to mill should iron, steel or any hard substance accidentally go between the plates.

The Feeder provides a successful means of regulating the feed when grinding small grain. Altogether making the Scientific Mill the MOST PRACTICAL THING OF THE KIND EVER INVENTED.

The Scientific is the Simplest. Can be taken apart and put together in a short time without the aid of a mechanic.

The Strongest. All parts are heavy and well-braced and especially adapted to the work.

The Most Durable. Can be run in either direction by simply changing the spout and crossing the belt. This gives double wearing capacity to the plates as they SHARPEN THEMSELVES each time they are reversed.

ROSS HAY AND ENSILAGE CUTTERS.

WITH MOST WONDERFUL CAPACITY.

These Cutters have been awarded Highest Honors wherever exhibited,

INCLUDING

First Premiums at California State Fairs and Mechanics' Fair, San Francisco, for several years past.

Built in 12 Sizes for Hand and Power.

With or Without Indestructable Carriers for removing the cut feed.

Not only will our machines cut double the amount of every kind of material that can be cut by any machine in the world and run with less power, but they are more thoroughly constructed, and are the heaviest, strongest and most durable made, highly finished, do not get out of order, and are exactly as recommended.

We refer to the Largest Stock-raisers on the Pacific Coast,

All of whom are using these cutters with the greatest satisfaction.

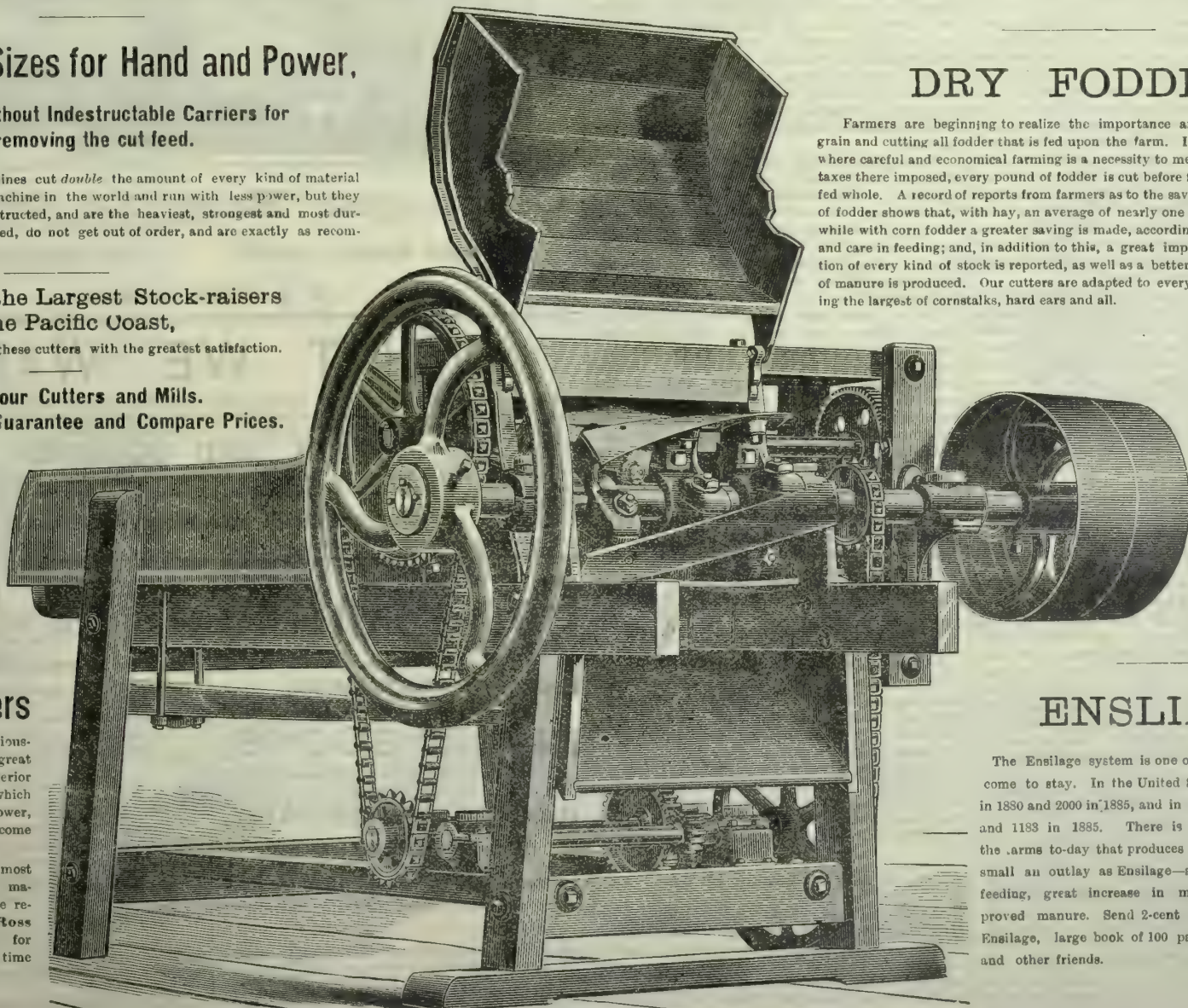
Call and examine our Cutters and Mills.

Get our Guarantee and Compare Prices.

WE ARE SELLING Ross Cutters

To parties who have previously done their cutting to great disadvantage with inferior downward-cut machines which waste both time and power, and soon wearing out, become worthless.

A poor feed-cutter is a most unprofitable piece of machinery, that should be replaced at once with the Ross which will soon pay for itself in the saving of time alone.



DRY FODDER.

Farmers are beginning to realize the importance and necessity of grinding grain and cutting all fodder that is fed upon the farm. In European countries, where careful and economical farming is a necessity to meet the heavy rents and taxes there imposed, every pound of fodder is cut before feeding, and nothing is fed whole. A record of reports from farmers as to the saving in cutting all kinds of fodder shows that, with hay, an average of nearly one ton in three is saved, while with corn fodder a greater saving is made, according to manner of cutting and care in feeding; and, in addition to this, a great improvement in the condition of every kind of stock is reported, as well as a better quality and condition of manure is produced. Our cutters are adapted to every kind of fodder, including the largest of cornstalks, hard ears and all.

ENSLIAGE.

The Ensilage system is one of rapid growth, and has come to stay. In the United States there were 6 silos in 1830 and 2000 in 1885, and in England 4 silos in 1880 and 1183 in 1885. There is no system in use upon the farms to-day that produces as large a return for so small an outlay as Ensilage—a large saving in cost of feeding, great increase in milk and flesh, and improved manure. Send 2-cent stamp for our work on Ensilage, large book of 100 pages, free to our farmer and other friends.

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GENERAL DEALERS IN ALL LATEST IMPROVED DAIRY AND FARM MACHINERY.

HORTICULTURE.

Oranges In Japan.

[Written for the RURAL PRESS by H. BERGER.]

Passing through the streets of any Japanese village or through the Japanese portion of the large cities open to Europeans, the quantity of oranges heaped in pyramids or filling large baskets at different stalls or booths must attract the attention of a casual observer, much more one interested in fruit culture, and all pertaining to it.

On closer examination, we find that by far the greater majority of these oranges belong to the variety known to us as the Mandarin orange. The main characteristics of this species are in their being flattened at both ends; the rind separating easily from the pulp, without the use of a knife; the segments dividing readily; the pulp is generally of a deep orange color, sweet with slightly sub-acid qualities; containing few or no seeds. The size is small to medium, the largest not exceeding two and one-half to three inches in diameter. The flavor is agreeable, though very distinct from any of our Los Angeles, Riverside or Florida oranges. Among these flattened citrus fruits the better varieties are known as Tou-Mikan, Kino-Kuni Mikan, both quite small fruited, some varieties of Unshiu medium, and the Kii-Seedless, which is one of the largest and best of the above-named sorts.

The main bulk of these oranges is produced in the south of Japan, where, also, the young trees are raised.

Visit to a Japanese Orange Garden.

To one who bears in mind the orange groves of Italy, "where the citron blooms, where among the dusky foliage the gold of the orange shineth," as Goethe speaks of in "Mignon," or who has visited the glorious orange gardens of Southern California or had a look down the vista of a well-kept orange plantation in Florida, the sight of the Japanese institutions of that sort is extremely disappointing. Instead of the standard trees trimmed into leafy crowns, extending for the most part in symmetrical rows, we saw a quantity of trees resembling more our native scrub oaks than anything else. They were of low, stubby appearance, with wide-spreading branches. The foliage, which in the younger trees appears a bright green, in these elder gnarled trees was of a deep hue. But for the blossoms, which were unmistakably "orange flowers," and just then appeared along the branches, we should not have recognized the trees, our idea of orange trees was so different. We could hardly credit our senses until having made a closer inspection. The reason given us for this low and spreading growth in orange culture was the fear of typhoons, which at certain seasons of the year sweep the country and would leave but a sad picture of ruin among a grove of standard trees grafted three or four feet above the ground. The Japanese orange trees are grafted or budded very low on the citrus trifoliata stocks and allowed to grow as bushy as possible; the main leader is continually cut off to allow all the side branches to spread, and one old orange tree which we measured was but six and a half feet in height and extended its outer branches over 30 feet in circumference.

The budding or grafting is done early in spring; the young plants setting about six inches apart in rows, are covered lightly with brushwood to protect them from the too fierce heat of the sun. These young trees make a good growth the first season—and as a rule bloom the second year from the bud—maturing fruit in some cases. The insect which I found most infecting the different varieties of oranges, but especially the flattened sorts, is a small parasite which nests in the leaf, which he causes to curl up, and draw itself up in all sorts of shapes.

Another peculiarity in these leaves is that some of them are punctuated as with the sharp sting of an insect, making pointed elevations on the surface of the leaf. I could not ascertain the cause of this.

No danger is, however, to be apprehended if strict precautions are taken before shipment of young trees from Japan; and vigilance on the part of our nurserymen's associations here against allowing any infected trees to be distributed. The idea has prevailed that Japanese orange trees were of a dwarf growth—this is likely, owing to the fact that the Japanese, with their great preference of dwarfing plants, raise a great many orange trees in pots, where, of course, the growth is more or less stunted; the other reason is the prevalence of typhoons as above mentioned. I have in the South seen a few trees growing in sheltered situations which were over 20 feet in height.

During the months of April and May young orange trees are peddled around the country and bought up by the peasant farmers, almost every patch of ground in the southern provinces boasting of a few orange trees. Besides the different flat or Mandarin sorts a few others merit attention.

The Yud-zu.

This orange is one of the hardiest oranges known; grows in some of the northern provinces. As a table fruit it is not to be recommended, but, using the rind and pulp for marmalade, it is delicious, and by actual trial I know it to be superior to the celebrated Dundee marmalade. This is owing to the fragrance of the rind; the fruit grows to be large. This variety for its hardness and superior flavor for

the manufacture of jellies should be largely planted, and prove valuable. Another fine variety is the

The Kunembo.

An orange which attains a fair size, but whose looks are not very attractive, the rind being covered with excrescences like warts. The flesh is sweet, juicy, and peculiarly aromatic; this latter quality has given rise to a fabulous report about this variety having originally been grafted on a pine tree, and therefrom gaining flavor.

The Dai-Dai.

Or summer orange; this fruit gets to be quite large, round, somewhat oblate. Rind is thick; the color, which is a bright yellow the first year, changes to a deeper tinge the second season. It remains on the tree two years, when it becomes very sweet, juicy, and is a fine table fruit. This variety is only found rarely in Japan.

Canton Hybrid.

Which came originally from China. This orange is a very late keeping sort; the pulp adheres closely to the rind; is very juicy, of a delicious flavor, contains very few seeds. The shape of the fruit is globular, color a rather dark yellow. The stock of this variety is as yet very limited. We must not forget to mention the

Kin-Kan Orange or Citrus Japonica.

This variety can truthfully be called hardy; trees have been known to bear winters in and around Yokohama, where the thermometer falls to 15° above zero. This orange is small, attaining in open ground the size of a medium egg plum. The shape is oblong; color, a bright yellow; the rind is as thin as a cherry's, is eaten with the pulp, which is sub acid—very cooling; the rind is sweet and very aromatic. This fruit is very much eaten in its raw state throughout Japan, where, at some family gatherings, pot plants, laden with the ripe fruit, are placed upon the table, to be picked off by the guests. It is extensively used for cooling drinks instead of limes or slices of lemon, imparting a very fine flavor to the liquid. For the purpose of crystallizing or preserving, this fruit has no equal among the citrus family, blending, as it does, the aroma of the orange with the acid of the lemon or lime. There is no doubt that in our glorious climate, so adapted to orange culture, this fruit would improve in every way, in size and flavor. It is admirably adapted for pot culture, where open ground is not available. The profuseness of its blossoms is remarkable, and the branches are literally bending under the weight of the golden fruits. The trees begin to bear when quite young, attain a height of from 12 to 18 feet, inclined to grow into bushy pyramids, but can be trimmed into any shape desired. Would not, with the prevailing dryness of our California climate, a low standard for the culture of orange trees be quite as advisable, with the branches spreading not too high above the ground? The surface would be somewhat protected, retaining the moisture so necessary to the roots.

Throughout Japan the custom prevails of watering all young trees, fields, etc., with night soil, which malodorous practice makes a visit to any, or a trip through a garden anything but a treat to the olfactory nerves; the stench arising from the earth when distilled by the hot rays of the sun is simply vile, but the soil, exhausted by centuries of constant planting, needs all the fertilizers available.

Let us here urge the necessity of planting orange trees as well as other fruit trees not later than the month of January, to give the roots a chance to establish themselves in the ground with the winter rains, and acquire strength before the heat of summer is on them. From reports sent to us from various points in the State of California and throughout the Atlantic Gulf States, where seasons are similar to ours, I glean the facts that all trees sent by us early in season, during December and January, have thrived well, whereas those sent as late as middle of March have not made any promising growth, some even being a total failure. Planting trees after the first good rains of the season, with more rain in prospect, is one of the main points of success.

Keiffer Pear Leaves Dropping.

EDITORS PRESS:—I have a number of Keiffer Hybrid pears in my orchard. About two weeks ago the leaves on one tree commenced to turn dark brown and dry up. A few days afterward I noticed another doing the same. The wood seems to be fresh and smooth as ever. Generally they are the last to drop their leaves. If some of the readers of your valuable paper could tell me what ails the trees I would be very much obliged. D. A. W.

Nuevo, Cal., Aug. 27, 1887.

A Day's Budding in '54.

EDITORS PRESS:—That day's budding at Martinez by Mr. Holliday and his brother George on August 11th was a good one, but in September, 1854, at the old Soscol nurseries and orchards, Napa county, James Watson, a graduate from Elwanger & Barry of Rochester, N. Y., cut, set and tied 1500 apple buds in ten hours, and but three per cent of them missed. That was when the nursery business in California was in its infancy and horticulture in its swaddling clothes. Whet your knife and try it again, Mr. Holliday. AN EYE WITNESS. Vacaville, Sept. 3d.

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Is trade—customers, and plenty of them; the kind that are ready and willing to pay cash for supplies, want good value for their money, and when they get it appreciate the trade and stay with us year after year. We can always suit better when we learn to understand each other. To secure this we must deal

FAIR AND SQUARE

With everybody, and this we try to do. We must change with the markets, but always try to go down as well as up. Flour in last list \$5.25, now \$4.25 to \$4.50 for the very best grades, and not likely to be lower. Ask for the last Price List, free.

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Estimates Furnished when Desired.

AMERICAN EXCHANGE HOTEL,

319 & 321 Sansome St., San Francisco.

One door from Bank of California.

The above well-known hotel offers superior accommodations to parties visiting the city.

The table is kept at top grade and the prices are within the reach of all.

RATES—\$1.00, \$1.25 and \$1.50 per day

Free Coach to and from the Hotel.

OHAS. & WM. MONTGOMERY, Prop'rs

WINCHESTER HOUSE,

44 Third Street, San Francisco, Cal.

This Fire-proof Brick Building is centrally located, in the healthiest part of the city, only a half block from the Grand and Palace Hotels, and close to all Steamboat and Railroad Offices.

Laundry Free for the use of Families
HOT AND COLD BATHS FREE.

Terms, Board and Room, \$1.00 per Day

And upward.

ROOMS WITH OR WITHOUT BOARD.

FREE COACH TO THE HOUSE.
J. POOLEY.

WANTED—AGENTS FOR THE BEST selling book in this country; 360 copies sold in a town of 3900 people; 66 in a town of 620; the largest sales ever known; agents have sold 10 books a day for 4 weeks in succession; ask for the agency for "The Child's Bible," over 400 illustrations. CASSELL & CO. (limited), 206 Broadway, Oakland, Cal.

BOUND VOLUMES—Back files of this paper bound in substantial cloth binding with leather back, containing six months' numbers in each, indexed, can be had at this office at \$4 per volume.

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Manufacturers of New, and Dealers in Second-Hand

BOILERS, ENGINES, PUMPS, HYDRAULIC MINING, QUARTZ AND SAW-MILL MACHINERY

OF EVERY DESCRIPTION.

PUMPING AND IRRIGATING PLANTS,

Woodworking Machinery,

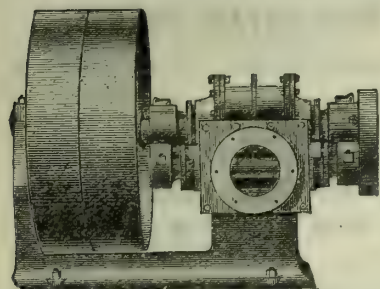
SHAFTING, PULLEYS, BOXES, HANGERS,

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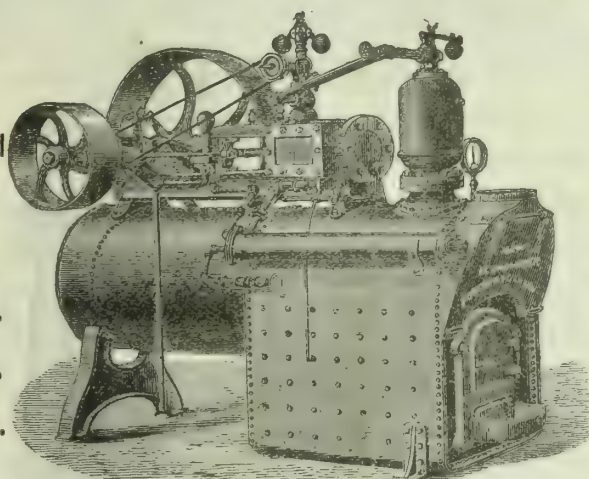
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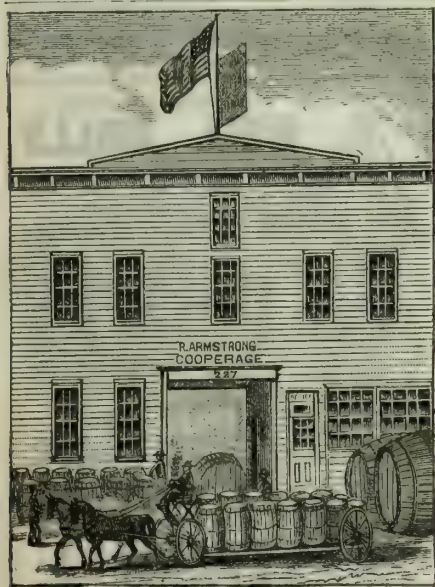
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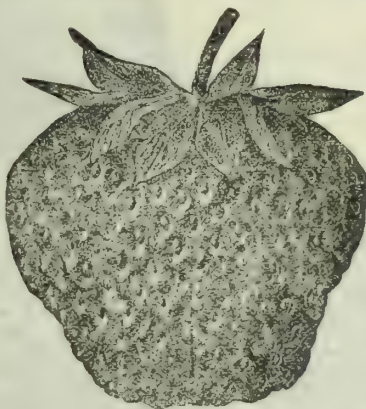


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THE DAIRY.

Centrifugal Separator Field Extended.

So many of the De Laval Centrifugal cream separators are now in use in Pacific Coast dairies, and so many other dairymen are contemplating the introduction of them that we believe some notes of the new styles now being manufactured to extend their applicability, will be read with interest. The Pacific Coast agents, G. G. Wickson & Co., 3 and 5 Front St., S. F., now have three styles of the De Laval, besides the regular machine which has been set up hitherto.

First is the "increased capacity" separator, which uses the same driving power as the regular separator but has twice the capacity, and is sold at a comparatively small advance in price. Some who have the regular machine, and desire more, are putting in the increased capacity separator. This is the case with the Steele Bros., of San Luis Obispo, who, after using the regular machine for about a year with satisfaction, have put one of the increased capacity in an adjoining dairy. The style of this machine is the same as the "regular" which has already been illustrated and described in our columns.

A Hand-Power Separator.

Another style of the De Laval which will interest many readers, is shown in Fig. 1 of the en-

fixed at the inlet on the steam pipe close to the turbine. With no belts and shafting, it requires very little room, the bottom of this machine measuring only 3x2 feet, and it can be placed in any corner without any foundation whatever. The steam turbine can also be applied to churns, and there are already several turbine dairies of considerable extent erected in Sweden.

All the styles of the De Laval and a full line of dairy supplies can be seen at Wickson & Co's dairy implement establishment at 3 and 5 Front St. They will also be shown at the leading fairs. At the Petaluma Fair last week, a premium of \$25 was awarded to the De Laval.

Vacaville Notes.

EDITORS PRESS:—The rush of the peach crop is over for this season. Most of the clings are gathered. The Orange, Lemon, Porter, McKevitt and Roseville clings are most grown here. The Salway and Pickets, both free-stone, are yet to come. There are a few other varieties, but these are the main late ones. There was considerable excitement about fruit last week. Buyers were running in all directions, and giving two and three cents per pound for peaches that would not sell for one cent a short time ago. Dried peaches are selling from 12 to 15 cents for unpeeled and 20 to 24 for peeled. Some wine grapes have been sent to S. F. and sold for \$20 per ton.

Help is pretty scarce, though tramps seem

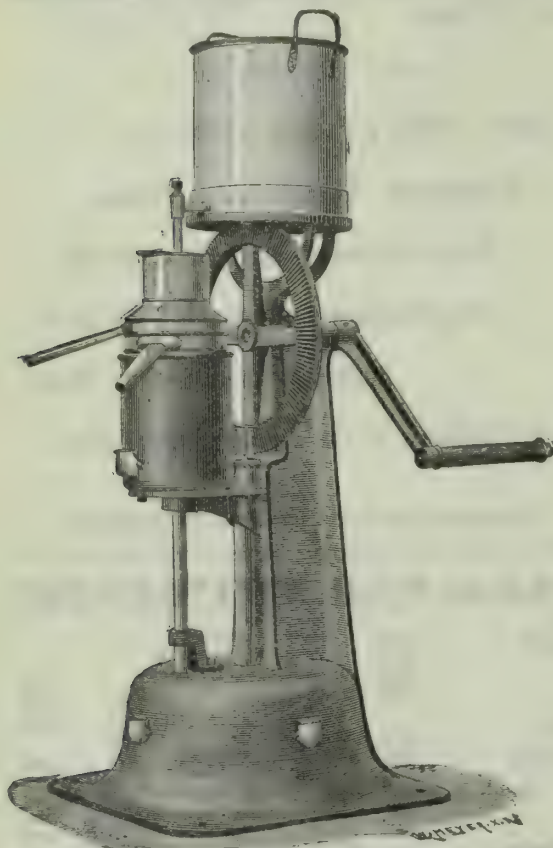


FIG. 1.—HAND SEPARATOR.

DE LAVAL CENTRIFUGAL CREAM SEPARATORS.

graving on this page. It is the De Laval Vertical Hand Separator, and promises to be of great value to owners of small herds or for family or hotel use. It is said to have a skimming capacity of 250 to 300 pounds per hour. This machine is constructed on the same principles as the usual well-known De Laval. The revolving cylinder has been lightened by shortening its radius, but with elongated walls, and is like its predecessor, pressed into shape from one solid piece of the best Swedish steel, thus offering all the guarantees of strength and durability which have made the larger machines so popular. The speed (6500 revolutions a minute), it is said, can be easily kept up by any man or woman of ordinary strength. It is easy to clean, every part of it being easy of access. No sliding belts whatever are used, so that 40 turns of the crank a minute make the proper speed of the cylinder a certainty.

The Turbine Separator.

Another style of the De Laval is shown in Fig. 2 and is called the Turbine, because the motive power is furnished by a jet of steam admitted near the base of the machine, as shown in the engraving. This separator does not require any engine or the usual means of communicating power, because the spindle carrying the cylinder is driven directly by a jet of steam, and by a very clever device the turbine is so constructed that the wear from friction renders the running bearing or joint more and more steam-tight instead of causing it to leak. It is claimed that the consumption of steam is about the same per horse-power as when engines are used, but the saving in the first cost of establishing a factory and in the running expenses is therefore considerable. No mechanical knowledge is required for managing it, the speed being regulated by opening or closing a common steam cock, raising or lowering the steam pressure, which is indicated by a usual steam gauge

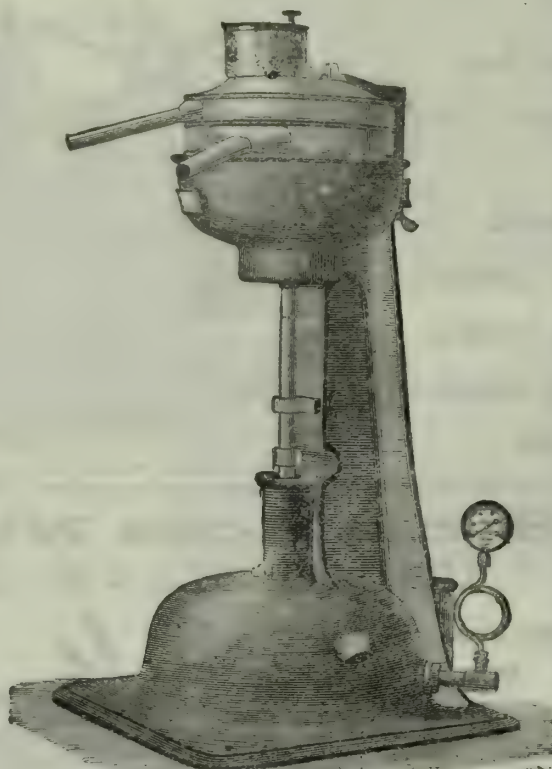


FIG. 2.—TURBINE SEPARATOR.

plenty. Chinamen are asking \$1.25 per day, and most of those who could get away have gone to the hayfields.

Several places have been sold about Vacaville lately. The Wilson place, containing about 160 acres, set to trees and vines four years, sold at \$600 per acre.

Most of the fruit-growers are doing well this year. They have had good crops and good prices, but every sweet has its bitter, and a great many engaged or sold their crops of dried fruit at 10 and 16 cents per pound, and now the knowledge that they could have got four or five cents more, if they had not sold so soon, takes all the pleasure out of getting a good price.

It sprinkled a little last night and threatens to-day. Rain now would do much damage to the large quantity of fruit which is out to dry, but by piling up the trays and keeping a close watch of the barometer, we hope to save it from serious wetting.

Vacaville, Sept. 5, 1887.

SUPERB APPLES.—In March, 1881, E. Leedham of Arroyo Grande, set out 20 Gravenstein apple trees—then one year old—which are now about eight inches in diameter and this season bore about 400 pounds of fruit each. Mr. Leedham (who is San Luis Obispo County's Commissioner at the Mechanics' Fair) has favored us with a big box of the apples. The largest of them measured nearer 12 than 11 inches in girth. Their rich coloring delighted the eyes, their fragrance the olfactories, and their juicy, fine-flavored pulp the palates of many employed about the office of the RURAL PRESS.

ACKNOWLEDGEMENT.—We acknowledge with thanks complimentary cards of admission to the following fairs: Mechanics Institute, San Francisco; State Fair, Sacramento; Pomological, Los Angeles.

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Los Angeles Pomological Society's Fair.

A Horticultural and Industrial Exposition is to be held in Hazard's pavilion, Los Angeles, next week, under the management of the Los Angeles County Pomological Society. Judging merely from the neat little pamphlet, giving names of officers, rules and premium list, which comes to us with the compliments of President Hiram Hamilton, one might safely infer that the preparations had been long in making, and that, too, with great care and painstaking. But we know from other sources that the committee have been putting forth unusual efforts to render the approaching fair the finest ever seen in that county.

The enumeration of articles for which medals and cash premiums are offered is very full, covering upward of 20 pages and embracing machinery and implements textile fabrics, needle, wax and fancy-work, painting and

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Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and, as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription rate, \$3 a year. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

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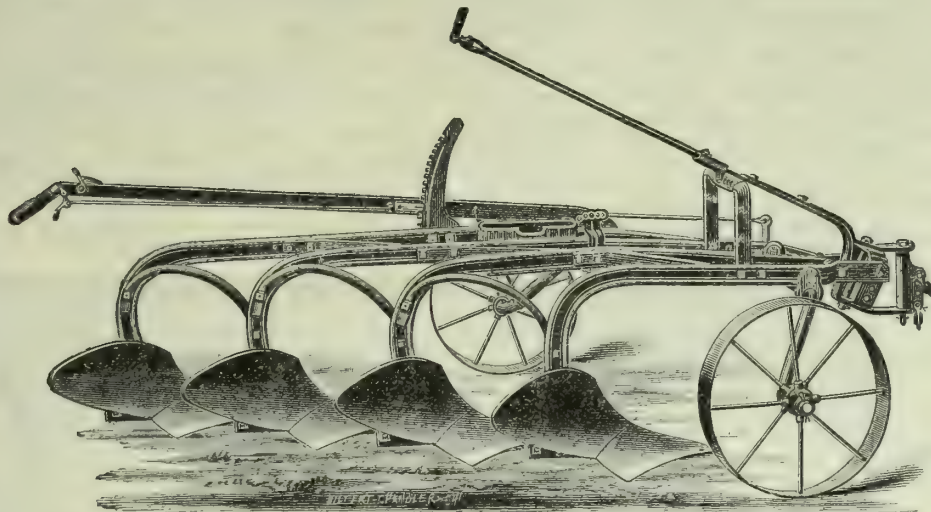
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—AND—
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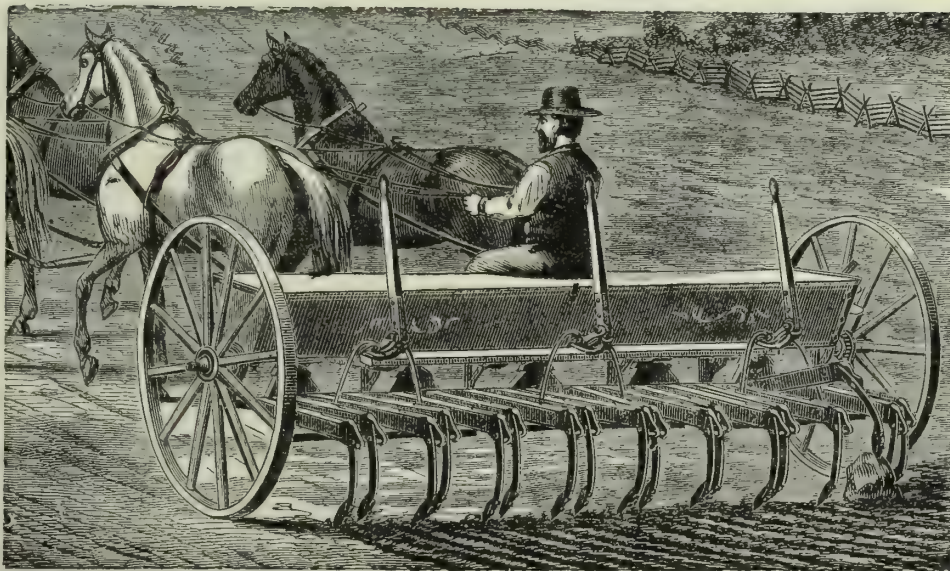
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6-foot, 11 Shovels, Single Gear, with 2 horses, will seed 8 acres per day, weight, 580 lbs. \$100 00
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10-foot, 18 Shovels, Double Gear, with 4 horses, will seed 25 acres per day, weight, 1010 lbs. 140 00
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14-foot, 26 Shovels, Double Gear, with 6 horses, will seed 40 acres per day, weight, 1400 lbs. 175 00

The Gorham Combined Seeder and Cultivator is a strong, substantial implement. It is fifteen years since we commenced the sale of the "GORHAM," and during that time the machine has been constantly and steadily gaining in public favor. It possesses many features of merit peculiar to it alone, to which we invite the careful attention and consideration of every farmer contemplating the purchase of a Seeder.

It is the most complete combination of Seeder and Cultivator in use and sows peatily all kinds of grain and other small seeds from the box. It has stood the most severe tests of time and use, and is now the standard Seeder of the Pacific Coast.



THE GORHAM SEEDER AND CULTIVATOR.

Its simplicity of construction enables it to be operated by any ordinary farm hand, and does not require a mechanical expert to handle it.

We put on all these machines the "Flat Scatterer," by which the grain is discharged upon the ground in a current about two feet broad and extending the entire length of the machine, parallel with the seed box. Another important advantage is that the grain is scattered before it comes in contact with the wind; and we can assure our patrons that no common disturbance of the air can affect the working of the machine.

A Lever of improved device for lifting and carrying the shovels is put on each machine.

We have placed the scatterer on the front side of seed box, which enables us to attach the drag bar further forward, making the machine more compact, higher draft, and better balanced.

Our new Adjustable Slip Tooth device, a novelty in its way, was well tested six seasons, and gave entire satisfaction to all who tried them.

We can, with confidence and pride, refer to thousands who are using it, knowing that they who have practically tested it, and are most thoroughly acquainted with it, are its warmest friends and admirers.

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State Fair Speed Program.

(Continued from Page 202.)

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J. B. Chase's ch. g. Kildare, by Kyrle Daly-Mistake.

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C. H. Eldred's b. f. Alma E. for Trickys, by Joe Hooker-Abbie W.

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Owen Bros.' ch. f. Serpolette, by Norfolk-Mattie Glenn.

Laurel Wood Stable's ch. f. Carmen, by Wildidle-Nettie Brown.

Laurel Wood Stable's ch. f. Not Idle by Wildidle-Bonanza.

Laurel Wood Stable's ch. f. Adeline, by Enquirer-Analyne.

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W. P. Todhunter's ch. g. Rock, by Bob Wooley-Miss Stoner.

Cabrera's ch. g. Manzanita, sire and dam unknown.

C. H. Eldred's b. f. Moonlight, by Thad Stevens-Twilight.

G. W. Trahern's b. g. Dave Douglass, by Leinster-Lily Simpson by Newry.

Jas. Garland's ch. c. Elwood, by Norfolk-Billette.

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Ninth Day, Sept. 24.

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Palo Alto Stock Farm's b. f. Manzanita, by Electioneer-Mayflower.

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Palo Alto Stock Farm's b. g. Howard, by Electioneer-Mamie by Ham, Jr.

J. D. Carr's ch. g. Manzanita, by Elmo-Ida May.

W. H. Seal's b. g. Alfred S., by Elmo-Nora Marshall.

S. B. Emerson's b. m. Maggie E., by Nutwood-George Patchen, Jr.

W. B. Bradbury's b. g. Old Nick, by Electioneer-Stockton Mail.

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The New Panorama Building, Corner of Tenth and Market Sts., S. F.

Missionary Ridge.

The magnificent battle panorama of the "Storming of Missionary Ridge," Nov. 25th, 1863, painted under the supervision of William Wehner, is now on exhibition at the corner of Tenth and Market streets, San Francisco, and should be seen by every lover of artistic excellence and historical accuracy, portrayed on canvas. "The battle of Chattanooga," says Dr. Draper in his "History of the Civil War," "was the most brilliant of the battles fought by Grant, and certainly the most picturesque of the war." Perhaps no great battle-scene was ever framed in such a magnificent landscape, and happily has the artist seized upon the most salient point of observation. It is on a spur of Missionary Ridge, just within the Confederate lines. Five States are in sight. In magnificent perspective may be seen the dim peaks of the Blue Ridge in Virginia, the

Ridge. This charge is the main feature of the panorama. A sort of haze rests over the landscape, for it is now 4 o'clock in the afternoon, and the sun is dropping out of sight behind the hills. A thin cloud flecks the shaggy brow of Lookout Mountain, but a good eye may see the spectral flag of the Seventh Kentucky floating from the top-most crest. Hooker has already fought the battle above the clouds.

In studying this picture the observer will bear in mind that Grant's plan was to break the enemy's center. To do this it was necessary to weaken it. Sherman and Hooker were therefore to press on the two flanks so as to compel reinforcements to be detached to them from the center. As soon as that was sufficiently weakened, Thomas was to assault it.

The night of the 24th was a busy one on both sides. All night long the Confederate signals flashed in sight of both armies, writing their fiery symbols upon the sky. Believ-

in four lines swept over the plain, deploying as they advanced so as to cover three miles of the ridge. Fifty guns poured a shower of shot and shell over all the way. There were many killed, many wounded, but the magnificent wave of battle moved forward. In 15 minutes they have carried the lower line of works and swept over them all along the line. Here they had been ordered to halt for a few minutes' rest, but impatient under a galling fire and elated with success, the men could not be restrained. They seemed determined on winning a victory for themselves. It was 500 yards to the summit. The ascent was broken by ravines, tangled by fallen timbers and huge masses of rock. Spurs jutted from the face of the ridge, serving as natural bastions from which field artillery and riflemen swept the intervening curtains of the slope with an enfilading fire. Bragg deemed his position impregnable, but nothing could check the ardor of the Union troops. They



soft outline of the North Carolina mountains, which, far away to the southeast, blend into the spur of the Rocky Face Range that vanishes southward, leaving the eye resting on a part of the Pigeon Range in Alabama. And this hardly half the horizon. As the visitor faces the town of Chattanooga, encircled from all land approach by lines of forts, batteries and rifle pits, to his rear is the valley of the Chickamauga, where, on the 20th of September, 1863, the sun went down on 30,000 men killed and wounded in the celebrated battle of Chickamauga, where Garfield won his spurs and Thomas displayed his matchless fighting qualities and saved the army. Before him is the valley of the Tennessee, through which flows the tortuous and sluggish waters of the Tennessee river. On the further shore may be seen the land-swell that leads to the Raccoon Range a little way north of Lookout Mountain, that over-brows in stern majesty the whole valley. From the nearer shore stretches a plain covered sparsely with dwarfish-looking trees and warted with knobs and knolls. This plain, clear up the slope to where the observer stands, was the chief theater of the bloody drama that culminated in the storming of Missionary

ing his left wing posted securely on Lookout Mountain, Bragg had, during the night, sent an entire division to strengthen his position on the Ridge. With the faint dawn of light Bragg's expectation of an attack on his right seemed to be about realized, but the real mysteries of the day were veiled by the fog in Lookout Mountain valley. Under that impenetrable curtain Hooker had arranged his lines, and as soon as it was light enough to march the drama of battle opened. How Hooker marched up the mountain, scaled its palisaded crests, is familiar history. In the meantime Sherman was not idle. Before daylight he was in the saddle and his attack was kept up furiously all day. As Sherman's position threatened the right flank of the enemy and their base of supplies, the Confederates moved heavily upon him. Grant was standing on Orchard Knob, from which everything could be seen as in a vast amphitheater. Trustingly relying on Sherman to hold his own on the left, struggling with an overwhelming mass, he waited for the approach of Hooker. The critical moment had come. The thunder-bolt was hurled.

At half-past three o'clock, at a signal of six guns from Orchard Knob, 20,000 men

fired but few shots; it was cold steel they used. Over rocks and logs, on they went. Now they have reached the crest. For a few moments there is a sharp hand-to-hand fight, but the day was won and Bragg and Breckinridge, in person, barely escaped. Sheridan's troops as they came rushing over the summit. At nightfall, Bragg, hotly pursued, was in hurried retreat, leaving Chattanooga, the most important stronghold of the West, in possession of the Union forces.

Last Saturday the panorama of this great strategic and picturesque battle was thrown open to members of the press and other invited guests, chiefly veterans of the war. Gen. O. O. Howard, who had supported Sherman in his futile attempt to turn the Confederate right wing, was present, also General W. L. Elliott, who commanded the Cavalry Corps of the Army of the Cumberland, Col. J. P. Jackson, who was a lively participant in the struggle, and Colonel Lyman Bridges, who fired the signal guns. These gentlemen made short speeches commenting on the realistic fidelity of the battle drama, the topography of the country, and all judges of fine art were struck with admiration at the magnificent scenic effect.

Petaluma Incubator.

This well-known incubator has been in practical use for several years, and each year has grown in popularity as a reliable and efficient machine for hatching eggs. It is not only popular on the Pacific Coast but is in use in the East and a number of foreign countries. From 1881 to 1885 there has been awarded 19 first premiums, among which are three gold medals.

The hatching of eggs by artificial heat has become a profitable business, and the popularity of this system of raising poultry in this State is largely due to the Petaluma incubator. By referring to an advertisement in this issue the merits and simplicity of this machine is more fully set forth.

The Petaluma Courier of last week says it has been shown letters from the managers of three of

the ostrich farms in this State, which prove that the Petaluma is giving the best satisfaction in hatching those large eggs, a most severe test, as the time required to hatch is 42 days.

Horse-Boots and Fixtures.

Mr. J. A. McKerron, for many years, has made this business a special study. A patent boot that he manufactures has been used for several years, and adopted by the leading horsemen in this State. The practical adaptability of these boots has spread abroad and Eastern orders are quite as large as those on the Pacific Coast. He employs a large force of skilled workmen at his factory at 228, 230, and 232 Ellis St., in a special line of horse-fixtures and equipments.

Important to Tree Planters.

One hundred and twenty-five thousand Fruit Trees for sale at a bargain, consisting of Apple, Pear, Peach, Apricot, soft and hard-shell Walnuts; also 2000 Fan-Leaf Palms. Sales will be made in lots, or the Nursery and stock will be sold on the most liberal terms as to price and payments, or will be exchanged for real estate. Inquire of J. M. Hixson, Real Estate Agent, 75 N. Spring street, Los Angeles, or address the proprietor, Milton Thomas, P. O. Box 304, Los Angeles, Cal.

Money Loaned

On Country Real Estate in large and small amounts at lowest rates, by A. Schuller, 106 Leidesdorff St., room 3.

SAN JOAQUIN VALLEY

District Agricultural Association

WILL HOLD THEIR

ANNUAL FAIR, SPEED PROGRAM AND EXHIBITION

—AT—

STOCKTON,

COMMENCING

TUESDAY.....SEPTEMBER 27th

And continue one week at Park and two weeks at Pavilion.

Great preparations have been made to make this meeting one of the most notable and attractive that has ever been held in this State.

LIBERAL PURSES,

For the Speed Program, Have Been Offered.

A LARGE EXHIBITION OF

AGRICULTURAL MACHINERY

—AND—

Combined Harvesters.

THE NEW PAVILION, which has just been finished, is the finest building on the Pacific Coast.

ENTERTAINMENTS, with a change of program for each evening, has been arranged.

There will be a SOCIAL DANCE, each evening for one hour.

J. M. LA RUE, Secretary.

L. U. SHIPPEE, President.

HORSE BOOT.

FINE HARNESS.



HORSE CLOTHING.

RACING MATERIAL

In Endless Variety at

McKERRON'S,

228, 230 & 232 Ellis Street,

San Francisco, Cal.

All Harness sold is exclusively of my own manufacture. It is unsurpassed for elegance of style, strength and durability.

THE CALIFORNIA HORSE BOOTS

Have fairly earned the reputation of being the BEST in use.

THE STOCK OF

HORSE CLOTHING

Is the Most Varied on the Coast.

Kitchel's Liniment, Going's, Dixon's, DeBoise's and Standard English Horse Remedies always on hand.

J. A. McKERRON, 228, 230 & 232 Ellis St., San Francisco.

A HEALTHY BOOM!

And a Boom that will know no Reaction!

Will Farmers, Stockmen, Ranchmen, Owners of Fowl, and every person that is interested in our dumb animals, please read the following:

It has been but little over one year since Dr. Fisherman's Carbolyzed Alkaline Lotion was first introduced on the Pacific Coast, and the demand created in that short time is unprecedented; orders are coming from all directions west of the Rocky mountains.

As very little has been done to advertise it, the reputation it has gained has been almost solely on its valuable merits. This Lotion is different from any other liniment ever put on the market, and we boldly claim that its merits cannot be excelled, and as to the point of economy it is many hundred per cent cheaper than any other remedy. To use it once, strictly as per directions, is to use it always. Some of the oldest and best stockmen on the Pacific Coast have discarded all other remedies and use only Carbolyzed Alkaline Lotion. The price is One Dollar for full quarts and Three Dollars for full gallons; as it is to be diluted, one-half with water, it makes just double that quantity of remedy. We guarantee satisfaction in each case or money refunded; we mean this; we have been established in business in San Francisco 21 years, and are here to stay, so we can easily be found.

Please send for copy of our 100 page illustrated book giving truthful testimonials and much other valuable information, which you get free:

This Lotion is recommended for the following ailments, viz.: Sprains, Sores, "New or Old" Bruises, Galls, Swellings, Scratches, Thrush, Grease Heels, Rheumatism. It has no equal for restoring weak knees and ankles to their original condition, Cows' Swelled Udder, Barbed Wire Wounds, Sore Lips, Mouth and Throat, Inflamed Eyelids, Mange, Itch, Skin Disease, etc. Prevents Ear Marks and Brands from becoming fly-blown during the branding season, and it has proved a sure cure for swelled heads and blindness in chickens and fowls; also has proven to cure alkali sores; also a valuable remedy for internal use.

The following is a copy of a letter received from the office of the Hoof and Horn Publishing Co., Prescott, Arizona.

Office of "HOOF AND HORN" Publishing Co.,
PRESCOTT, ARIZONA, July 20, 1887.

Messrs. Lynde & Hough—DEAR SIR: It pleases us to inform you that the Lotion is meeting with a remarkable run and is eagerly sought after by stockmen. Our sample lot was long ago exhausted, but the applications still come in daily for another bottle, so by now it looks as if your remedy would soon be the recipient of a "boom." Many parties have taken the address from our ad. column and will favor you with several orders soon, so they say. What inducement would it be to take the agency here, and what percentage would you give on every dollar's worth of the remedy sold. The sole and exclusive right to the Territory.

Very respectfully,

"HOOF AND HORN" PUBLISHING CO.

ASK YOUR DRUGGIST TO ORDER

DR FISHERMAN'S CARBOLIZED ALKALINE LOTION

For you, or order direct from us. Please give it a trial.

Yours, with respect,

LYNDE & HOUGH,

116 California Street,

San Francisco, Cal.

Farmers and Viticulturists, Attention!

FERTILIZE! FERTILIZE!

NITROGENOUS SUPERPHOSPHATE.

UNIVERSITY OF CALIFORNIA, Nov. 3, 1886.

DR. J. KOEBIG—Dear Sir: I have analyzed your sample of "Nitrogenous Superphosphate," with the following result:

Soluble Phosphoric Acid.....	12.90 per cent
Reverted Phosphoric Acid.....	.95 "
Insoluble Phosphoric Acid.....	2.83 "
Pota h.....	2.23 "
Ammonia.....	1.87 "
Nitric Acid.....	2.95 "

The above amount of Nitric Acid is equal to 0.85 per cent Ammonia, therefore, total of Nitrogen calculated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vineyards, orchards, gardens, farms, and I recommend its use by the cultivators of the soil generally, in California. Yours truly, DR. E. A. SCHNEIDER.

fertilizer. It is especially well adapted to use in California, on account of the predominance in it of Phosphoric Acid, which is generally in small supply in our soils. Yet it is desirable that "complete" fertilizers be used in our orchards and vineyards, and yours is of that character in furnishing Potash and Nitrogen as well. Very respectfully, E. W. HILGARD.

The value of this Fertilizer consists in the large percentage it contains of Phosphoric Acid—the chief element of all plant food—in combination with the necessary quantities of Potash and Ammonia, and the ease and cheapness with which it can be applied.

In ordinary soils the following quantities will be found sufficient: For Wheat, Barley, Corn and Oats, 300 to 350 pounds per acre. For Grass, Sugar Beets and Vegetables, 250 to 300 pounds per acre. For Vines, Fruit Trees, from 1/2 pound to 1 pound each. For Flower Gardens, Lawns, House Plants, etc., a light top dressing, applied at any time, will be found very beneficial.

University of California, College of Agriculture.

BERKELEY, Nov. 20, 1886.

DR. J. KOEBIG, San Francisco—Dear Sir: I take pleasure in adding my testimony to that of Dr. Schneider as to the high quality of the "Nitrogenous Superphosphate" Fertilizer, analyzed by him at your request. It is a high-grade article, and as such returns the user a better money value than a low-grade

FOR SALE IN LOTS TO SUIT,

On board cars at Sbranto, Station of the C. P. R. R., 20 miles north of San Francisco, at \$30 per ton, by the MEXICAN PHOSPHATE & SULPHUR CO., H. DUTARD, President, room 7, Safe Deposit Building, or

H. M. NEWHALL & CO., Agents, 309 and 311 Sansome St., San Francisco.

GRANGERS' CO-OPERATIVE STORE,
TENTH AND K STREETS, SACRAMENTO.



DEALERS IN

General Merchandise, Groceries, Agricultural Implements, Wagons, CARRIAGES AND BUGGIES.

A New Deal.

We buy for cash and sell for cash. The old credit system has been abandoned. We will not be undersold. We guarantee all goods as represented. We will give good value for your money. Our motto is quick sales and small profits and speedy returns.

Farmers and consumers will find it to their interest to call and see us and be convinced. T. A. LAUDER, Manager.

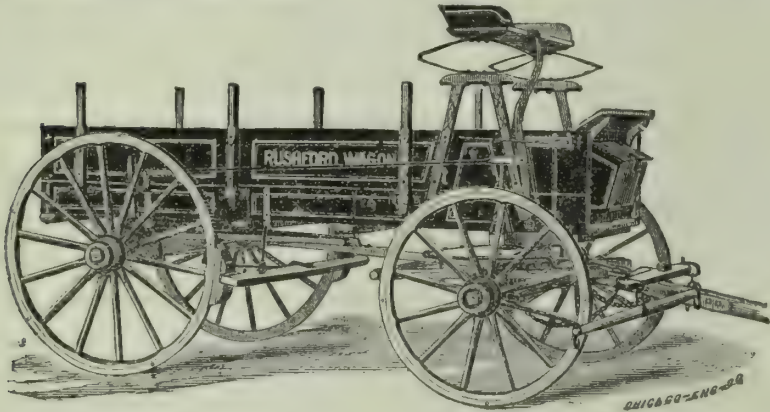
FARMERS! FREIGHTERS! DEALERS!

IT WILL PAY YOU TO EXAMINE THE

RUSHFORD TUBULAR Steel Axle AND Steel Skein WAGONS

BUILT FOR THE PACIFIC COAST TRADE.

The Tubular Steel Axle is made from one piece of wrought steel, from end to end, including spindles; with polished case-hardened spindles, and ground seamless boxes. We guarantee to replace any Tubular Axle bent or broken, no matter what weight or circumstances.



THE RUSHFORD STEEL SKEIN RANCH WAGON

Will carry 1000 pounds more weight than the same size of Iron Skein Wagon.

1. It is the only skein covering the tapering portion of the axle in SOLID STEEL.
 2. It envelops more of the axle with SOLID STEEL than any other skein.
- We carry all sizes of Tubular Axle and Steel Skein Wagons, with capacities from 2000 to 15,000 pounds. Prices same as for the old style of iron axle and skein wagons. Full descriptive catalogue on application.

14 & 16 MAIN ST.,
San Francisco.

BULL & GRANT FARM IMPLEMENT CO.,

233 N. Los Angeles
St., Los Angeles.

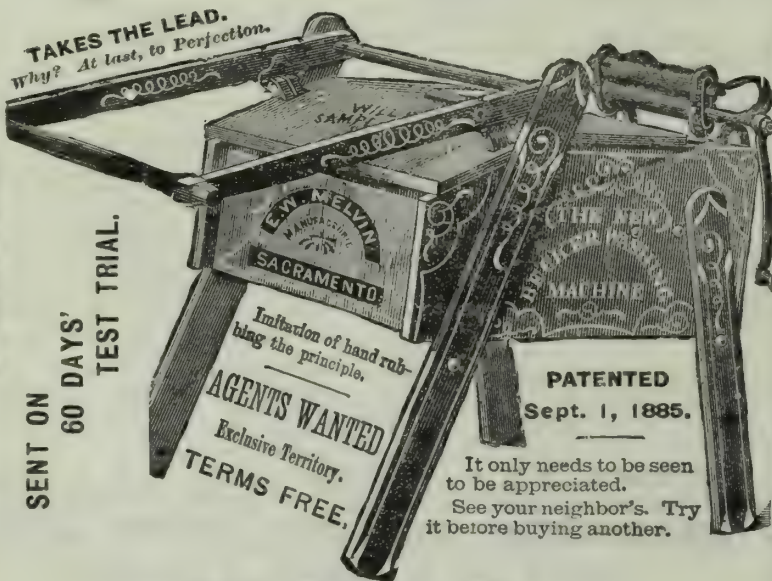
We Carry the largest assortment of the latest improved Agricultural Implements on the Pacific Coast; Acme Pulverizing Harrows; Jay Eye See Sulkys and Gangs; J. I. Case Steel and Chilled Iron Plows.

SPECIAL OFFER!

"NEW BECKER" WASHER HAS A REPUTATION.

IT

TAKES THE LEAD.
Why? At last, to Perfection.



BECKER'S LATEST IMPROVEMENT, the Greatest of American Washing Machines. Costs but Little More, and Worth Double any other Machine in the Market.

SENT ON
60 DAYS' TEST TRIAL.

7th Improvement April 1, 1887.

Approaches nearer to the old method of hand-rubbing than any invention yet introduced to the public. EASILY worked, and washes PERFECTLY clean. Owing to its intrinsic merits, thousands have been sold all over the United States, and all giving PERFECT satisfaction. It only needs to be seen and tried to be appreciated. Awarded first premium 1883, 1885 and 1886. In localities where as yet I have NO agent, I will ship sample Machine and Wringer on 60 days' trial, the party to pay for them at WHOLESALE prices and act as Agent, if found satisfactory; IF NOT, return them.

Do not lose money by waiting until SOME ONE ELSE orders samples and secures an agency for your locality. Farmers make \$200 to \$500 during the year. Ladies have great success selling this washer. WRITE AT ONCE for New Illustrated and Descriptive Pamphlet, which contains my liberal proposition. Mention this paper. Call and see me.

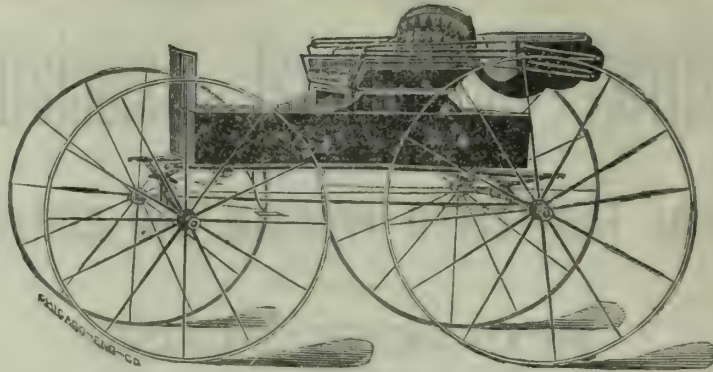
25,000 AGENTS WANTED.

E. W. MELVIN, Proprietor and Manufacturer.

OFFICE, 806 J STREET, SACRAMENTO, CAL.

DEWEY & CO., { No. 250 MARKET ST. } PATENT AGENTS.
Elevator 12 Front St.

WARRANTED FIRST-CLASS THROUGHOUT---PRICE, \$130.00.

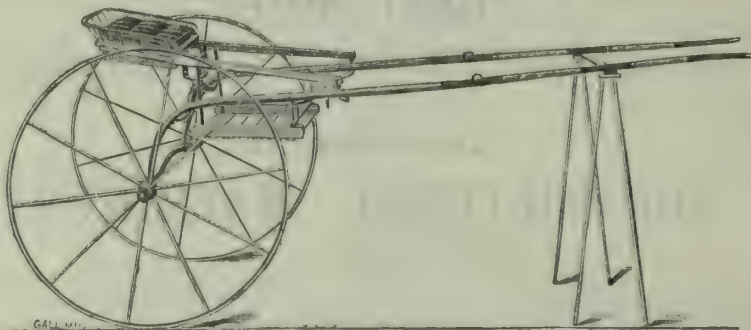


SOME IMPORTANT POINTS:

Derby Fifth Wheels; Double Collar Inch Steel Axles; Steel Round Edge Tires; Screwed Iron Wheels; Extra Wide Backs; Full Leather Tops 42 inches long; All jobs smoothly finished, and fine, smooth painting throughout.

IN STOCK:

END, SIDE, BREWSTER, TIMKEN and CONCORD SPRING BUGGIES. PHAETONS, SURREYS, CABRIOLETS, JUMP SEATS AND SPRING WAGONS.



NO. 0 CART, PRICE, \$80.00.

These carts have fifteen-sixteenths inch double collar steel axle, seven-eighths by three-sixteenths round edge steel tire, patent hub wheels. Has a double cross spring; adjustment for raising and lowering seat so as to fit different sized horses, box under seat in which to carry halter; is very simple in its construction, strong and durable. We aim to sell the best vehicle for the least money. Send for our illustrated catalogue and price list.

The Pacific Mutual Life Insurance Co.

OF CALIFORNIA. ORGANIZED 1887.

Paid to Policyholders and their representatives, more than \$3,500,000
Assets Exceed 1,600,000

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It is the only Life and Accident Insurance Company transacting business in the United States who a stockholders are by law made liable for the debts of the corporation, and whose directors are made responsible for the acts of its officers.

PROFIT All profits go to its policyholders, none to stockholders, who are limited to the interest earned by the money paid in by them. The Company's investments earn the highest average rate of interest of any Company in the world, and its location is a guarantee that this will be perpetuated, thus assuring the greater dividends to policyholders.

DEATH CLAIMS PAID DURING THE FIRST EIGHT MONTHS OF 1887.

Observe particularly the promptness with which payments follow proofs of deaths. On September 1, 1887, the Company had no unpaid claims on hand.

LIFE INSURANCE	NAME.	Residence.	Amount	Proof Received.	Claim Paid.	ACCIDENT INSURANCE
—ON—	Louis Lepetit	Oakland, Cal.	\$ 600	Jan. 24	Feb. 17	—BY THE—
	S. V. Warroble	Stockton, Cal.	7,308	Feb. 25	Feb. 25	
APPROVED PLANS.	W. H. Doyle	Shanghai, China	10,000	Feb. 25	Feb. 25	DAY,
	W. E. Hughes	Fresno, Cal.	3,000	Feb. 24	Feb. 25	
POLICIES	F. Wiedmayer	Ft. Dodge, Iowa	125	Feb. 10	Mar. 2	MONTH,
	Hassel Jewell	Fresno, Cal.	2,000	Mar. 2	Mar. 7	
—ARE—	W. G. Shaffer	Tacoma, W. T.	1,000	Mar. 3	Mar. 9	YEAR.
	J. L. Jones	San Francisco, Cal.	10,000	Mar. 21	Mar. 25	
LIBERAL, EQUITABLE, World-Wide, Incontestable.	D. E. Norton	El Dorado, Cal.	1,000	Mar. 10	Mar. 23	POLICIES ARE
	Eli T. Stone	Modesto, Cal.	465	April 11	April 18	
	C. F. J. Kitchener	Traver, Cal.	5,000	April 19	April 21	DEFINITE, Non-forfeitable
	C. M. Van Doren	White River, W. T.	3,000	Mar. 23	April 29	
	Margaret Brooks	San Francisco, Cal.	1,031	April 30	April 30	—AND—
	Mrs. F. A. Shepherd	Georgetown, Cal.	5,000	April 29	May 3	
	Elizabeth G. Toy	Chico, Cal.	2,920	May 5	May 14	Free From Technicalities.
	Justus Laux	Colusa, Cal.	2,255	May 7	May 16	
	J. J. Long	Missoula, M. T.	800	May 17	May 19	
	H. Van Husem	San Francisco, Cal.	350	April 29	May 21	
	T. D. Day	Stockton, Cal.	5,000	May 13	May 24	
	B. J. Guthrie	Davisville, Cal.	5,000	May 31	June 14	
	Edw. D. Sillsby	San Francisco, Cal.	5,000	June 30	June 30	
	Lewis McMillan	White River, W. T.	2,000	July 7	July 7	
	Jene A. Blauingame	Dry Creek, Cal.	970	July 20	July 20	
	George Ohle	Empire City, Nev.	350	Aug. 10	Aug. 16	
	Andrew Jellby	Red Bluff, Cal.	1,100	Aug. 15	Aug. 29	
	Total		\$80,054			

Principal Office, 418 California St., San Francisco, Cal.

GOOD CROPS EVERY SEASON WITHOUT IRRIGATION.

Free by mail, specimen number of "The California Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of

SANTA CRUZ COUNTY.

Address, "EXCHANGE AND MART," Santa Cruz, Cal.

This paper is printed with Ink Manufactured by Charles Eneu Johnson & Co., 500 South 10th St., Philadelphia. Branch Offices—47 Rose St., New York, and 40 La Salle St., Chicago. Agent for the Pacific Coast—Joseph H. Dorsey, 529 Commercial St., S. F.

Fair Awards.

Following are pavilion awards at the Sonoma county (Santa Rosa) fair for products of agricultural and allied industries:

Best and most extensive display of general products of Sonoma county, Pomona Grange; best white corn, E. A. Rogers; Australian wheat, J. P. Cook; dry sweet corn, E. H. Light; six turnip beets, J. Roberts; collection of vegetables, C. W. Hawkins; largest pumpkin, J. Roberts; watermelons, O. H. Light; muskmelons, do.; six blood beets, C. O. Grove; bouquets, Miss M. Hawkins; flowers and plants, M. H. Dunn; ornamental foliage, pinks, ferns and cut flowers, do.; loaf of bread, Miss Ethel Hardin; soda biscuit, do.; graham bread, Hallie Porter; best loaf bread, do.; best corn-bread, Mrs. Button; brown bread, do.; sponge cake, Mrs. B. M. Spencer.

Best variety of figs, Mrs. Mary Henderson; six kinds of fruit, do.; six var. peaches, M. Littlefield; display of plums, do.; display apples, C. Wightman; pears, E. H. Light; branded peaches, O. Wightman; canned fruits, S. R. Packing Co.; blackberry jam, Mr. J. H. Laughlin; plum jelly, Mrs. Singerfetter; prune jelly, Mrs. P. Wells; blackberry jelly, do.; best ten pounds dried apples, C. Wightman; peaches, do.; pears, do.; apricots, do.; raspberries, do.; plums, do.; nectarines, do.; cherries, do.; blackberries, do.; prunes, do.; strawberries, do.; general display of produce, do.; best six var. table grapes, L. A. Murdoch; best three var. table grapes, Mrs. A. Moore; display Cal. raisins, C. Wightman; six var. wine grapes, P. Wells; best general display by producer, do.; best grape brandy, J. DeTurk; best white wine, do.; claret, do.; sweet wine, do.; sherry, do.; soft shell almonds, Mrs. Mary Henderson; Sonoma Co. raised nuts, C. Wightman.

Wine-press, Pare Bros.; corn planter, E. H. Light; windmill, N. G. Finlay (cyclone); churn, Geo. Osborn; plow, Baker & Ross; vineyard plow, do.; farm wagon, do.; top buggy, do.; cart, do.; open buggy, Colgan & Hervey; two-seated wagon, do.; spring wagon, do.; set double harness, Prindle & Seavy; single harness, do.; display saddlery, do.

Recommended for special premiums.—Display of natural flowers, Miss Wiseman; ornamental grasses, do.; garden seed drill, E. H. Light; fence machine (Empire), S. V. Cooper; bale of alfalfa hay, C. O. Grove; display of silk cocoons, etc., J. Neuman; turned horseshoes, W. H. De Ban.

Fairs to Come.

Mechanics' Institute, San Francisco, Sept. 1 to Oct. 8.
California State, Sacramento, Sept. 12 to 24.
Oregon State, Salem, Sept. 12 to 17.
Los Angeles Co. Pomological, Los Angeles, Sept. 12 to 17.
Nevada State, Reno, Sept. 21 to Oct. 1.
Second Dist.—San Joaquin, Stanislaus, Merced and Tuolumne—Stockton, Sept. 26 to Oct. 1.
Ninth Dist.—Humboldt and Del Norte—Rohnerville, Sept. 27 to 30.
Eighteen Dist.—Alpine, Inyo and Mono—Independence, Sept. 27 to Oct. 1.
Nineteenth Dist., Santa Barbara, Sept. 27 to 30.
Tenth Dist.—Siskiyou, Trinity and Shasta—Yreka, Sept. 28 to Oct. 1.
Contra Costa Co. Agricultural, Oct. 3 to 8.
Santa Clara and San Mateo—San Jose, Oct. 3 to 8.
Sixth Dist.—Los Angeles, San Bernardino and Ventura—Los Angeles, Oct. 3 to 8.
Eleventh Dist.—Plumas, Lassen, Modoc and Sierra—Susanville, Oct. 3 to 8.
Eastern Slope, Bishop Creek, Oct. 3 to 8.
Seventh Dist.—Monterey and San Benito—Salinas, Oct. 4 to 8.
Twenty-Fifth Dist.—Napa and Solano—Vallejo, Oct. 4 to 7.
Twenty-Sixth Dist.—Amador and Calaveras—Yuba, Oct. 5 to 7.
Portland Mechanics' Fair, Oct. 6 to 22.
North Pacific Domestic and Fat-Stock Assoc., Portland, Or., Oct. 9 to 17.
Fifteenth Dist.—Tulare and Kern—Visalia, Oct. 10 to 15.
Third Dist.—Butte, Colusa and Tehama—Chico, Oct. 11 to 15.
Twelfth Dist.—Lake and Mendocino—Ukiah, Oct. 11 to 15.
Sixteenth Dist., San Luis Obispo, Oct. 12 to 15.
Pajaro Valley, Watsonville, Oct. 20 to 22.
San Diego Co. Horticultural and Agricultural, Oct. 28 to 30.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

JARED C. HOAG—California.
G. W. INGALLS—Arizona.
GEO. McDOWELL—Santa Clara Co.
W. J. FARRMAN—Nevada.
J. L. DOYLE—Nevada Co.
WILLIAM POOL—Fresno Co.
R. G. HUSTON—Butte, Montana.
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M. S. PRIME—Solano Co.
SILAS PRUDEN—Colusa Co.
B. R. McPHERSON—Santa Barbara Co.

HOLSTEINS.—C. E. Humbert and Paul Leroux, the new Cloverdale firm of importers of horses from France, have at their ranch 18 Holstein-Friesian cattle of the Aggie strain, headed by Sir Newton of Aggie 2d.

COTSWOLDS.—R. H. Crane of Petaluma has a large invoice of Cotswold sheep now on the way out, and is supplying parties who desire to improve their flocks.

PACIFIC COAST WEATHER FOR THE WEEK.

(Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.)

DATE.	Portland.				Red Bluff.				Sacramento.				S. Francisco.				Los Angeles.				San Diego.			
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.
Sept. 1-7.																								
Thursday.....	.00	64	N	Fr.	.00	82	N	Cl.	.00	78	Nw	Cl.	.00	73	W	Cl.	.00	76	SW	Cl.	.00	68	W	Cl.
Friday.....	.36	65	S	Cy.	.00	88	S	Cl.	.00	82	SW	Cl.	.00	67	W	Cl.	.00	78	W	Cl.	.00	66	Nw	Cl.
Saturday.....	.18	54	Nw	Cy.	.00	74	Nw	Cl.	.00	72	Nw	Cl.	.00	68	W	Cl.	.00	76	W	Cl.	.00	66	W	Cl.
Sunday.....	.04	64	Nw	Cl.	.00	72	N	Cl.	.00	72	Nw	Fr.	.00	65	W	Cy.	.00	72	S	Cl.	.00	68	SW	Cl.
Monday.....	.02	72	Nw	Cl.	.07	80	W	Cl.	.T	63	S	Fr.	.02	58	SE	LR.	.00	74	SW	Cl.	.00	66	W	Cl.
Tuesday.....	.00	82	NE	Cl.	.00	72	S	Fr.	.T	60	SW	Cy.	.18	60	Nw	LR.	.00	74	W	Cl.	.00	66	Nw	Cl.
Wednesday.....	.00	58	S	Cy.	.T	66	S	Cy.	.02	64	S	Fr.	.02	62	Nw	Cl.	.00	78	W	Cl.	.00	68	Nw	Cl.
Total.....	.60				.07				.02				.22				.00				.00			

EXPLANATION.—Cl. for clear; Cy., cloudy; Fr., fair; Fy., foggy; — indicates too small to measure. Temperature. Wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

Mr. White's Holsteins.

J. H. White of Lakeville, Sonoma county, exhibited 18 head of registered Holstein-Friesian cattle that were much admired, and pronounced by several cattle experts one of the best herds of show cattle ever seen in this State. His importations have been from the most noted strains of the herd book. At the head of his string are Oro Blanco and Lancaster, two-year-old bulls of large size, fine symmetry, and deep black with white points. A span of yearling bulls, Laurin and Huachuca, attracted a good deal of attention from cattle men. In the next stall were Annemie and Winfridalie, four-year-old cows that were models of beauty. Dagodine (a cut and description of whom appeared in the RURAL PRESS last year) was in the next stall with her calf, and has improved with age. The cows Letta, Wayward and Lyle, three-year-olds, are very promising animals. Ocola, two years, and the yearling heifers, Sierra and La Sonite, were much admired. Although Mr. White's cattle were placed at the lower end of the yard they had more visitors than any herd on the ground. During the past year, Mr. White has had a steady and brisk demand for young bulls and heifers, and his success may be attributed to his select importation and judicious breeding. His cattle will be on exhibition at the State Fair and San Joaquin Valley District Association.

From Sonoma County.

EDITORS PRESS:—The first rain of the season has just come to us. For several days there had been threatenings of a shower, but "the oldest inhabitant" said there would be no rain, and consequently the tardy farmer had his grain yet unharmed. However, the damage to grain and hay will amount to but little. The dry feed in pasture will be somewhat damaged. Business in country and town alike is flourishing. An increased demand for property is perceptible, and money is seen changing hands every day.

Hop-pickers are in great demand. Everybody, white, black or copper-colored, who can pick hops can find employment at good wages. Wine-making will soon claim attention. The vintage will be good, better than at first expected. Already some of the white grapes are ready for the cellar.

Our fair city is getting ready for the State Grange meeting. The subordinate Grange is at work preparing for the entertainment of visiting Patrons, of whom there promises to be many. All are invited.

OCCASIONAL.

Santa Rosa, Sept. 6, 1887.

A Good Move.

A surveying party is at work on the Buena Vista rancho near Salinas, consisting of 7000 acres, which will be platted in parcels of from 50 to 500 acres. This whole tract is now offered for sale in subdivisions at one-third cash and the balance in one, two and three years, at eight per cent.

Several large land-holders in Monterey county are making preparations to follow the same plan, which will place on the market some of the most productive land in the State. Monterey county has become noted for an equable and salubrious climate, and the Hotel Del Monte and Pacific Grove Retreat, situated in this county, have become the popular resorts on the Pacific Coast.

The policy adopted by the proprietors of the Buena Vista has given new life and created quite a furore in this staid community. Its adaptability in raising small fruits, and the thermal belt running the entire length of the county, has caused a large inquiry during the last 30 days from persons who wish to plant orchards and build homes. Land in this locality is offered at from \$50 to \$100 per acre in small tracts.

THE LANE & BODLEY CO., Cincinnati, O., established 1850, are the oldest and most extensive manufacturers of engines and sawmills in this country. The excellent quality of their work, fair dealing and liberal use of printers' ink has given their goods a reputation and sale throughout the entire civilized world. We take pleasure in referring our readers to their announcement in another column of this issue.

A Challenge to Fruit Growers.

Citizens of Tehama county have an emphatic way of asserting their belief in the adaptation of their lands. A dispatch from Red Bluff, Sept. 2d, says:

The fruit-growers of Tehama county, Cal., do hereby challenge any portion of the State to compete with them in fruit-growing, for a prize of \$400, to be paid by the losing party. The fruit to consist of ten acres of the following varieties: Oranges, lemons, peaches, nectarines, apricots, prunes, apples, cherries, figs and grapes; trees to be selected by a competent nurseryman for the competing parties and planted in the season of 1887-88, and to be of the same size and age. The prize to be awarded by a committee selected by the competing parties as soon as the trees come into bearing. The challenge will include quantity, quality, size and keeping qualities and earliness of ripening. Parties accepting this challenge will correspond with Dr. Westlake.

HON. H. C. WILSON,
DR. G. W. WESTLAKE,
W. H. BAHNEY,
GEORGE H. FLOURNOY.

Red Bluff, Tehama County, Cal., August 27.

MONTEREY COUNTY LANDS.—Among recent transactions in real estate, we notice that 7665 acres of the Gabalan ranch, belonging to M. Lynn, was bonded last week to a syndicate of California and foreign capitalists through J. C. Hoag of San Francisco for \$240,000, the bond to run 60 days. In the event of the purchase being made, Mr. Lynn agrees to rent the tract the coming year, paying therefor the sum of \$17,000 per annum, the object of this being to close out his farming and dairy interests without sacrifice, he being a large operator.

Over-Worked Women.

For "worn-out," "run-down," debilitated school teachers, milliners, seamstresses, housekeepers, and over-worked women generally, Dr. Pierce's Favorite Prescription is the best of all restorative tonics. It is not a "Cure-all," but admirably fulfills a singleness of purpose, being a most potent specific for all those Chronic Weaknesses and Diseases peculiar to women. It is a powerful, general as well as uterine, tonic and nerve, and imparts vigor and strength to the whole system. It promptly cures weakness of stomach, indigestion, bloating, weak back, nervous prostration, debility and sleeplessness, in either sex. Favorite Prescription is sold by druggists under our positive guarantee. See wrapper around bottle. Price \$1.00 a bottle, or six bottles for \$5.00.

A large treatise on Diseases of Women, profusely illustrated with colored plates and numerous wood-cuts, sent for ten cents in stamps.

Address: WORLD'S DISPENSARY MEDICAL ASSOCIATION, 683 Main Street, Buffalo, N. Y.

"Golden Medical Discovery"—the great blood purifier

Offensive breath vanishes with the use of Dr. Sage's Catarrh Remedy.

GRINDING EGYPTIAN CORN.—Those of our readers who raise Egyptian corn and have trouble and expense in preparing it for feeding will be interested in the advertisement on another page of the Scientific Feedmill, which experience proves will grind Egyptian corn in the head just as it grows, without even the expense of thrashing, and parties using these mills in Fresno and Visalia counties for this purpose speak very highly of the work performed, as also the benefit to their stock from this feed.

PREMIUM ROADSTERS.—J. R. Rose's span of four-year-old roadsters, which took the first premium at the Petaluma Fair, are of the McClellan stock and closely related to the famous Nellie R.

Do you want the best goods at the least cost? If so, send to Weinstock & Lubin, Sacramento, Cal., for their large Fall Catalogue (free). Among other attractions it presents eight pages of finely lithographed Eastern Fashions. Weinstock & Lubin are the largest general retailers on the coast, and in busy seasons fill as high as a thousand mail orders a day.

SOUTH OAK RANCH, ONE AND A HALF MILES from Kelseyville, Lake county; house of 6 rooms; insured for \$600; soil of ranch 60 feet deep; fine for olives, apricots, peaches, prunes and grapes; Lake county produced richest-flavored, highest-flavored and best-keeping fruits at New Orleans World's Fair; this ranch of 160 acres at \$2500 (six acres plowed ready to plant) a great bargain. Address or call on W. L. FOSTER, Kelseyville, Lake county.

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R. H. McDonald Jr.
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It is the Leading Agricultural Home Newspaper and standard authority on all branches of California Agriculture.

It has the fullest and most accurate REPORTS OF HORTICULTURAL MEETINGS, and is the best record of the EXPERIENCE OF INDIVIDUAL FARMERS AND FRUIT-GROWERS in all parts of the State.

Its market reports are prepared with care and the greatest reliability possible for the benefit of the producer.

THE PACIFIC RURAL PRESS has more circulation and influence in the Pacific States and Territories than all the other agricultural weeklies in the United States combined. Advertisers can reach nearly all the leading reading farmers through its columns.

A well-known horticulturist who was in attendance upon the meetings of fruit-growers, writes: "The greatest praise that could be bestowed on the PACIFIC RURAL PRESS at the late Fruit-Growers' Convention, and which shows, undoubtedly, the well-deserved popularity of that paper, is the fact that almost all the members of that Convention were subscribers to the Press."

It is a Farm and Home Journal of the highest class, pure in tone and well informed on all matters of industrial interest. It is handsomely printed and illustrated. It is a 20-page weekly, and is furnished, postage paid, for \$3 per year in advance. Single copies, 10 cents, prepaid.

What Others Say of the "Rural Press."

PROUD OF THE RURAL.—We feel proud of the RURAL PRESS. It is a paper that we are not ashamed to send to our friends in the East. Every farmer on the Pacific Coast should take it, and it is a valuable paper for any one to read. We appreciate your efforts. Long may you live to bless our cause. —James Blood, Santa Barbara Co.

THE RURAL BEST OF ALL.—I take from four to six papers but if I could take but one, I should unhesitatingly choose the PACIFIC RURAL PRESS. —J. M. Asher, San Diego Co.

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I have found the Machine (No. 3) very simple, and it does the work to perfection. Parties who have larger Driers of different makes say they cannot turn out superior fruit (apricots and peaches) to mine.
Vacaville, June 12, 1887. I. W. A. GILMORE.

I found the Machine (No. 2) good, and can truly subscribe to all the merits claimed for it. I have sent apples to Santa Rosa and they sold as first-class.
Laguna, July 15, 1887. W. H. J. AITKEN.

Evaporator came safe to hand (No. 3). Have tried apricots with good success.
Stockton Nursery, July 15, 1887. E. C. CLEWES.

Be'ore writing I wanted to test the Drier also on peaches, apples and pears. Am now doing so with the very best results. Upon the whole, I am greatly pleased with the Drier.
(Rev. Dr.) W. ALEXANDER.
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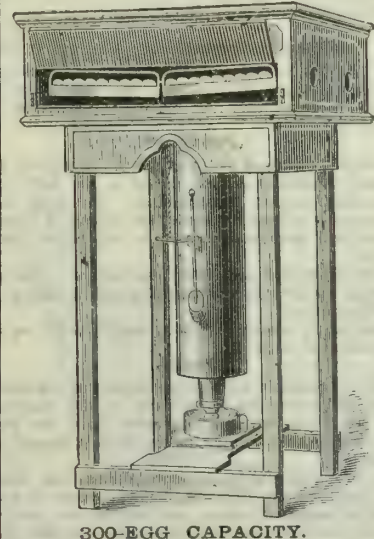
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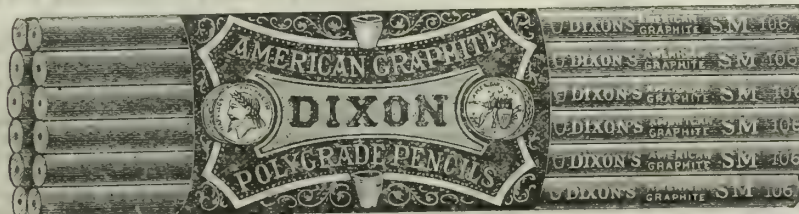
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do good	1 20	@	1 45	Sweet V. Grass	9	18
do fair	1 25	@	1 50	Orchard	17	18
Dr.	1 14	@	1 57	do	9	10


Wet salted.....	7 1/2 @	8 1/2	Lawn.....	30 @	40 @
HONEY, ETC.			Mosquit.....	8 @	9 @
Beeswax, lb.....	20 @	22	Timothy.....	7 @	7 1/2 @
Honey in comb.....	11 1/2 @	14			
Honey in comb.....	14 @	16	Crude, lb.....	2 @	—
Extracted, light.....	5 @	6	Reddied.....	1 @	—
do dark.....	4 @	5 1/2	FALL—1887.		
HOPS.....			Humboldt and		
Oregon.....	17 1/2 @	22 1/2	Mendocino.....	18 @	20 @
California.....	15 @	22 1/2	Sacramento valley.....	14 @	18 @
ONIONS.....			Free Mountain.....	18 @	20 @
Pickling.....	50 @	75	S Joaquin valley.....	11 @	16 @
Red.....	25 @	30	do mountain.....	12 @	17 @
Silverskins.....	50 @	65	Cava's & F'tall.....	12 @	17 @
NUTS—JOBBER.....			Oregon Eastern.....	14 @	20 @
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do choice.....	50 @	1 25	Nectarines.....	8 @	10
Apricots, lb.....	—	—	do evaporated.....	16 @	18
Bananas, bunch.....	1 50 @	3 00	Peaches.....	12 @	12 1/2 @
Blackberries, ch.....	4 00 @	6 00	do pared.....	—	—
Cantaloupes, cr.....	50 @	—	do evaporated.....	24 @	25
Cherries, white bx.....	—	—	Pears, sliced.....	5 @	6
do black bx.....	—	—	do qtd.....	5 @	5
do Royal Ann.....	—	—	do evaporated.....	8 @	10
Cherry plums.....	—	—	Plums, evaporated.....	13 @	13 1/2 @
Crabapples.....	—	—	do unpitted.....	3 @	5
Cranberries.....	10 00 @	12 50	Prunes.....	10 @	13
Currants ch.....	—	—	do French.....	11 @	14
Gooseberries lb.....	—	—	Zante Currants.....	8 @	—
Pears, black bx.....	30 @	50	RAISINS		
do white bx.....	30 @	50	Dehesa Clara, fcy 2 40 @	2 50	
Grapes, white.....	20 @	35	Imperial Cabine.....	—	
do black.....	20 @	30	et. fancy.....	1 75 @	—
do Rose Peru.....	25 @	40	Crown London.....	—	
do Muscat.....	35 @	50	Layers, fcy.....	1 50 @	—
do Tokays.....	40 @	60	do Loose Mus.....	—	
Isabel.....	15 @	20	castels, fancy 1 40 @	—	
Wine, Zinfandel.....	15 @	20	do Loose Mus.....	—	
do Mission.....	15 @	20	castels.....	1 35 @	—
Limes, Mex.....	10 00 @	—	Cal. Valencias.....	1 25 @	—
do Cal. box.....	—	—	do Layers.....	1 25 @	—
Lemons, Cal., bx.....	—	—	do Sultanas.....	1 25 @	—
do Sicily, box.....	8 00 @	—	Fractious come 25, 50 and 75		
do Australian.....	50 @	75	cents higher for halves, quarters		
Oranges, Com bx.....	—	—	and eighths.		
do Choice.....	—	—	VEGETABLES		
do Panama.....	—	—	Artichokes, doz.....	—	—
Peaches, bx.....	40 @	80	Asparagus @ bx.....	—	—
do basket.....	50 @	80	do extra choice.....	—	—
Crawfords, bx.....	—	—	Okra, dry, lb.....	15 @	20
do basket.....	—	—	do green lb.....	5 @	—
Pears bx.....	40 @	60	Paraulps, ctd.....	1 50 @	—
do Choice.....	50 @	1 25	Peppers, dry lb.....	10 @	—
do Bartlett, bx.....	—	—	do green, box.....	25 @	50
Persimmons.....	—	—	Pumpkins pr ton.....	—	—
Jap, bx.....	—	—	Squash, Marrow.....	—	—
Pineapples, doz.....	4 00 @	5 00	fat, too.....	—	—
Plums lb.....	2 @	3	do Summer bx.....	25 @	60
Pomegranates, b.....	—	—	String beans lb.....	14 @	2
Prunes lb.....	25 @	3 1/2	Tomatoes box.....	15 @	20
Quinones bx.....	74 @	—	do choices.....	20 @	35
Raspberries ch.....	—	—	Turkeys ctd.....	25 @	60
Strawberries ch.....	3 50 @	6 00	Beets, sk.....	30 @	50
Watermelns, 100.....	3 00 @	7 50	Cabbage, 100 lbs.....	50 @	—
DRIED FRUIT			Jarrots, sk.....	35 @	—
Apples, sliced, lb.....	12 1/2 @	13 1/2	Eggplant, @ bx.....	35 @	60
do evaporated.....	13 @	14	Garlic, lb.....	14 @	3
Apricots.....	9 1/2 @	10 1/2	Green Corn, cr.....	50 @	75
do evaporated.....	16 1/2 @	18 1/2	do sweet cr.....	75 @	1 25
Blackberries.....	13 @	14 1/2	do large box.....	1 00 @	1 50
Citron.....	28 @	30	Green Peas lb.....	—	—
Dates.....	9 @	10 1/2	Sweet Peas lb.....	2 @	3 1/2
Figs, pressed.....	6 @	7 1/2	Lettuce, doz.....	10 @	—
			Lima Beans lb.....	—	—
			Mushrooms, lb.....	8 @	—
			Rhubarb bx.....	—	—



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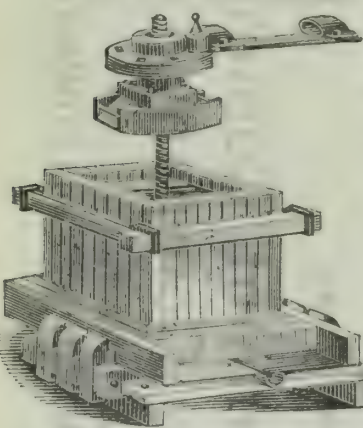
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H. M. LARUE, Yolo County.
I. C. STEELE, San Mateo County.
THOMAS MCCONNELL, Sacramento County.
C. J. CRESSEY, Merced County.
SENECA EWER, Napa County.

CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up, and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

DEPOSITS received. CERTIFICATES OF DEPOSIT issued payable on demand. BILLS OF EXCHANGE of the Atlantic States bought and sold. **ALBERT MONTPELLIER,** Cashier and Manager.

San Francisco, July 1, 1887.

HORTON & KENNEDY'S

FAMOUS ENTERPRISE

Self-Regulating WINDMILL

Is recognized as THE BEST.



Always gives satisfaction. SIMPLE STRONG and DURABLE in all parts. Solid Wrought-iron Crank Shaft with DOUBLE BEARINGS for the Crank to work in, all turned and run in adjustable babbitted boxes.

Positively Self-Regulating.

With no cone springs, or springs of any kind. No little rods, joints, levers, or anything of the kind to get out of order, as such things do. Mills in use 8 to 12 years in good order now, that have never cost one cent for repairs. All genuine Enterprise Mills for the Pacific Coast trade come only through this agency, and none, whether of the old or latest pattern, are genuine except those bearing the "Enterprise Co." stamp. Look out for this, as inferior mills are being offered with testimonials applied to them which were given for ours. Prices to suit the times. Full particulars free. Best Pumps, Feed Mills, etc., kept in stock. Address,

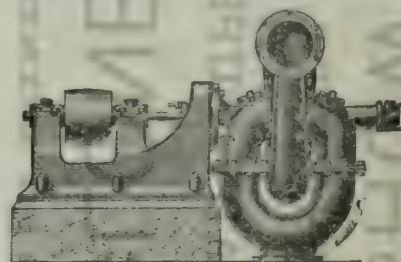
HORTON & KENNEDY.

GENERAL OFFICE AND SUPPLIES (as always before)
LIVERMORE, ALAMEDA CO., CAL.
San Francisco Agency—**JAMES LINFORTH**
120 Front St., San Francisco.

H. P. GREGORY & CO.

SOLE AGENTS FOR

WEBBER'S CELEBRATED



IRRIGATING PUMPS.

We also carry in stock the LARGEST LINE OF

MACHINERY

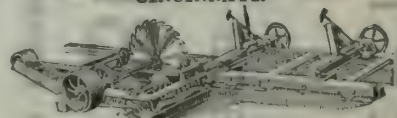
In the UNITED STATES.

Consisting of Wood and Iron Working Machinery. Pumps of every description.

ENGINES AND BOILERS

A SPECIALTY.

THE LANE & BODLEY CO., CINCINNATI.

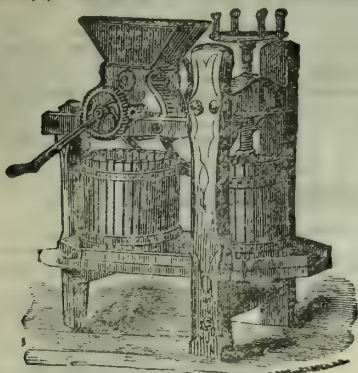


SAW MILLS AND ENGINES

For all purposes. An experience of thirty years permits us to offer the best. Good work at low prices. Send for circular.

IMPROVED CHAMPION Cider Mills and Presses.

Three Sizes—Senior, \$40; Medium, \$30; Junior, \$25.



Best Cider Mill in the World.
Easiest Worked.
Strongest and Will Last Longer than any other Mill.

The strainer board under the tubs allows a free passage for the cider from the tubs without obstruction of any kind. Our Mills are light, substantial, and handsomely finished.
 The very extensive sale we have had for our Mills proves their popularity in all sections of the country, and we will guarantee them to grind as many apples in a given time and produce as much cider from a given quantity of apples as any other hand-power Mill in America, and do it with much less labor than any other Mill on the market.

TRUMAN, ISHAM & HOOKER,
 SAN FRANCISCO, CAL.

FRUIT PAPER,

—FOR—

Wrapping and Packing Citrus and Deciduous Fruits.

Cut to any desired size. Full Stock always on hand of Linings:

WHITE WAXED TISSUE,
IMPERVIOUS PARCHMENT,
AND EDGED PAPERS

—FOR—

Raisins and Dried Fruits.

We have facilities for executing large or special orders at short notice.

S. P. TAYLOR & CO.,
 No. 416 Clay St., San Francisco,
 PAPER DEALERS.



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 227 & 229 Wabash Avenue, Chicago, Ill

J. L. HEALD'S AGRICULTURAL WORKS.

Crockett, Contra Costa Co., Cal.

Stationary Engines and Boilers.

Portable Straw-Burning Boilers & Engines.

IRON AND BRASS CASTINGS.

Machinery of all kinds furnished at shortest notice.

Heald's Patent Wine-making Machinery, including Grape Crushers and Stemmers, Elevators, Wine Presses and Pumps, and all appliances used in Wine Cellars. Irrigating and Drainage Pumps. Heald's Patent Engine Governor, Etc.



LIGHTNING WELL SINKING MACHINERY. Our Artesian Well Encyclopedia contains near 700 engravings, illustrating and describing all the practical tools and appliances used in the art of well sinking; diamond prospecting machinery, windmills, artesian engines, pumps, etc. Edited by the "American Well Works," the largest manufacturers in the world of this class of machinery. We will send this book to any party on receipt of 25 cents for mailing. Expert well drillers and agents wanted. Address, **The American Well Works, Aurora, Ill., U. S. A.**

THE GIANT POWDER COMPANY.

PATENT OWNERS OF

NOBEL'S DYNAMITE,
NOBEL'S EXPLOSIVE GELATINE,
NOBEL'S GELATINE-DYNAMITE,
Best and Strongest Explosives in the World.

As other makers IMITATE our Giant Powder, so do they Judson, by Manufacturing a second-grade, inferior to Judson.

BANDMANN, NIELSEN & CO, General Agents, San Francisco.

JUDSON POWDER,

The Only Reliable and Efficient Powder
 For Stump and Bank Blasting. From 5 to 20 pounds blows any Stump, Tree or Root clear out of ground at less cost than grubbing. Railroaders and Farmers use no other.

MERY'S IMPROVED PIONEER

BARLEY CRUSHER

Using the Benoit Corrugated Rollers.

STILL AT THE FRONT.

VALUABLE IMPROVEMENTS HAVE BEEN ADDED THIS YEAR.



This Mill has been in use on this Coast for 6 years, **TAKEN THE PREMIUM AT THE STATE FAIR**

Four years in succession, and has met with general favor, there now being

Over 200 of them in use in California, Nevada & Oregon
 It is the most economical and durable Feed Mill in use. I am sole manufacturer of the Corrugated Roller Mill. The Mills are all ready to mount on wagons.

Having used one of the Barley Crushers manufactured by M. L. Mery, of Chico, Butte county, I can say it will do all that is claimed for it, and to those wishing an A No. 1 machine, I would recommend it as the very best I have crushed 35 tons in 11 hours' work.
 J. D. GOLDEN.
 M. L. MERY, Manufacturer, Chico, Cal.

CHICO, CAL., Feb. 1, 1887.
 M. L. Mery, Esq.—DEAR SIR: The 9x14 Barley Crusher bought of you and used in the California Mills, gave entire satisfaction; have crushed 8000 pounds an hour. I have also crushed as much or more on set 10x20 when working for General Bidwell, which set he is using in his mill to-day. Yours truly,
 GEO. SHAND.

ORLAND, CAL., August 5, 1887.
 Mr. M. L. Mery—DEAR SIR: In reply to yours of August 1, 1887, regarding the mill I bought of you, would say that the No. 2 gives perfect satisfaction, and that I can crush from 1000 to 1200 sacks of Barley per day. I will recommend it to the public for good work and lots of it.
 M. C. DILLMAN.

I thank the public for the kind patronage received thus far, and hope for a continuance of the same.

M. L. MERY,
CHICO IRON WORKS, CHICO, CAL.

PRESCOTT HOUSE.



S. W. Corner Kearny and Montgomery Avenue, San Francisco.

Free Coach to and from the House.

J. W. BECKER, Proprietor.

1887.

1888.

Mission Rock Grain Dock and Warehouses, SAN FRANCISCO.

Regular Warehouse for S. F. Produce Exchange Call Board.

Storage Capacity for 75,000 Tons of Grain.

THE CALIFORNIA DRY DOCK CO., Proprietors.

OLIVER ELDRIDGE, Pres.

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Freight paid, fire insurance and loans effected, and proceeds forwarded free of commissions. Money advanced at lowest rates on grain in warehouse, interest payable at end of loan. Storage season, ending June 1, 1887, at reduced rates. On all wheat shipped to Mission Rock by barges, freight rates guaranteed the same as to Port Costa. All applications for storage or other business addressed to **CHAS. H. SINCLAIR, Superintendent.**

OFFICE, 318 California St., Room 3.

PALACE DYE WORKS,

1332 Market St., opp. Odd Fellows' Build'g San Francisco, Cal.

All kinds of Ladies' and Gents' Garments Cleaned and Dyed. WE EXCEL. Send for Circular of Prices.
CHAS. J. HOLMES, Manager.

The MEEKER SUN FRUIT DRIER

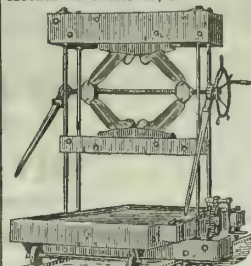
PRODUCES THE

Finest Quality of Fruit at the Least Cost.

Adapted to all kinds of Fruits and Raisins. Send for Catalogue.
W. A. MEEKER,
 Fifth and Bryant Sts., S. F.

Worth's Patent Combined Screw and Toggle Lever Wine and Cider Press.

First Premium awarded on Wine Press at Sonoma and Marin Agricultural Fair, Sonoma Agricultural Park Association, Santa Clara Valley Agricultural Society and Mechanics' Institute, S. F.



I desire to call the attention of wine and cider makers to my Improved Press. The follower has a movement of 26 1/2 inches, the first revolution of the screw moves the follower 1 1/2 ins., the last revolution is but 1-16 of an inch, thereby the power increases in the same ratio as the resistance. The platform is 50 inches wide and 10 feet long; is run back and forth under the press on a railroad track.

Has two baskets, by which you can fill the second basket while the first one is under the press, thereby doing double the amount of work that can be done on any screw or lever press in the market that use only one basket, for this reason: While my press is working continuously the other kinds are doing nothing during the time they are emptying and filling their basket.

Printed Testimonials can be had on application of the following parties, who have brought my press: J. B. J. Portal, San Jose; Wm. Pfeiffer, Guberville; Joseph Walker, Windsor; Kate F. Warfield, Glen Ellen; Joseph Drummond, Glen Ellen; Isaac De Turk, Santa Rosa; John Hinkelman, Fulton; J. & F. Muller, Windsor; R. C. Stiller, Guberville; Lay Clark & Co., Santa Rosa; Vache Freres, Old San Bernardino; J. F. Crank, San Gabriel; James Finlayson, Healdsburg; P. & J. J. Gobbi, Healdsburg; Wm. Allen, San Gabriel; Wm. Metzger, Santa Rosa; J. Lawrence Watson, Glen Ellen; Walter Phillips, Santa Rosa; Geo. West, Stockton; Eli T. Sheppard, Glen Ellen; Rancho Wine Co., Rancho, Los Angeles Co.; Downing Fruit & Wine Co., Downey; J. L. Beard, Centerville; Wm. Palmtag, Hollister; A. Burnham & Son, Santa Rosa; Paul O. Burns Wine Co., San Jose; E. Emil Meyer, Santa Cruz Mountains, Wright P. O.; Marshall & Hill, Laguna Station; R. J. Northam, Anaheim.

Also manufacture Worth's Patent Hand and Power Grape Stemmers. **W. H. WORTH, Petaluma Foundry and Machine Works, Petaluma, Sonoma Co., Cal.**

THE SCIENTIFIC KIT OF TOOLS

—FOR—

Farmers, Dairymen, Stockmen & Machinists



Blacksmith's Drill Press, Hand Feed; Weight, 65 lbs.

Combination Anvil and Vise, hardened face, finely polished; weight, 50 lbs.

Farmer's Forge, No. 5 B, will heat 1 1/2-inch iron.

Blacksmith's Hammer, and Handle, 2 lbs., solid cast steel.

Blacksmith's Hot and Cold Chisels; 1 1/2 lbs. each; both solid cast steel.

Blacksmith's Tongs, Wrought Iron, 18 inches.

Screw Plates, 3 Taps, 3 Set Dies, cut 3/8, 1/2 and 3/4 inch.

Farrier's Knife.

Farrier's Pincers, Cast Steel; 12-inch.

Shoeing Hammer and Handle; weight, 9 oz.

EVERY TOOL GUARANTEED,

And we offer this complete

OUTFIT FOR ONLY \$25.00

Which is hardly half the regular prices, and none can afford to be without this set. Orders by mail promptly filled. Address,

G. G. WICKSON & CO.,
 Nos. 3 and 5 Front St., San Francisco



HORSE POWERS, WINDMILLS, TANKS and all kinds of Pumping Machinery built to order. Awarded Diploma for Windmills at Mechanics' Fair, 1885. Windmills from \$65. Horse Powers from \$50. **F. W. KROGH & CO., 51 Beale Street, San Francisco.**

MAGIC FRECKLE CURE



Promptly Eradicates Freckles, Tan, Sunburn, Moth Patches and all discolorations without injury, and imparts to the skin purity and velvety softness.

—MAGIC—

COMPLEXION SOAP Removes Pimples, Blackheads and cures all skin. Each of the above articles sent post-paid for 25 cts. each, or 5 packages for \$1.25. Address and mention this paper: **The W. M. Miltard Co., Buffalo, N. Y.**

1887. THE FARMERS' FRIENDS. 1887.

IMPROVED CHAMPION CIDER MILLS and PRESSES.

THREE SIZES:

Senior, \$40. Medium, \$30. Junior, \$25.

MOST EASILY WORKED.

Built Stronger and Will Last Longer

Than any other Cider Mill manufactured.

THEY HAVE AN ADJUSTABLE THROAT,

Which adapts them to all kinds and sizes of fruit.

THE GRINDING ROLLERS are ADJUSTABLE

They Grind Finer than other Mills.

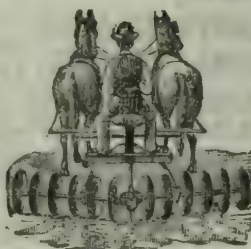
They are Light, Substantial and Handsomely Finished.

LA DOW JOINTED PULVERIZING HARROW.

Points of Superiority in Which it Excels:

It will do better work.
It is MUCH easier for the team.
It is easier to manage.
It has a LEVER to change the angle.
It is not heavy on the horses' necks.
It has no side-draft.
It leaves no ridge at the center.
It has self-feeding oil cups.

It has a wrought iron frame.
Its chilled bearings cause it to wear longer and work easier.
It is easier to ride.
It conforms to uneven surfaces perfectly.
It can be made rigid if desired.
Its journals are protected from dirt.



Thousands in use, giving entire satisfaction.

PRICE LIST.

No. 12 cuts 6 feet, for 2 horses, has 12 16-inch discs, with weight boxes, FOR VINEYARDS.....	\$ 65 00
No. 16 cuts 10 feet, for 4 horses, has 18 16-inch discs, with weight boxes, 100 00	
No. 17 cuts 15 feet, for 4 horses, has 24 16-inch discs, without weight boxes.....	150 00

PRICES REDUCED!

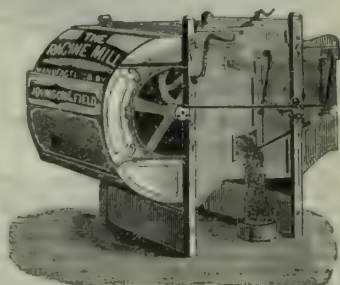
FANNING MILLS.

JOHNSON & FIELD'S

IMPROVED WHEAT CLEANERS,

BEST IN THE WORLD.

Will clean more wheat in less time than any other Mill manufactured.



Unscrupulous parties are trying to force upon farmers and dealers a worthless imitation of our new Cleaner under a name so similar as to be mistaken for the GENUINE Cleaner.

No. 1. Farm Mills, 24 inches wide.....	\$ 30 00
No. 2. Farm Mills, 30 inches wide.....	40 00
No. 2. Warehouse Mill, 40 inches wide.....	50 00
No. 3. Warehouse Mill, 48 inches wide.....	60 00
No. 2. Separator, without Suction.....	135 00
No. 3. Separator, without Suction.....	160 00
No. 2. Separator, with Suction.....	175 00
No. 3. Separator, with Suction.....	250 00

The Mills are First Class in every particular.



The Superior Grain Drill.

BEST HOE DRILL IN THE MARKET.

Does Better Work and Takes Less Seed per acre than any other kind of Hoe Drill.

Can be worked in trashy and on ground where other kinds will not. Has the best Adjustable Force-Feed in the market, a feed especially adapted to drilling

OATS and BARLEY, WHEAT and RYE, FLAX and MILLET.

IT IS THE CHEAPEST DRILL,

Because it saves and returns more on the investment.

The only Gang that will Turn a Square Corner.

RADLEY'S NEW

Square Corner Sulky and Gang.

REASONS WHY THEY EXCEL ALL OTHERS:

1. They embrace a new principle in construction.
2. They combine lightness and strength.
3. They are extremely compact.
4. They are very light draft.
5. They work equally as well without a pole as with.
6. They turn a corner without strain on the wheels or plow.
7. They are easily operated.
8. They plow level furrows across corn rows.

Don't buy until you have seen them.

We are Agents for David Bradley's Celebrated Garden City Clipper Plows, Harrows and Cultivators. Agents for Calvin Toomey's Truss Axle Sulkys. Send for Catalogue and Circulars.

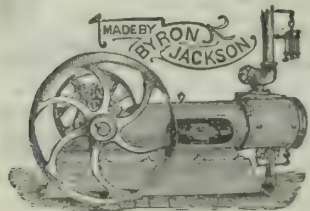
TRUMAN, ISHAM & HOOKER,

421 to 427 MARKET STREET,

SAN FRANCISCO, CAL.

COMPLETE
IRRIGATION AND DRAINAGE
OUTFITS.

BYRON JACKSON

STEAM ENGINES
—AND—
BOILERS.

"SPECIAL" ENGINES

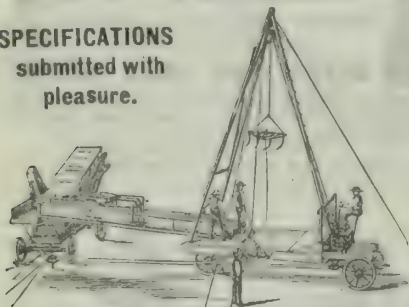
—FOR—

Electric Lighting

—AND—

PUMPING.

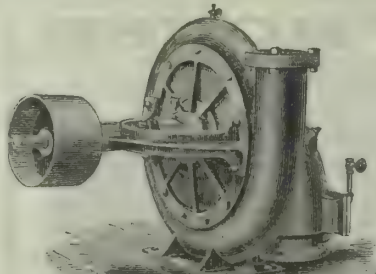
SUPERIOR ECONOMY GUARANTEED.

SPECIFICATIONS
submitted with
pleasure.

JACKSON HARVESTING MACHINERY.

SELF-FEEDERS

FOR THRASHING MACHINES.

ELEVATORS and SPREADERS,
DERRICKS and FORKS,
ETC., ETC., ETC.

CENTRIFUGAL PUMPS

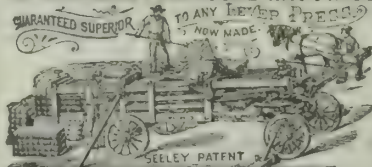
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Irrigation and Drainage.

Both Vertical and Horizontal, for pumping from wells, rivers, etc.

DEEP WELL PUMPS A SPECIALTY.

THE WHITMAN PERPETUAL HAY PRESS



Write to me. I am Agent for the Press.
BYRON JACKSON,
Manufacturer of
HAY STACKERS, BAKES, THRESHERS, WINDMILLS, PUMPS, HARROWS, ETC.
625 Sixth Street, San Francisco.

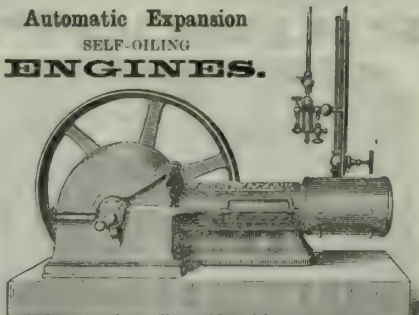
PRICE, \$250.

Complete with all the Latest Improvements.

Call and See Them.

All sizes and styles, either for setting in brick, or semi-portable, on skids, with fire-box. PRICES given on application. Address

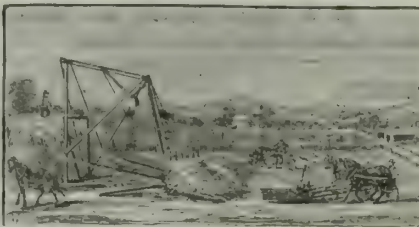
Automatic Expansion SELF-OILING ENGINES.



I make these Engines in all sizes, carrying usual sizes in stock for prompt delivery. All working parts are inclosed, running in oil, insuring perfect lubrication and requiring less skill and attention than any other.

They are solid, substantial Engines—strictly first class in every respect—developing very high economy, and fully the equal of the best Eastern makes.

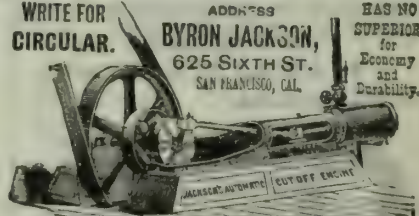
CORRESPONDENCE SOLICITED.



"ACME" STACKERS,

"ECLIPSE" STACKERS,
And LOADERS.

LATEST IMPROVED RAKES.



The above shows general design of my larger-sized Stationary Engines. I have patterns for 10x20-inch, 12x20-inch, and 12x24 inch—others under way, and can generally make prompt deliveries.

THE GOVERNOR is an automatic cut-off, controlling a single slide valve by a direct action on the eccentric, and is connected directly to the valve without any complication of rock shaft, tappets, springs, or dashpots. A special point, covered by U. S. Patent, is the driving crank or link, connecting the actuating eccentric to the driving disc, so the governing eccentric may be moved about the shaft within the other eccentric (which drives the valve) by the centrifugal and centripetal action of the weighted arms and springs. The governing force is thus relieved from the strain of moving the valve. I believe this single feature makes this governor superior to any other of its class.

WINDMILLS.

TANKS,
PUMPS, Etc.

Write for Prices.

Parties interested in these machines, and especially those who have land to irrigate or reclaim, are requested to write me, stating fully their probable wants. It costs nothing and may save you money, as I have given the subject careful study for many years, and have spent thousands of dollars developing and perfecting the complete and very economical steam-power pumping outfits I am now offering for sale.

BOILERS.

BYRON JACKSON, 625 Sixth Street, San Francisco, Cal.

PACIFIC RURAL PRESS

Vol. XXXIV.—No. 12.]

SAN FRANCISCO, SATURDAY, SEPTEMBER 17, 1887.

\$3 a Year, in Advance.
SINGLE COPIES, 10 CTS.

A Place for the Norsemen.

The Norwegian immigrants need not all pile into Wisconsin, simply because it has a climate much like that of their native land—short, warm summers and long, cold winters, with much ice and snow. They might come on to California and find these same, coupled with advantages not to be enjoyed in Wisconsin—localities healthful and fertile, with plenty of wood and water, and winters comfortably rigorous.

It will surprise some to hear us say this, nevertheless we have in California, the most of which may be said to be winterless, districts hyperborean enough, to be the habitat of the Scandinavian and even the Esquimaux. The reason that so little has ever been said about these districts is, that they lie remote and are of comparatively small extent, being hardly larger all told than the State of Connecticut or Massachusetts. They consist of a series of valleys cradled in the High Sierra, mostly in Plumas county, though a few have been dropped along the great Snowy Range further to the south.

Going into these valleys of a winter, scenes such as greet the eye in Northern New England and in Canada open to view. Snow lies to a depth that ought to cheer the heart of the hardy Norseman. There is good sleighing for three or four months every winter, during which time all transportation and travel is done on runners. The houses and the barns, all capacious, are built with a view to warmth. Great fires blaze in the open fireplaces. Into these huge logs having been rolled, are piled with wood, the fires hardly ever being suffered to go out. No need for frugality in the use of wood or lumber here, for the mountains all round are covered with stately forests. The fields are mostly fenced with logs or split rails after the old, old fashion.

The big barns are filled with hay, often pressed to economize space. Great stacks of straw stand outside, for this, too, is carefully saved, being used both to feed and bed the animals. The winters being long, and the snow so deep that there is little browsing for the cattle, much fodder is here necessary. Most of the stock, of which a great deal is kept in these valleys, is housed during the winter. This stock consists mostly of milch cows, great quantities of the finest butter and cheese being made here every year. Enough grain is raised for home consumption and some for shipment abroad. The oats because of its weight brings an extra price in the mining towns of Nevada where most of it is marketed.

For growing the hardier fruits these valleys

cannot be excelled, the apples raised here being especially good. The vegetables, too, are very fine, though to mature these, as well as the grain, irrigation is in most cases necessary. With this aid, enormous crops of both are made certain.

The snow, though it falls to a great depth in these high-lying basins, never drifts badly, nor does the blizzard, so destructive to life and property in Wisconsin and neighboring States, ever go tearing through these beautiful and peaceful valleys. While the winter temperature is low, the cold, because the air is so little stirred, is not severely felt; and what is even

Washington Bartlett.

Monday last, at 5 o'clock P. M., Governor Bartlett closed his earthly career. His death was not unexpected. There has been a whisper ever since his inauguration that his health was failing; that the arduous duties of the gubernatorial office, following close on a warmly contested election, had over-taxed his strength. In May he sought rest and recuperation at Highland Springs; and the symptoms of an insidious disease seemed to disappear. But as he was very feeble and liable to fainting fits it was thought advisable to change his loca-

known, the only extant copy is in the Bancroft library. Under the title is the imprint: San Francisco: Printed by Washington Bartlett, No. 8 Clay street; 1849. He took part in the Vigilance Committee in 1856. In 1859 he was elected County Clerk, and was re-elected in 1861 and in 1867. He filled the vacancy caused by the death of James H. Cutter, on the Board of Harbor Commissioners appointed by Governor Haight. For a brief period he practiced law in partnership with his brother Columbus. Three years he discharged the duties of Secretary of the Chamber of Commerce in this city. In 1873 he was elected to the State Senate on

the Peoples' ticket and voted for United States Senator, Governor Newton Booth. In 1880 he was selected to serve as a Freeholder in framing a new city charter, and in 1882 was elected Mayor on the Democratic ticket, and in 1884 was re-elected. In the Democratic State Convention September, 1886, Washington Bartlett was nominated for Governor, and elected by a majority of 652 votes.

His death is a public bereavement. Few men in official position have been as conscientious and free from partisan bigotry. Only a few weeks before his death, and when the mysterious shadow was deepening around him, he said: "I have always considered my office a sacred trust given me by the people, and that I must

discharge my duty to them without regarding my own personal feelings."

When expostulated with for not dropping the duties of his office and seeking rest, he said: "There was no time when I could do it honorably. If a man accepts a position of trust he must not leave his work. If I had known that the work I had to do would kill me, I should have kept on just the same, for I could not shirk it. I think it has finished me."

A good citizen and able and honest servant of the people has passed to his reward.

THE California Conserving Company has incorporated to preserve and put up for market fruits, etc. Capital stock, \$100,000, divided into 1000 shares. The directors are D. H. Porter, W. S. Newhall and H. E. Hall of San Francisco and Abel W. Porter and Abner S. Hall of Los Angeles, who, together with Daniel Burr, are the incorporators, each taking one share of stock, except Burr, who subscribed for 995 shares.

FAIRS AND AWARDS.—We are obliged to omit this week the publication of several lists of awards which we had prepared, as well as accounts of the Golden Gate, Shasta County and 17th District Fairs, for all which we hope to find space later.



ALFALFA IN ARIZONA—SCENE ON THE CALISTOGA STOCK FARM, IN THE SALT RIVER VALLEY.—See page 229.

more singular, ice never forms to any great thickness. The swift-flowing streams never freeze over. People who come to these valleys to reside, if careful afterward not to expose themselves to an Eastern climate, will probably live to a good old age.

Winterless California is so extensive, and with its many advantages so invites immigration, that we have omitted to speak of these Alpine valleys until reminded that we ought to find, somewhere in this State, homes suitable for these North people, who love to wallow in the snow and to hear the house timbers snap and crack with frost, bringing to mind thoughts and scenes of Fatherland.

PROF. RILEY IN ENGLAND.—Prof. C. V. Riley has been taking part in the meetings of the British Association at Manchester. A cable dispatch says his paper discussing the hop louse "revealed great special knowledge and an intimate acquaintance with the subject." It is gratifying to see his worth, however well known at home, meeting with merited recognition beyond the sea.

THERE are said to be 5260 feet of grain warehouses, 60 feet wide, along the line of the railroad in Salinas valley, and the entire space is piled full of grain. Threshing is nearly done.

tion to Oakland, where he arrived at the residence of a relative, Mrs. Dr. Buckel, in a very weak condition. He grew no better, and Monday, Aug. 22d, it was announced that he had received a stroke of paralysis on the left side. Since then his most sanguine friends have not ventured to hold out the hope of recovery.

Governor Bartlett was born in Savannah, Georgia, February 29, 1824, where he spent his boyhood days. Like thousands of plucky and enterprising young men, he caught the gold fever, and sailed from Charleston in January, 1849, for California. On arriving in San Francisco he found nearly everybody heading for the mines. Young Bartlett resolved to stay in the city and start a newspaper. In January, 1850, in conjunction with John Robbs, he started the *Journal of Commerce*, a daily paper. Bartlett was editor and immediately took an energetic part in furthering the admission of California to the Union. In 1853 Mr. Bartlett and his brother, Columbus, established the *Evening News*. As a journalist he always proved himself an able and untiring supporter of what was just and proper for the welfare of the State and people. It may not be generally known that he published the first book in this city, entitled, "California As It Is and As It May Be—A Guide to the Gold Region." So far as

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

On Maintaining the Territorial Integrity of the State.

EDITORS PRESS:—What you say in a recent number of the PRESS touching the proposed division of California seems to me timely and pertinent. The remark that the men who fixed the present boundaries of this State builded better than they knew is warranted by the facts of history.

I was a resident of California at the time this question of forming a new State and giving shape to its institutions came up to be discussed around the campfires and at the primary assemblages of the people, and can attest that there were two things on which the men of that day had, by a large majority, firmly set their hearts, and these were free soil and plenty of it. It is true, our knowledge of the territory out of which the new commonwealth was to be erected was meager. But what we did not know we guessed at, and, as subsequent events proved, our guesses were not much out of the way.

Without claiming that the incident I am about to relate actually determined the boundaries of California as they now exist, I may say I believe it had something to do with that matter.

About the middle of August, 1849, an informal meeting was held at Sutter's Mill to talk over this business of converting California into a State, a subject that then largely occupied the minds of the older residents; the more recent arrivals, who had by this time begun to be numerous, being, as a general thing, more concerned about getting to work at gold digging than about this question of statehood.

At the meeting referred to there were present perhaps 20 in all, among them being the following, the only names I can now recall: William E. Shannon, then already elected delegate to the Constitutional Convention to assemble at Monterey on the 3d day of September; Clarkson Dey, Charles E. Pickett, William Huefner and the writer. My impression is that Elihu Anthony, now living at Santa Cruz, was also present. About this, however, I am not positive, though I remember he was that summer stopping at the Mill, and that he took an active part in this and all other public affairs.

At this meeting it was unanimously agreed that the organization of a State was desirable, the only problems that seemed to require serious consideration being those relating to boundary and the exclusion of slavery. On the subject of slavery the two principal speakers were Dey and Pickett, the latter advocating the admission of "the peculiar institution" in an impassioned and forcible manner; his opponent, a natural orator and a man of fine parts, speaking with more coolness, but with such effect that when the vote came to be taken Pickett was left without a single supporter, though there were those present who sympathized with his views.

This matter disposed of, the question of designating suitable limits for the new State next claimed attention. For our guidance in this we had only one of Fremont's earlier maps, on which hardly more than a few of the principal rivers and ranges of mountains were laid down. On three sides the limits of California were already fixed; Oregon bounding it on the north, Mexico on the south, and the Pacific ocean on the west, leaving only to be determined how far the new State should be extended toward the east. In this direction the country while under Spanish rule had been supposed to reach to the summit of the Sierra Nevada. Consulting now our skeleton map, it was discovered that the 120° of longitude west from Greenwich would run very near the summit of these mountains. This, besides according with the ancient lines of California, would form a conspicuous, natural and every way suitable boundary on the east. Commencing, therefore, at the Oregon line—the 42° of north latitude, and following this meridian south, it was found that, if extended in that direction, it would strike the ocean shore somewhere in the neighborhood of Santa Barbara and more than a hundred miles before it reached Mexican territory. This would never do, since, besides leaving out a large scope of country recognized as being a part of California, it would bring the new State to a point, giving it an angular and unseemly shape. Moreover, these limits, if adopted, would include an area altogether too circumscribed for what was designed to be the future Empire State of the Pacific.

Traveling south along this meridian, it became necessary, then, to call a halt, which was done when the 39° of north latitude was reached. Here the pioneer State-builder paused, and, surveying the great wilderness stretching away to the southeast, hesitated as to his next objective point. He knew nothing of the resources or the natural landmarks of this vast and desert region. He knew, however, that there was off that way a point where the 35° of north latitude crossed the Colorado river; and for this he struck out, and, having reached it, followed down the middle of that stream to the northern line of Mexico.

A rough map of these outlines of California, as suggested at that meeting, was drafted and

given to Delegate Shannon, who, a few days after, left for San Francisco. On the 2d day of September, 1849, the steamship Panama, Capt. Bailey, left San Francisco for Panama and intermediate ports, taking down to Monterey most of the delegates to the Constitutional Convention, Shannon among the rest. The writer, who was also a passenger on that vessel, being on his way home to New York, well remembers the circumstance of this Sutter Mill map being produced by Shannon and shown to the other delegates, who, on the boundaries as there laid down being explained to them, approved of the same. As these boundaries were so obviously fit and natural, it may well be that they, or something very nearly like them, would, even in the absence of this chart, have been adopted by the convention. In this view of the subject, it is not unlikely that similar, if not identical, lines may at the time have suggested themselves to the minds of other members of the convention.

As now constituted, this State presents a shapely and well-proportioned territory, being of nearly uniform width throughout its entire length of 700 miles, and this notwithstanding the diagonal strike and the great irregularity of its coast line. To preserve it in its integrity should be therefore the pride as it is the interest of every Californian. As the Jewish mother, rather than see her offspring divided with the sword, yielded her claim to its possession, saying, "in nowise slay the child," so would the old-time resident, rather than see California dismembered, say to these malcontents, take the whole, but in nowise destroy the State. "One and indivisible" is a motto that befits California no less than the Union of States.

HENRY DEGROOT.

Napa County Notes.

EDITORS PRESS:—Light, refreshing and welcome showers which visited this valley a day or two prior to Admission Day told us that another fruitful season was drawing to its close.

An early winter, or, to be more exact, early rains that shall usher in the wet season, are expected, and, so far as possible, due preparations for their advent are being made by our thrifty farmers.

Thrashing in this valley finished about the 3d ult., and in other portions of the county at an earlier date. One machine had a successful run of over 60 days—an excellent record for this season. Year by year the area of orchards within our borders increases, and though grain-fields are in the same proportion decreased, still the amount of wheat and barley raised is quite large. The yield of wheat this season was fair; no very large returns are reported, but the quality was excellent. A few of our farmers sold their crop before the market flattened out and realized handsomely, but most of the fields were not thrashed in time for grain-raisers to take advantage of the high prices. In consequence, much is held in storage, all holders being anxious and looking for a firmer market in the near future, or, at least, by next spring. Our barley crop was a good one, though this cereal holds and ever has, in this county, a minor place, wheat being the chief grain raised.

There never was a better hay crop produced in this county than this season, though the yield per acre has, at times, been excellent. The quality of the present crop is superior. Considerable has been sold; much more is stored, as many think prices will appreciate before or during the rainy season. Some of last season's crop yet remains unsold, the crop of '86 being too large to dispose of to advantage.

Our orchards have yielded liberally, and large quantities of fruit have been shipped to S. F. and other points in the State, and to the East. Much has been dried. Greater pains, more interest has been taken in drying fruit this season than ever before throughout the county. New and approved methods have been made use of, the result being that there has been placed on the market some excellent fruit, the equal of that of any section of the State. In Napa City there is a good-sized, well-appointed cannery, built about one year ago. The output last year was in quality excellent, could not be surpassed. This season the cannery has remained closed, and though the valley produces large quantities of superior fruit of most every variety, orchardists had to find a market for the greater portion abroad. It is certain that if some good manager would take hold of this institution another year he could make much money for himself and for the stockholders. While towns in neighboring counties have canneries that put up large quantities of fruit at a profit, it seems a pity Napa should not do as well, for there are few towns in the State that are possessed of as many advantages.

This fact, which has been patent to very many for years past, will be impressed upon many more in the future as our railroad facilities increase. No one can rob Napa City of her river, the traffic upon which is very large. The railroad passing through town and up the valley is one of the best-paying lines in the State, considering its length. But there is room for an additional road, which, in all probability, will soon be built from Napa to Lake county, passing through several smaller fertile valleys on the way. This will mean, of course, much for both counties.

We've had a slight touch of the "boom" that is traveling through the State, and real

estate has appreciated considerably during the last month. This state of affairs is confined to no one section of the county. Considerable farming land has been sold to outside parties, and greater activity is anticipated during the coming winter and spring. Napa's fertile soil and unexcelled climate are factors that will draw hitherward before long a large number of Eastern seekers after congenial homes.

The cool weather that prevailed during the summer has retarded the vintage. The first grapes crushed in the valley were obtained by a cellar in Napa City from Woodland and Davisville. Our own grapes will be ripe for crushing in a week or so, by which time many cellars will have commenced operations. The crop generally is not a full one, not more than two-thirds at the outside. Prices have not been fixed yet, so far as we are able to learn, though many think that rates offered last fall will prevail, i. e., from \$15 to \$25 per ton, according to variety. Several new and substantial cellars have been built this season.

Napa, Sept. 10, 1887.

R.

THE ORNITHOLOGIST.

Defending the Road-Runner.

EDITORS PRESS:—I appear on behalf of the above swift-footed bird to pray that the severe, and as I think unjust, sentence passed upon him by Dr. J. W. Gally of Pajaro township, Santa Cruz county, be nullified. It gave me pleasure to learn, from the letter of your correspondent, that in addition to the many peculiar habits of the creature I seek to defend, he must skip on through life bearing the distinguished Latin name of *Gypsoeranus serpentarius*—or snake-eating Secretary bird—and that the *habitat* of his race is in South Africa as well as on the Pacific Coast.

As a vermin-destroyer, the road-runner fills a most important place in frontier and sparsely settled regions. In Mexico he is much better known and appreciated than anywhere else on our shores. One American friend, who lived for many years in that republic, gives me trustworthy information on the subject. For a long time his little daughter had a pet runner which was quite as tame as any of the domestic fowls. The movements and antics of the bird were described as being extremely comical at times, and he was highly valued for his practically useful qualities. He cleared the house and grounds of rats, gophers, mice, snakes, scorpions, centipedes, tarantulas, vinegar-bugs, and all kinds of smaller vermin, such as crickets, cockroaches, and bugs generally. My friend's Mexican employees often described how the runner killed rattlesnakes, but he did not believe their stories. According to their account, when a snake was found sunning himself, his great enemy looked for a small cactus bush, common in most localities, and breaking off a short branch, which, by reason of its jointed nature, was easily done, he made haste to form an unbroken circle of such branches around his lethargic victim.

When the trap was closed, a sudden peck at the snake set him in motion, and soon there was nothing visible but a writhing ball of hooked pieces of cactus, with the lacerated sufferer inside. My friend was subsequently told by a highly respected land and mine-owner that he himself had seen a rattlesnake killed in that way, and in every respect the statements of the employees were correct.

One of my neighbors here, and a helper, were digging a well last summer a few miles from town. Their camp was visited by a friendly runner, which, being well treated, soon became tame, and stayed near by most of the time. He was continually catching grasshoppers, bugs, and insects of all sorts, and his movements when so engaged were said to be astonishingly rapid. One day he was observed viciously pecking at the center of a tassock of grass, and on later examination it was found that he had killed a tarantula there, but did not make any use of it as food.

In this Territory occasional losses are sustained by cattle swallowing the poisonous "campo mucho." It is a long, slender insect, which, both by shape and color, can be well concealed among rank grass. The good my protegee does by destroying that pest goes far toward counterbalancing his faults and failings. I can afford to admit that he probably kills quail, doves, and small birds, and at times robs their nests, but in the course of a year he very likely destroys hundreds of snakes, most of which, contrary to a common belief, have the power to fascinate birds, and are known to be inveterate robbers of their nests. Men and road-runners ought to be judged, not according to isolated acts in their lives, but rather on the basis of their general habits in relation to the world at large. In this light the snake-destroyer is entitled to protection and ought to be encouraged in his good work, even if he is not a perfect bird. I admit that his killing of three swallows on the 3d day of June, 1887, as recounted by Dr. Gally, was entirely wrong, but I cannot see why he should be denounced as a robber and sneaking pirate for the performance of that feat. As wild deer and antelope have no owner, the hunter who kills them is not a thief; the highwayman, on the other hand, is a robber, because he disregards the rights of property. But who owned the three swallows? Nobody. And since no person was robbed, the bird that

killed them was not a robber. Thus, it will be seen, Dr. Gally's accusation is slanderously unjust. In defense he may declare that in a great farming and fruit-growing State like California the whole community have a proprietary interest in insectivorous birds, and any agency which impairs their usefulness ought to be condemned. That would be sound reasoning, and I accept of it as presented by the doctor, while I must also show that his practice is not in keeping with his theory. He openly proclaims the fact that he owns a 20-acre marsh, where he breeds snakes, toads, lizards, frogs and other vermin. He seems proud of his "natural zoological garden," and tells us of the clouds of gnats, including no doubt mosquitoes and similar pests, which skimmed over his hay-field on a certain day, and brought a flock of swallows there to feast upon them. The legitimate work of these swallows was to kill rural insect pests, which impaired the husbandman's profits; but Dr. Gally, in breeding millions of blood-sucking flies and gnats, which, no doubt, successfully preyed upon farm stock in that neighborhood, so gorged the birds that they were rendered useless in their proper line of service to man.

In respect to the three swallows whose untimely and tragical end threw the doctor's mind into such a feverish whirl, I claim that by logical sequence he ought to be regarded as their slayer himself. He left a miasmatic swamp undrained, bred innumerable insects in its noxious ooze; tempted the swallows to come to a banquet he had prepared for them; kept his domesticated *Gypsoeranus serpentarius* there, bent on mischief; and lo! when the unsuspecting fruit-growers' friends came within four or five feet of the ground, they were dexterously transfixed. What did your correspondent do at the close of that calamitous half-hour? Did he rush to the house for his rifle and lay the guilty miscreant low? Not he. He sat down and wrote his letter for your pages, and, no doubt, found the effort a sort of sedative, particularly as he probably made his conscience believe that all the blame ought to be laid on the feathered offender. As well might tabby be sentenced to death for killing the canary which has escaped from its cage, as that the poor road-runner should be anathematized for obeying his untutored instincts.

Dr. Gally's allusion to "those arbitrary and firm fellow-citizens who seem to be much better and more intimately acquainted with Deity" than himself is an outcrop of his inveterate and arbitrary practice of intruding on every possible occasion his opinions on religious questions. As he appears now to be a see-nothing in entomological matters, I have not the slightest hope of being able to convince him that he is an incomparably worse enemy to the farmers and fruit-growers within a mile or two of his marsh than the agile creature he so bitterly condemns.

The question of the road-runners, condemnation or acquittal, must now be left to the judgment of your readers.

A PROSPECTOR.
Dos Cabezas, Cochise Co., Arizona, Aug. 25, 1887.

HORTICULTURE.

Fall of Blossoms.

The following paper by Rev. M. Ongerth of Alameda was read at the last meeting of the State Horticultural Society:

It happens with stone more frequently than with pip fruit-trees, that they have most abundant blossoms, and yet do not develop any fruit or very little, and seemingly this fact is not subject to any law of nature. And yet in nature's life there are no accidents—nothing inexplicable; everywhere we can see cause and effect.

Man's science has found the way to bend nature's producing power to his will, but at the same time the fruit tree strives first to follow the primordial law of its natural obligation, even if in every other respect it obeys the training hand of man.

The orchardist wants a bountiful harvest of juicy, delicious fruit, but the tree tries to conform to the intention of its Creator, that is, to increase and multiply, by producing seed to its fullest development and ripeness in order to propagate its kind.

To attain his object the orchardist gives the tree a selected place, secures it air, light and sun, and watches its growth, opens and manures the soil, supplies nourishment to its organs. He has so advanced in the science of manipulating the tree that he can force it to produce wood-growth or fruit. But mistakes are very often made, and the orchardist is surprised that nature does not respond in carrying out his intentions.

The tree, in the hand of nature, develops best where soil and condition are the most favorable, and then it maintains its existence in a hard struggle with its surroundings, and at the same time strenuously endeavors to obtain, to secure and to increase the conditions essential to the object of its life.

In this regard man often errs in not properly considering its needs, and then the tree acts precisely as dissatisfied workmen do nowadays—it strikes.

The earnest efforts of the tree are frustrated by the condition of the soil, which has been opened too much, is heated and dried by the sun. The cell connections of the bark on trunk

and branches and the thirsting leaves are also dried up; discouraged, the tree sheds blossom after blossom, and at the season of maturity there is neither juicy fruit nor well-developed seed for reproduction.

The secret how to help the tree in its endeavors is taught us by its growth in a free state of nature and by the way it acts to fulfill its destiny; the secret lies simply in surrounding the bark with refreshing coolness and in sheltering the soil from the burning heat of the sun with adequate vegetation.

Before the stone fruit has developed its sheltering foliage, blossoms appear as the first signs of a rich yield in fruit, but the hot rays of the spring's sun or the north wind which sometimes dries everything up in this country make unmerciful attacks on the abundance of blossoms. And how often these attacks are fatal to the crop the older orchardists know but too well.

An abundant yield of fruit will repay well the cost of labor and material of placing a protecting board or a bundle of straw on the south or southwest side of the trunk and of covering the soil with straw three to five inches high; especially is this the case with the apricot, peach and plum trees.

These same means will insure the maintenance of the fruit on the tree until its maturity.

I said above that the tree's first object is to produce and develop seed, suitable for propagation. He who understands the physiological peculiarities of the seed-kernel, will agree with me that hitherto in California very little consideration has been given to the physiological necessities of the life of the tree, and that here nature does not always produce a sufficiency of the elements of nutriment to promote the development and growth of germ-life.

In the composition of my liquid tree-protector I have taken into consideration the requirements for the development of the seed, for stone as well as seed fruit; its object is not only to protect the tree against the ravages of animal and vegetable parasites, and against the injuries of the weather, but also to assist in the nourishment of the plant, in the production of blossoms and the development of fruit and seed.

[In the discussion which followed the reading of the paper, it was remarked that in all probability the dropping of blossoms is due to several causes; some acting in one case and some in another, and it was doubted whether any specified treatment would meet all adverse conditions.—EDS. PRESS.]

FORESTRY.

Joaquin Miller on Forestry.

NUMBER ONE.

Mr. Joaquin Miller, appointed by Governor Bartlett a delegate to the American Forestry Congress, has decided to contribute for publication in this journal notes of important considerations which he desires to urge upon the attention of the Congress. We are glad to be able to give them to our readers for their consideration and comment:

To my fellow-members of the Congress of American Forestry:

"And the Lord planted a garden eastward in Eden."

Last year I urged, and indeed for a dozen years or more I have urged, that the United States should surrender to each State its remaining timbered lands in order that they might be the better protected from fire and inundations and so on.

And now the Governor of this State has commissioned me to represent California, in part, in the Congress of Forestry to be held the current month at Springfield, Ill. As this little appointment to this very important post came without my knowledge or solicitation of friends, it is fair to presume that there are those in authority who are at least not hostile to my plans for advancing the interests of forestry. And as I may not be able in person to urge the adoption of my plan before the American Congress of Forestry, it may be well to open this series of papers with a brief outline of my methods and reasons for the same.

I believe it is pretty generally conceded that our continent is being washed into the sea by way of the Mississippi and its thousands of miles of tributaries on the one hand, and at the same time swept naked of its native forests by annual fires on the other. I take it that it is this deplorable condition of things that has called into existence the American Congress of Forestry. I spent some time with the late Captain Eads at the mouth of the Father of Waters, inspecting his jetties two years ago.

"We have begun at the wrong end," said this great man more than once to me.

One morning he threw a bucket over the side of the boat and drew up several gallons of dark mud and water.

"There," cried the great engineer, "there is a mixture of one-tenth Missouri, one-tenth Illinois, one-tenth Iowa, one fraction Kentucky, and so on, through about 15

States, with an addition of about five-tenths of pure water."

"And what would you do, Captain Eads, to stop this washing away of States?"

"As I told you," remarked the energetic old man, as he dumped the ugly mixture back into the Gulf of Mexico, "we have begun at the wrong end. But the country is not educated up to the point of beginning. It wants the other end for wheat and corn. It only wants the mouth of the river kept open so as to be able to sell its corn for the present generation, and let the next generation look out for itself. The other end of the river has drowned out this end; State after State is going to be drowned out until some day the coral insect may again build his pretty castles where the people of Iowa are now digging wells for water. The United States is tearing out her very heart with her gang plows, and dumping it into the sea, sir."

I beg to put this statement before the country with something of the emphasis with which this great and good man uttered it there in the mouth of the great river. More than once he brought up the subject and always with an emphasis that would write every syllable in italics.

Captain Eads was very fond of quoting poetry. Once he was saying to himself, "Leaves, leaves, nothing but leaves," when he suddenly turned to me and said: "Do you know that in leaves you can read the history of creation? My son, leaves are not only creation but salvation." I am now writing down his words literally from notes taken at the time.

Captain Eads explained to me that he meant if leaves and grasses were left lying on the ground at the proper time of the year, as nature, the hand of God, placed them, there would never be any damage from high water any time; that leaves would be the salvation of the Republic, and that there would never be any need for Eads' jetties. He explained that he meant when he said that leaves were creation that there is no nourishment so dear to the hungry earth as a handful of leaves. He insisted that more beauty could be grown out of a single basket of leaves than a whole load of manure.

And how are we to preserve the leaves? How are we to use these little reservoirs to hold back the floods? How are we to stay the greed of man and save the land in some measure, at least, from flood and flame?

By beginning as Captain Eads advised, at the proper end. I suppose if man had been his own Creator, he, in his sublime selfishness, would have next created woman. But God first made a garden. She was an after-thought; quite a secondary affair. We ought not to entirely forget this fact.

"And the Lord planted a garden Eastward in Eden."

Some very great, but perhaps not very good man, Bob Ingersoll, I think it was, once remarked that if the Lord had discovered California in time He would have planted His garden Westward instead of Eastward.

But we of California hold with the poet that the East is the West, and the West is the East, and that Eden is ours, all ours. And we mean to try to preserve it, to cherish it, to not be driven out of it by sword, or flood, or flame. We read that about the first real substantial employment that the Lord God was engaged in, after making "the stars also," was that of planting a garden. We know of no pursuit higher than this planting of a garden; except perhaps it may be that of preserving a garden. And to that end the State of California last year voted \$80,000. We are not rich as the older States are. It costs much gold, much strength, to lay the corner-stones of a State three times larger than the great State of New York. California has poured out her money like water. In the early days we declared war with the Modoc Indians, raised men, fought that war through, paid our men, such as would accept pay, and never had a cent of help from the States. We have been doing this sort of thing all the time.

But now at last our land is annually on fire. These fires start on public lands and grow strong there, and then overrun our fields and farms. The farmer can no longer secure an insurance on his ripened grain. We come before the Congress of Forestry with a Bill which is already before the Federal Congress. We invoke the united help of the Nation. This Bill, if made a law, will at least permit us to protect our own grounds and our own gardens, which we have planted Westward "in Eden."

I here beg to submit this Bill, as it now stands before Congress, with the indorsement by joint resolution of the Legislature of California:

A Bill for the Protection of Forest Lands Belonging to the United States and the State of California.

Be it enacted by the Senate and House of Representatives of the United States of America in Con-

gress Assembled, That all Government forest lands in the State of California, not suited to agriculture, on and after the passage of this law, shall be withdrawn from sale and entry, and shall not be alienated from the United States Government. Lands covered with trees or brush, or both, shall be considered forest lands. Such lands shall remain withdrawn until a definitive survey shall have ascertained what portion of such lands should be permanently maintained in forest for the welfare and best interests of the people of the commonwealth.

Officers of the United States Land Department in California shall not allow the sale, or entry, or disposal of any lands in forest not suitable to agriculture. And for the further carrying out of this Act by said officers they are hereby required to demand from all applicants for lands, under any law of the United States in California, that they affirm under oath that the lands which they desire to purchase, to enter, to homestead, or to acquire by any means from the Government, are not in forest, or that at least half of such lands in forest applied for are suitable to agriculture. Two witnesses shall be required to confirm under oath the above statement. The forest lands so reserved shall be placed under the management and control of the Forest Commissioners of California. The Forest Commissioners of California shall have power under this Act to appoint Forest Police and Guardians, and to provide a system for the perpetuation and renewal of forest growth; to mark out such timber as should properly be cut and to sell the same; to regulate pasturage and any occupancy whatever upon the forest lands so reserved; provided, that the said Commissioners turn into the Treasury of the United States all funds received by them for timber, fuel, privilege of pasture, hunting permits, or for any other purpose, over and above the cost of maintenance of said forest lands.

The Forest Commissioners of California, while controlling and managing the forest lands reserved by this Act in the State of California, shall give an annual account to the Secretary of the Interior of the receipts and expenditures for managing the same.

For the purpose of providing foresters and agents to carry out the provisions of this Act, the sum of \$50,000 is hereby appropriated, to be drawn from the Treasury upon the warrant of the State Board of Forestry of California; provided, that should the receipts from said management cover the cost, or any portion of the same, any such excess of receipts, or any portion of the \$50,000 hereby appropriated not needed, shall be turned into the United States Treasury.

The object of this Act is to prevent the waste, the destruction by fire and by other improper means, of the trees and brush on Government lands, and the robbery of timber from the Government forests situated on lands unsuited to agriculture; to provide a reasonable and honorable means of conducting the tan-bark and lumber business in California; to maintain a permanent supply of fuel and lumber by protecting the reproductive power of forests; to secure the climate against extremes of heat and cold and violent winds; and to protect the valleys from torrents and floods; and to provide protection for the watersheds of the springs and streams, so that these shall remain perennial in their flow, for the use of the mines, commerce and agriculture of the State.

This is the bill which California, a land that asks but few favors, has felt compelled to lay before the door of Congress. We have been driven to this by the same vandals that have brought about the devastating and deadly fires of Michigan and other States where forests are being torn down by the greed of wealthy lumbermen, who defy the law and laugh at its agents in Washington.

But for my own part I should have simplified the bill by demanding an absolute surrender to the State of all forest lands not capable of cultivation. Not only that, but I would have the law extend to Michigan, New York, and all the States.

Let us look on this plan a moment. Suppose California and all other States indeed had absolute control of all forest lands, why the State, following the liberal action of the nation, would let the counties have the lands within their lines to protect, to make parks or pleasant resorts, or to erect churches and schoolhouses thereon. The remote border counties that have been impoverished by Indian depredations, fires, and floods, and kept poor by the very conditions of savage, mountains and inaccessible forests, would thus not only be enriched but made at once the protectors of the nation's very heart and vitals. Every county officer, every Constable, aye, every citizen would then have a pride and a personal interest in preserving his property. These woods would then be as secure as the archives or the courthouse of the county. The remote pioneers would no longer assist the depredator to escape punishment and laugh at the Federal officers and law, but he would help to protect the property of children and the heart of the nation.

And so I say, bluntly, that common sense and common justice demand not only that California, but all the States, should have the forest lands not suited to agriculture conceded absolutely and at once by the Federal Government.

There are few forest fires in the old world, because the poor pick up the fallen timber and the leaves are gathered to nourish the earth. But was this the case of old? I rode for a full day, from Babylon toward Jerusalem, without seeing so much as a grasshopper; not a bird, not even a blade of grass in a land that was once an Eden. We read that Alexander the Great planted every tree of Greece there in trying to restore that land, and mourned because the

Greek ivy could not be made to grow on the tower of Babel.

Well, let me tell you right here that in the process of fires and floods—floods that always follow fires—is permitted to go on by the help of ten thousand iron-toothed mills—gang-plows in the valleys to help along the flood that has gathered force in the burned-out higher land—why, we will accomplish that same desolation just as certain as water runs. Only we will achieve by the aid of gang-plow and circular-saw implements, unknown of old, in two centuries what it took Babylon 20 to bring about.

May I beg in conclusion that you do not quite forget what that great and most thoughtful old man, Captain Eads, said about leaves. Leaves are the life of this nation. Every leaf is a little reservoir. Every leaf that is left to lie in its place through the season of floods helps to hold the fort as God purposes. I tell you a single little leaf is of more importance in the glory and perpetuation of this nation than is her stoutest soldier to-day. But surrender the leaves and grasses to the flames and what can poor denuded mother earth do but surrender to the floods and let ruin possess the land?

Yes, we must have fires; but fires in the season. Why, I would rather see a frost in midsummer, I had rather see a cowboy serving at the altar of the High Priest, than contemplate the mutilated way in which we hobble along as a nation in these things.

Our fires must be annual, regular as the spring season; but always in the spring; not always in the summer and fall; never in the summer or fall. Far better have frosts in May.

It was my fate to spend my boyhood with Indians. They were the only true foresters I ever knew. In the spring after the leaves and grasses had served their time and season in holding back the floods and warming and nourishing the earth, then would the old squaws begin to look above for the little dry spot of headland or sunny valley. And as fast as dry spots appeared they would be burned.

In this way the fire was always under control. In this way the fire was always the servant, never the master. And by the time the floods came again there was another coat of grass and leaves stronger and better than the one before, because of the careful and temperate fire of the careful and wise old woman. By this means the Indians always kept their forests open, pure and fruitful, and conflagrations were unknown.

I say, then, let the forests be placed in the hands of those who live in or near them, and have some heart and some interest in their preservation. I say that the life and duration of this nation depend on her walls of wood, more than ever did that of Athens; and I say further, that while we may plant our valleys we MUST preserve our mountains.

Let the few remaining millions of forest lands be conceded to the States, and then on down to counties, and even smaller divisions, school districts for example. And then let the foresters of plain, hard, common sense, follow the Indian's simple method of preserving his property, and my word for it, neither New York, Louisiana, Michigan nor California need fear flood or fire, drought or drowning rains. We would then be getting back near to nature, and nature never betrays her own. Who ever heard of either flood or fire in the Indian's home until the white man came to make it his monopoly?

JOAQUIN MILLER.

Oakland, Cal., Sept. 8, 1887.

SAN FRANCISCO LEMONS.—There is now on exhibition at the Mechanics' Pavilion a sample of seedling lemons grown in the open air at the residence of W. B. Ewer, 1516 Folsom street, San Francisco. The tree upon which these lemons were grown is only seven years old from the seed. The present is its second crop. In addition to those here shown, about fifty ripe lemons have been picked from the tree the past summer, some of them larger than any here shown. The tree has now over one hundred lemons upon it, in every stage of growth from the blossom and fruit just setting—the same as shown in this exhibit. The fruit is very superior, with but few seeds, and of fine flavor. A curious and interesting feature will be noticed of a ripe lemon with a bunch of blossoms growing upon the same stem. The tree has been in constant bloom for over one year.

"VENERABLE PRIEST OF FLORA."—Dr. Asa Gray, who has been spending several months in England and on the European continent, had conferred upon him, in June last, at Cambridge, the degree of Doctor of Science. The public orator expressed a hope that Prof. Gray might be permitted to see the completion of that great work of the Flora of North America, on which he had been so long engaged, and alluded to him as the *flora sacerdos venerabilis* who had reached the seventy-sixth year of his age. "Through all this tract of years wearing the white flower of a blameless life."

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

State Grange.

The next session of the California State Grange will be held in the city of Santa Rosa, the county seat of Sonoma county, commencing at 10 A. M. Tuesday, Oct. 4, 1887. Santa Rosa Grange has engaged Hahman hall, on Fourth street, for the sessions. The hall is on the second floor, large, finely furnished, lighted with gas, and has spacious ante-rooms, closets and committee-rooms. There will be both a piano and organ at the service of the Grange. The hall is in every way well adapted to the use of secret societies, having been built expressly for such purpose.

How to Get to Santa Rosa.

Leave San Francisco, at foot of Clay street, just north of Oakland ferry, via Donahue Broad Gauge. Take steamer Tiburon for Point Tiburon, leaving S. F. at 7:45 A. M., 3:30 P. M. or 5 P. M. for Santa Rosa. Fare to Santa Rosa, \$1.75. Arrangements have been made with the R. R. Company so that the round trip will cost but \$2. Passengers will arrive at Santa Rosa at 10:10 A. M., 6:05 and 7:20 P. M. Committees from Santa Rosa Grange will be at the depot, on arrival of each train, to welcome Patrons and to assist them to hotels.

All the hotels are making special and reduced rates as follows:

SPECIAL HOTEL RATES.

	Per day.
Grand hotel } Single person	\$1.50
and } Occidental	
Two persons in one room, each	1 25
Magnolia house	1 25
Eagle hotel	1 00

Any Patron who may desire rooms, or any information pertaining to the session of the State Grange that is to be obtained at Santa Rosa, can get the same by addressing E. W. Davis, W. M. of Santa Rosa Grange, at Santa Rosa, Sonoma Co., Cal.

Santa Rosa Grange meets every Saturday to confer degrees and to complete the details of State Grange work.

Bennett Valley, Sebastopol, Two Rock and Santa Rosa Granges are working industriously, hand in hand, for the good of the Order, and the Patrons of Sonoma county are determined that, so far as depends on their efforts, the coming session of the State Grange shall be altogether pleasant and successful.

With Santa Rosa's genial climate, good hotels, splendid streets, fine drives, costly dwellings, and noted hospitality, we can assure our readers that it is a good place, and an opportune time to go to the State Grange. Go and work. Go to work, and that for a good cause. We hope to meet all our Grange friends at Santa Rosa the first week in October, 1887.

Literary Exercises at the State Grange.

Members of the State Grange will be pleased to learn that Lieutenant Maxfield, of the U. S. Signal Service, will read a paper at the annual session of the Grange, on "Rain and Frost in California." Lieutenant Maxfield is the Chief Officer of the Pacific Coast division of the Signal Service, and is a resident of San Francisco. It is he who forecasts and predicts the weather of the Pacific Coast. His position is one which has enabled him to gain a vast amount of information relating to the meteorological peculiarities of this coast, and his lecture cannot fail to be of interest and value. We know of no subjects that could be treated of before the State Grange of more pointed interest than these. Farmers should make an effort to be present during the reading of this lecture, as much benefit will be derived.

That portion of the session of the Grange which comprises this literary feature will be open to the general public, so that all farmers, whether members of the Grange or not, will be enabled to listen to Lieutenant Maxfield's remarks.

The Literary Committee have encouragement from several sources which lead them to anticipate a good share of entertainment during the session. They would be pleased to have others who are willing to contribute hand their favors in during the earlier part of the session, when there is more time for literary exercises, without interfering with the other business of the session.

SPEAKS WELL FOR LUGONIA.—We have recently seen statements from places in the southern part of the State that the scale appears to be dying out there, and now comes the *Citrograph*, saying that a worse parasite begins to find the climate unwholesome. "The only saloon East San Bernardino valley has ever had, last week filed its petition in bankruptcy. Liabilities, \$1300; assets, exempt from execution, \$200. The saloon business don't pay here, and the experience of the first one will, we hope, prove such a warning that no other person will ever try it again. We have no use for that kind of a death trap, and the fact of this one going into bankruptcy is evidence that our people do not patronize such an institution."

Going to Santa Rosa.

[An Address to Grangers by Mrs. MARIA B. LANDER.]

"Ben Fisher had finished his harvesting, And he stood by his garden gate, One foot on the rail and one on the ground, As he called to his good wife Kate."

Shall we go to the State Grange? "Can't go!" "Why not?" "Can't afford the expense."

Grangers! do we not nearly all of us recognize these words, or have they not with some become almost stereotyped phrases? However, it may be, as the first week in October, 1887, draws near, this question of going to the State Grange must be answered.

Sisters, how many brothers like unto this "gude man"? Ben Fisher says:

"I know, Kate, our crops aren't the best, But we've labored together to keep things along, And together we'll now take a rest. Frosts blighted the fruit, but Brindle is prime, And Jimmy and Fan are a show."

Your butter and cheese can't be beat in the State, So up to the Grange we will go!"

Thus together do man and wife, daughter and son, take an outing, and human nature, in keeping with that growing nature which the reason of man directs, guides, and in a measure controls, must perforce take a rest; nay, even as the germ-buds safely wrap themselves in thorny or burrow-like coats for winter sleep or rest, so the tiller of the soil and his careworn family bring to light their seedy broadcloths and shiny dresses of well-worn goods, that they may have a little change, get away for a few days from that treadmill of duty in which sometimes

"Their feelings get raspy and cold, For toil never ending and labor uncheered Make women—and men sometimes—scold."

Patrons! have you not labored diligently of late, and have you not, brothers, strong men as you are, come almost to scolding? Of course sisters do not scold—they only fret and worry, and when sorely driven may perchance scowl; but, husband, do you not see that this little fretting and worrying, this everlasting sameness of action, is doing more to make the once girl-face of your helpmate take the lines, furrows and wrinkles of age than has all the number of years of wifehood and motherhood that have been patiently and faithfully, if not always smilingly, given?

Brothers, the good book says beware of vanity; but if many of you would stand before the looking-glass and study for a very few minutes a day the lines that are writing their changes upon your sun-browned faces, you too would see that all work and no play is making of you a dull boy; even as it did the Jack you once so confidently quoted to parents and teachers. [If you would study the reflection there given, you might possibly see that one of your strongest traits was a growing tendency to not only labor yourself from daylight till dark, but that your growing life-buds, your children, also must "make hay while the sun shines;" and as California is noted for her sunny days, almost all days are for labor, and but few hours left for a satisfactory sandwiching of play.

Fathers, as a rule you are the arbiters of all family goings and comings, and if you in reality, as Ben Fisher in poetry, say go, then will the hardness of care from wife's face turn into tearful softness and flashes of the girl-spirit you once knew say:

Ben we will go! There may be stock fatter than ours, Horses swifter of foot, cows finer by far, Better butter and cheese, fruit and flowers; But there's one thing, I claim, that can't be surpassed

In the whole Yankee nation to-day, I would not exchange for a kingdom to boot— That's my gude man.

Surely this frank and perhaps naive confession of the growing old wife will, with her good presence, lead all good husbands to Santa Rosa. This City of Roses says to the Granger: "We are booming, but have in reserve for California farmers a boom of brotherly love and greeting. For our Eastern brothers we have climate to sell, but to the old-gold-hunters, who have turned their spades into scythes and pruning-hooks, we have a royal Grange welcome. Therefore come to the State Grange,

"And gather new feelings, new thoughts and new ways."

If we find those that suit as we roam, And gather up strength in head, heart and hand For the loves and the duties of home."

Grangers! yours is the labor that garners the sunshine and dew for cities and palatial homes, giving it them in no stinted relays of fruits, nuts, berries and grains. Your own barns teem with like stores for your animal subjects, but too many forget that wife, children and self need a rest, change or outing, and it is such we beg—turn over a new leaf and attend the State Grange.

Martinez, Sept. 11, 1887.

DANVILLE GRANGE had a fine meeting and a number of visitors the first Saturday of this month. District Lecturer Loucks assisted in conferring the fourth degree on a class of eight. The ample Harvest Feast was spread in the grove.

ST. HELENA GRANGES, to the number of about five and twenty, surprised their Worthy Overseer Lewelling in his home a few nights since, and stormed his castle in a friendly fashion. Both victors and vanquished passed a happy social evening.

San Jose Letter.

EDITORS PRESS:—Now that the rush of work, taking care of the fruit crop, is easing up a little, our Grangers are beginning to think of their duties to the Order, and if you can once get a Granger awakened to what he conscientiously feels to be his duty, you will almost always find him ready to fulfill it. Last Saturday found the seats in our Grange hall but sparsely filled, yet those who were there came with willing hands to work in the harvest field.

I think almost all the members of San Jose Grange feel a deep interest in the work of the Order, and that the farmers can by united and earnest effort do more to help themselves and to build up a better state of things financially and socially by meeting together once a week in the Grange hall and there discussing the affairs of the farm and interchanging ideas generally.

This summer has been a very trying time for our Grange. The large fruit crop and the great scarcity of help has compelled every one to work early and late until the fruit was saved, and we have been obliged to drop for the time not only the Grange, but all social meetings. Now that our fruit is safe, however, we are ready to enter with renewed interest upon the old familiar and pleasant duties.

Brother Cressey dropped in upon us last Saturday. Said he had, owing to the San Jose boom, sold a piece of real estate, and consequently was enabled to come and pay up his dues. We are always glad to see Brother Cressey enter our hall under any circumstances—his earnest, energetic words bring good cheer every time.

Our little city of San Jose is enjoying a "boom," which seems to express a revival in business and an increase in real estate values.

Our beautiful climate and fine soil are two great factors at work in this boom business, but it has taken the earnest, persevering labor of the farmer to test the producing capacity of the soil; and now, after years of hard, patient work and experiment, he is beginning to reap some reward. May he live long and prosper!

My greatest fear is, that the large prices offered for land will have a tendency to unsettle many families that are just beginning to feel they can take life a little easy. There seems to be no doubt, now that our lovely Santa Clara valley is becoming better known the other side of the Rockies, that the influx of Eastern people will be large, great inducements will be offered our farmers to part with their beautiful places, and many will leave behind their homes it has taken years to make. But then there must always be pioneers in every country, to make the way smooth for men of means. We are glad to have Easterners come and share this heritage we have entered into. We bid them all welcome. There is enough of the good things of this coast for us all.

We are beginning to think and talk of the State Grange, and hope to be of the number who will be present, although we cannot tell what duties may intervene. But at all events, the session cannot pass without being earnestly remembered by San Jose Grange. Fraternally, San Jose, Sept. 14, 1887. N. A. S.

An Enthusiastic Pioneer.

At a meeting of the Pioneers of Alameda and adjacent counties, held in Oakland Admission Day, Brother Erastus Kelsey of North Temescal, who is President of the society, made a brief but eloquent opening address, substantially as follows:

Pioneers and Friends: We have met here this evening to celebrate the anniversary of the admission of California to that galaxy of States, to whose luster her Golden Star added a gleam unrivaled since time began, and gave an impetus to adventure, commerce and civilization before unknown, starting an era of progress, development and liberty which shall tell upon the destinies of the nations.

By her gold, commerce, through all its avenues, has been quickened and expanded. By her cereals the world has been fed.

Pomona has showered gifts upon her in profusion; Flora admires her with a wealth of beauteous flowers; her mountains, crowned with eternal snows, are rich in gold; her beauty of scenery is unrivaled and all known, lowing herds and bleating flocks roam her thousand sunny hills, "her smiling plains laughing to the tickling husbandman," a bounteous crop of waving, golden grain. Her climate, in which it is a pleasure to live and breathe, gives assurance of the prosperity, health and happiness of a people who were culled from the most adventurous, energetic and cultured of our race, in whom all nations shall be blessed.

THE GRIDLEY MONUMENT was unveiled in Rural cemetery, Stockton, with appropriate ceremonies, on Admission Day. The procession included detachments of the military, G. A. R., P. of H., Pioneers, etc. The G. A. R. plat was decked with flowers and bunting. There was a great concourse of people, among them the widow and children of the "mourned hero," and Judge Swinnerton delivered a feeling and eloquent address.

ALHAMBRA GRANGE is to discuss the question of Woman Suffrage to-day, Sept 17th.

Grange Work and Progress.

[Prepared Weekly by M. WHITEHEAD, National Lecturer.]

The first State in which members of the Grange have taken formal action in testing the Interstate Commerce law is Vermont. State Master Alpha Messer, representing the State Grange, started the ball in motion by addressing Gov. Ormsbee, calling his attention to the fact that Canadian products are carried over the railroads of the State to Boston and other markets at lower rates of freight than those charged Vermont farmers for a shorter distance. The result has been the State Grange has entered formal complaint against the Central Vermont and other railroads for violation of the Interstate Commerce law. Under the State law the Governor has the power to assign counsel on behalf of the State to assist the Grange in presenting the matter before the Commission, and exercising this right, Gov. Ormsbee has appointed Hon. Kittredge Haskins, who is preparing the case for the State Grange, and U. S. Senator Edmunds will make the argument before the Commission. This will be a test case of the law, and will be watched with much interest. It is encouraging to know that the Governor and the people of the whole State will, with the aid of eminent legal talent, defend her farmers from injustice. That the result will be on the side of justice and right is the hope of all friends of good government.

One of the mistakes that has been made by some Granges is in expecting too much at once. A crop cannot be secured except the ground be carefully prepared, the seed planted, and then weeks and months pass in care and cultivation before the harvest comes around.

"Heaven is not reached at a single bound, But we build the ladder by which we rise From lowly earth to vaulted skies, And we mount to the summit round by round."

All Grange work should be entered upon deliberately, carefully, one thing at a time well done, ever moving onward and upward. It is by well-planned, well-organized work that the Grange to-day is steadily lifting agriculture and its votaries from the ruins of the past and placing it again "at the front."

TEMESCAL GRANGE.—We hope all good Grangers who can attend the meeting of Temescal Grange, of which we spoke last week, will be on hand at 10 A. M. to-day (Saturday). A good time is confidently expected.

REDDING voted, the 1st of the month, on the question of incorporating, and nearly two-thirds of the ballots cast were in favor of the measure.

Santa Clara After the Rain.

EDITORS PRESS:—This county has had a remarkable experience and escape. September 5th and 6th we had rain—some weeks in advance of the usual time. It was unevenly distributed, but enough fell in most localities to have done much damage, had it hung on and tapered off gradually, allowing mold to start on fruits drying and dry feed. Many acres were covered with trays of fruit in all stages of drying. Most of this was piled up the previous night, and such seems not damaged in the least.

Some trays got their full allowance of rain; but oh, this grand redwood of ours! Had it been created on purpose for making trays to dry fruit on, it would have filled the bill exactly. It splits so true and evenly it can be put together almost like sawed lumber. There is so well-defined and firm a grain that air circulates under fruit laid on the shakes, and the least angle given to the tray makes the water run off the side almost as promptly as if no fruit was on it. There is little or no annoyance from gum or pitch, none whatever from warping, and the split shake has no fuzz, like sawed lumber, to stick to the fruit. The redwood is, in the line of trees, a grand development of the eternal power, and deserves to rank in history and song with its cousin, the cedar of Lebanon.

After the rain the sun reassured its reign so promptly with the grand tonic that seemed in every breath of air that nearly every start of mold was promptly killed, though the feed on a few acres sloping to the north may be moldy and the seeds sprouted, and some bales of hay that lay wrong side up may have let the rain in where the sun could not dry it out.

However, the people as a whole are far better prepared for freaks of weather than they were a few years ago. If the joke that "our downcast cousins coming here so freely have brought their weather with them" is true, it is even more true that their careful saving, prudent, look-ahead habits, added to the Californian's native vim, have helped more than their weather has hurt us, and now let us urge and help them to bring their grand daily-bread-earning factories to us. C. A. W.

San Jose, Sept. 12, 1887.

REMEDY FOR FLEAS.—An exchange recommends slacked lime in the stables and sheds where fleas are likely to find a home. Unslacked lime would probably be very good, but there is a possibility of setting fire to the dry trash. Slacked lime, however, gives satisfaction.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

GLANDERS.—Oakland *Enquirer*, Sept. 8: There seems to be an alarming spread of glanders among the horses of Oakland and vicinity, and Sanitary Inspector Snook is on the watch to prevent a general infection. He says that several have been shot privately that have but recently come to his notice, including one at Berkeley yesterday. He has now under his observation two or more cases that exhibit symptoms of the disease. They will be promptly disposed of, in case it is found that they actually have the glanders.

Calaveras.

CALAVERAS GRAPES.—Stockton *Independent*, Sept. 7: U. G. Findley, a farmer residing near Milton, Calaveras county, has sent to this office a fine sample of Muscat grapes grown on the redlands near Milton without irrigation. The fruit is large and luscious.

Fresno.

FAIR AT FRESNO.—*Expositor*, Sept. 7: The Directors of Agricultural District No. 21 have decided to hold a fair here Oct. 4th to 8th during the fall meeting over the fair grounds track. The list of premiums offered is modest, but it is the forerunner of future fairs at which larger premiums and a more comprehensive list of prizes will be awarded.

Inyo.

BANANA MELONS.—Inyo *Independent*, Sept. 10: Last spring Mr. McCarroll sent to Pennsylvania and got the seed of a variety of muskmelon called by the above name. The seed was planted at Mr. Goodale's place, Fish Spring, and have made fine yield. The melons do not at all look like the ordinary muskmelon, but more resemble huge cucumbers. The meat is salmon-colored and of delicious flavor.

SUITED TO ALFALFA.—A year ago last spring Mr. A. O. Collins bought the McCown ranch. By purchase and location he now owns over 1000 acres. A ditch taken from the river conveys water on to all this tract, except less than 20 acres. The soil for the greater part is a light, sandy loam and seems especially adapted to alfalfa. One piece of land was seeded early last spring for the first time with oats and alfalfa. A good start was made, when during the unusual high winds in April the tract was covered with light sand until not a trace of verdure could be seen. The grain made a start through this and was again growing nicely, only to be again buried up. However, water was turned on, and soon, for the third time, both grain and alfalfa were growing. The alfalfa is now thoroughly set and growing rapidly; with the exception of an odd knoll here and there, where the water did not reach, the stand is close, and next season will undoubtedly produce a heavy crop. Another field that looked as though it would have to be reseeded has a fine stand. There are upward of 200 acres now in alfalfa and more will be started next season. The ditch will supply an abundance of water for the entire tract.

Lake.

A MODEL FRUIT-RANCH.—Lakeport *Avalanche*: Geo. Thorington has over 2000 trees, large and small, in a bearing condition. Peaches, prunes, apricots, apples, figs, plums, and in fact every kind of tree fruit that is raised in this vicinity. The trees are all in a healthy and flourishing condition. Our next steps were directed toward the vineyard. Here he has about 20 acres planted to different varieties of grapes; the vines were loaded with fine grapes of various colors. We were taken to the house, where his estimable wife showed us the fruit she had preserved—a tempting display: large peaches that had to be crowded into the jars, prepared whole, looking as fresh as though just off the tree. Mrs. Thorington's preserved fruits are something to be proud of. When George bought this land he paid \$1000 for 155 acres, and with scarcely any help outside his own family he has cleared off a wilderness of trees and brush and converted it into an Eden. This ranch is a proof of what can be done with a little energy and good management. We have in Lake county thousands of acres of equally good land that can be bought at from \$5 to \$25 per acre.

Los Angeles.

CRYSTALLIZED FRUIT.—Pasadena *Union*, Sept. 10: The Fruit Crystallizing Works have used 64,000 pounds of sugar since starting up early in the summer. A considerable force is still employed. Pears, grapes and peaches are now being crystallized. The product will be marketed about October 1st.

Napa.

HOP CROPS.—St. Helena *Star*, Sept. 9: Cole & Simpson have about 20 acres in hops, and upward of 100 Chinamen gathering them. They expect to get through this week. They have a fair average crop. Storey Bros. have 22 acres near Rutherford and seven acres in St. Helena, and report a medium crop. Jas. Dowdell has 14 acres; crop, only medium; picking, progressing favorably. R. F. Lane has 16 acres and a fair crop. He is this year trying the experiment of picking altogether with men and boys, and they are giving satisfaction. The work is done cleaner, better and at less expense than with Chinese, all things considered.

STORING WHEAT.—Register, Sept. 9: Con-

siderable wheat from Napa, Berryessa and contiguous valleys has already been stored in our local warehouses, and wagons loaded with this grain are coming in daily from various points. "I'd like to sell my crop, but I don't care to give it away, as I'd have to do if I sold it at going prices," said a rancher yesterday, "so I'm going to store here in town." Some lots have been sent to Vallejo and Port Costa.

PEERLESS POTATOES.—F. Brughelli has forwarded to the Mechanics' Fair a box of tubers of the Peerless variety. For beauty and for size they cannot be excelled. Some of them weighed upward of two and a half pounds. The contents of the box was taken from only one sack of potatoes. Mr. Brughelli has three acres planted to these vegetables on his ranch below town.

Nevada.

IMPOUNDING WINTER RAINS.—Grass Valley *Union*: Wm. Bree, an enterprising farmer on the lower Colfax road, is constructing a large reservoir in which rain-water will be collected in the winter for the purpose of irrigating his meadow and fruit lands during the summer. By this means he expects to be able to cut at least two crops of clover in a season, and to irrigate as much orchard land as he may devote to that purpose. The reservoir is formed by building an embankment across a valley on the upper end of the ranch. He carried the embankment high enough last season to secure a fair supply of water this season. He is now engaged in building it higher, but does not expect to fill it to its full height until next season, when it will make a lake covering about 30 acres, and furnish a water supply that he can carry to every part of his farm. The embankment forming the breast of the reservoir will be between 200 and 300 feet in length, 60 feet at the base and about 12 feet in height, and is intended to be strong enough to stand permanently. Mr. Bree has figured the matter out to his own satisfaction, and has confidence that he will be well repaid for the outlay in the increased value of his crop.

Placer.

ONE YOUNG RANCH.—Republican, Sept. 7: About two miles from Auburn, on the Sacramento road, H. B. Gaylord has a sloping piece of ground east of the railroad on which he used to mine, but finding that unprofitable he turned his attention to growing fruit and vegetables. Two years ago last spring he cleared off 12 acres under the ditch, devoted a small piece to alfalfa and planted the remainder to an assortment of fruit trees and a market garden. Last year was his first season and he sold \$800 worth of "truck" from the place. This year he has hired one man, but his receipts will amount to nearly \$2000—not a bad result for the second year. It must be remembered that his fruit trees are very young and only a few of them are yet in bearing. Mr. Gaylord has been successful with all kinds of fruit he has tried to grow, and also with every kind of vegetable except cabbage and cauliflower. Others about Auburn have failed with those vegetables, and would be glad if some gardener would tell them what the trouble is.

BEAR RIVER DITCH.—This week laborers are beginning to cut the brush along the Bear river ditch preparatory to cleaning it out and enlarging it. Mr. Birdsall will have a large force at work by October 1st. He says the next year it will bring down at least 1500 inches of water as far as Auburn, possibly 2000 inches.

San Bernardino.

POTATOES PAYING WELL.—Ontario *Record*: Potatoes are found to be a profitable crop at Cucamonga. Mr. Anderson of the Iowa tract has raised six successive crops on six acres. Each has been profitable, but the sixth especially so. After paying all expenses of producing, harvesting and marketing, he cleared \$1500, an average of \$250 per acre. A crop of potatoes occupies the ground a little less than five months, Mr. Anderson having taken three crops off the same ground in 14 months. The potatoes are of such superior quality that Mr. Anderson has a standing order for all he can raise from a Riverside merchant, at 25 cents per sack above market quotations.

Santa Barbara.

LOMPOC MUSTARD.—Record: The mustard crop will not fall much short of the output of last year, but the price seems a trifle lower. Some sales have been made at two and a half cents per pound at our wharf. If our farmers had sufficient foresight to combine and place all their mustard crop with some reliable firm, the highest price possible would be obtained, we believe.

Stanislaus.

ORANGE ORCHARDS.—Modesto *News*: J. H. Prouse's orchard, near Knight's Ferry, contains over 3000 orange trees. About 700 are old trees and are bearing. W. J. Mellor has 500 orange trees in his garden that are one year old. It is his intention to bud them next spring and plant them in a 40-acre tract. City Marshal Hill reports that he has found within the city limits of Modesto 850 orange trees ranging from one to 20 years old. The latter are large, hardy, well-bearing trees and prove that our soil and climate are adapted to the culture of citrus fruit. One gentleman in Modesto has a number of lemon, olive and walnut trees growing, all of which are heavy bearers.

Tulare.

MAST.—Visalia *Times*, Sept. 8: The acorn crop in the foothills this year is stated to be very light. In the valley the crop is heavy

along the streams, but as you leave the water-courses the crop grows lighter until there is none worth mentioning. John Fulgham recently brought to town several branches from an oak tree that were full of acorns. He stated that on an 80-acre tract he has rented east of town there will be acorns enough to fatten 100 head of hogs. But this is a solitary case.

TIMBER CULTURE.—Delta, Sept. 8: One of the few persons perfecting claims to land under the timber-culture law is D. K. Zumwalt of Visalia. He has a fine grove of trees on his claim near Traver, and by the time his eight years (necessary to make good the title) have expired, the law will have been complied with to the letter as it has been to date. This forest will also prove a good investment, as the timber grown on the place will soon be very valuable—the more so that it is in a region where there is no oak timber within a radius of several miles. It will be found necessary before many years to cultivate trees in the valley for fuel, so rapidly are the oak groves disappearing.

FARM AND ORCHARD ITEMS.—The thrashing of alfalfa has commenced. The crop of seed promises to be good in most places.... The wheat crop in the western half of the county, recently thrashed, was lighter than on the east side, where the rainfall was heavier, but it turned out fairly well.... There is a very large amount of grain stacked in the fields in the vicinity of the foothills.... A few farmers have already commenced plowing, to have their ground ready for seeding when the first rains come.... Some fine apples are being brought from foothill orchards. The late apples grown there are much better than those grown in the valley, being firmer and of better flavor. Early apples grown here are not excelled by any.... Strangers in Visalia remark the large number of fine horses to be seen here.... We hear every few days of more parties who are intending to plant olive trees this winter.

NEW PEACH FOR DRYING.—I. H. Thomas has growing in his orchard a new variety of peaches that promises to be a valuable addition to those grown for drying. It is called the Leopold and Walker's Variegated, and was originated in Texas. The fruit is large and contains little or no water. In color it would be called a "pinto," as it is as mottled as a child with the measles. The meat is a nice yellow and mealy. While it is claimed to be originated from the "Indian Blood" or China cling peach, it is a freestone.

ALMONDS AND OLIVES.—Visalia *Times*: District Attorney Lamberson brought in from the Diss ranch, near Jonesa, a sample of olives and almonds grown on that place. The twigs shown are full of fruit and nuts respectively, and settle for all time the question as to whether olives and almonds can be grown in this county.

Yolo.

HOP-HOUSE BURNED.—Woodland *Democrat*, Sept. 8: Tuesday morning the hop-house on Lovdal Bros.' upper ranch—five miles above Sacramento on the Yolo side—was destroyed by fire. The kiln was perhaps the largest in the State, being 100x120 feet, and contained the entire hop crop of 40 acres—about 80,000 lbs. It had been contracted for at 25 cts. per lb. The loss was fully \$30,000; insurance, \$11,000. It is not known how the fire originated. The only explanation is that a Chinaman had dropped a bunch of matches into the green hops while picking, and that the heat in the kiln ignited the lucifers. Hop-men believe that fires in hop-houses occur from this cause more than all others combined, and any person caught smoking in the field is immediately "bounced."

WINDFALLS.—Orchardists suffered no little loss from the severe north wind which prevailed the latter part of last week. Apples, pears, in fact all ripe fruit was blown off the trees, and those who were not prepared to dispose of it right away were unable to save a large portion of it.

Yuba.

STOCK PARADE AT THE FAIR.—Marysville *Appeal*: There were in the procession as it passed before the judges on the quarter stretch, 168 stallions, geldings, and mares, and about 50 yearling and suckling colts. The parade of cattle consisted mainly of Jerseys and Holsteins, with a few grade animals. There were some Polled Angus cattle in the line. In appearance and quality of the stock, farmers and stock-growers generally conceded that the parade was the best that has been seen here for some years. There were nearly 50 head of cattle in the stables that were not taken out, for the reason that they were not halter-broken, and could not safely be herded on the track.

NEVADA.

WILD OATS.—Silver *State*: Wild oats brought from California do well in Paradise valley. We are informed that the oats have almost taken possession of some ranches, and produce a good crop without irrigation. Chas. Singhas has a piece of ground that he is summer following. The field was covered with wild oats, and though plowed in June the oats were not killed. Assessor Riley thinks the oats will grow on any sagebrush land in Nevada, and, if given a good start, will hold their own against summer drouth and winter cold.

GRAIN AND ALFALFA.—Reno *Gazette*, Sept. 6: Many farmers in the vicinity of Lovelock will harvest seven tons of alfalfa to the acre this season. J. H. Thies reports that he will harvest seven tons to the acre. He also re-

ports harvesting 80 bushels of oats, 55 1/2 of wheat and 70 bushels of barley to the acre.

WASHINGTON TERRITORY.

COST OF HOP-RAISING.—E. Meeker, in *Washington Farmer*: Mr. Yates writes me, in regard to the cost of raising hops, that the sum total would amount to 8 1/2 cents per pound, and divides the cost of an acre yielding a ton as follows:

Rent of land.....	\$ 15 00
Setting poles.....	3 00
Training vines.....	2 50
Cultivation.....	10 00
Second training.....	2 50
Picking (one ton).....	85 00
Pulling poles, etc.....	8 00
Team and man hauling.....	4 00
Boss and paymaster.....	4 00
Drying (one ton).....	9 00
Baling.....	3 00
Cloth and twines.....	5 50
Piling poles.....	2 50
Logs on poles (breakage).....	1 00
Wear and tear of building.....	10 00
Insurance.....	2 50
Wear and tear of tools.....	7 00
Delivering to station.....	1 00
Total cost of one ton.....	\$175 00

This is quite an accurate statement of the cost in detail, where the yield is a ton to the acre. We do not average a ton, and, in fact, not over 1600 pounds, taking the whole Territory. I have known two tons to be picked off an acre, and believe I have some that will go that much this year, yet I do not expect an average of more than 1700 pounds. Mr. Yates, upon the whole, is not very wide of the mark. Our off hand standard estimate of cost is nine cents per pound baled, ready for the market.

Answers to Correspondents.

EDITORS PRESS:—In answer to Mrs. V. Hope, I would state that

Asparagus

is very easy to start either from seed or plants, and can be planted at any time during the winter months. Any nurseryman can supply plants, or you may sow seed and transplant the next winter.

Pumping into a Tank.

To "H," Chico, I would say that it is no harder to pump water into the bottom of a tank than over the side at the top, but easier when the tank is only part full, as it saves pumping the water the distance between top of tank and the water level in the tank; and if the tank is full, it saves the friction on the sides of 10 feet of pipe. Put a check valve on the delivery pipe in the tank and then it is all right.—E. LEEDHAM, *Arroyo Grande*, Aug. 29, 1887.

Tehama's Challenge.

EDITORS PRESS:—I see a note in the *RURAL PRESS* of Sept. 10, from Hon. H. C. Wilson and others, challenging any portion of the State to compete with them in the growing of certain specified fruits. Now, if these gentlemen will leave out oranges, lemons and limes, and confine themselves to peaches, apricots, nectarines, plums, prunes and Muscat grapes, I will call them—the winner to donate the prize to some widows and orphans' home. I. H. THOMAS.

Visalia, Sept. 11, 1887.

THE ALLEGRETTI GREEN FRUIT STORAGE COMPANY has incorporated, with the following directors: I. Allegretti, A. T. Hatch, B. M. Lelong, E. F. Niehaus, S. Heywood. I. Allegretti of West Berkeley has been chosen president and manager; A. T. Hatch of Suisun, vice-president, and the Grangers' bank of S. F., treasurer. The secretary is yet to be appointed. The principal office is at San Francisco, but the works are at West Berkeley. Several growers have put in storage fruit to be exhibited at the Mechanics' and State Fairs.

ANOTHER LARGE LAND SALE.—The *Visalia Times* mentions the sale of 40,000 acres in the northern part of Kern county, near Tulare lake. The lands belonged to Moses Hopkins, and the purchase was made by a syndicate composed of James Morton, Tulare; M. Ayres, Los Angeles; M. E. Swarwout, Los Angeles; Carrie M. Green, G. Franger, G. S. Terry and others of Pasadena. The consideration is said to have been close to \$500,000. The final papers were passed and recorded on the second instant.

THE BIENNIAL REPORT OF THE STATE BOARD OF HORTICULTURE, which has been in the hands of the State printer for several months, is now ready for distribution. It makes an octavo volume of 600 pages and contains a number of colored plates. Persons desiring to secure a copy should apply to B. M. Lelong, Sec. State Board of Horticulture, 220 Sutter St., S. F.

THE WILLAMETTE FARMER, after nearly 20 years of useful independent life, has sold its business and good-will to the *Portland Rural Spirit*, in which its owners and managers mean to furnish a good farm journal for the whole Pacific Northwest.

A PARTY OF MEN are at work under County Surveyor Enslow, running the line for the big irrigation canal of the Butte and Yuba Irrigation Company.



Place Your Hand in Mine, Wife.

'Tis five-and-twenty years to-day
Since we were man and wife—
And that's a tidy side, I say,
From anybody's life.
And if we want, in looking back
To feel how time has flown,
There's Jack, you see, our baby Jack,
With whiskers of his own.
Place your hand in mine, wife—
We've loved each other true;
And still, in shade or shine, wife,
There's love to help us through.

It's not been all smooth sailing, wife—
Not always laughing May,
Sometimes it's been a weary strife
To keep the wolf away.
We've had our little tiffs, my dear;
We've often grieved and sighed!
One lad has cost us many a tear,
Our little baby died.
Place your hand in mine, wife—
We've loved each other true;
And still, in shade or shine, wife,
There's love to help us through.

But, wife, your love along the road
Has cheered the roughest spell,
You've borne your half of every load,
And often mine as well.
I've rued full many a foolish thing
Ere well the step was taken;
But, oh! I'd haste to buy the ring
And wed you o'er again.
Place your hand in mine, wife,
We've loved each other true;
And still, in shade or shine, wife,
There's love to help us through.

'Twas you who made me own the hand
That's working all along,
In ways we cannot understand,
Still bringing right from wrong.
You've kept me brave and kept me true,
You've made me trust and pray;
My gentle evening star were you,
That blessed the close of day.
Place your hand in mine, wife,
We've loved each other true;
And still, in shade or shine, wife,
There's love to help us through.

—Frederick Langbridge.

Hammering it in.

Depressed by a severe cold, for which I was indebted to the variable nature of the weather in the last days of November, I sat yesterday morning in a despondent way beside my coffee and dry toast, roasted the soles of my slippers and read away my digestion over the last murder recounted in the *Times*. Suddenly I was startled by the step of a man rushing hurriedly upstairs. The door of my sitting-room was burst open, and my friend Boulder, flourishing in his hand a heavy hammer, stood before me and gasped out: "I've done it at last, Smith! I've done it at last!" Boulder is a most excitable man, with a wife and a large family of boys. I looked aghast for marks of blood upon the hammer, for a trace of human hair in some crack of the handle.

"Which? Who? How many?" I shouted.
"My son, Jack," he declared, "is the cause of it all. He brought it upon me. O, Smith, my dear friend, would you have believed I should ever come to this? Cut me some ham."
He sat down opposite me in an easy-chair, turned up his soles also to the fire, helped himself to a thick slice of bread, and said again:
"Cut me some ham. I must be off to the hills in ten minutes; and it's well to fortify myself, because I may miss my dinner to-day."

"Sir! Mr. Boulder!"
"Let me ring for a cup and saucer. There, now go on with your breakfast and I'll tell you all about it. I was led to it entirely by that hard-headed fellow, David Page!"

"Page?"
"David Page, F. G. S. Hark you! Three weeks ago Mrs. Boulder came to me and said, 'Peter!' I replied, 'Susannah!' She said, 'Look at Jack's clean shirt.' She showed me a shirt folded neatly, with its front covered with red stains and holes and indentations. 'Mercy!' I cried, 'what's the cause of this?' Jack was at school round the corner, you know—Tickleby's day-school. 'I wish to show you, Mr. B.,' said my old girl, 'Jack's linen drawer.' Followed my wife. Looked in the drawer. Found it filled up with stones and dirt. In the drawer below that found clay, sand and old shells in his Sunday jacket. Caused the dirt instantly to be carried to the dusthole. Farther examined drawers in Jack's room, and in the corner of one found a book entitled 'Advanced Text-Book of Geology. Descriptive and Industrial,' by David Page, F. G. S.

"That's what has done it, Peter," Mrs. B. said. "That's the book I've seen him reading evening after evening." "He shall read no more of it," said I. "The book is confiscated."

When Jack came home at dinner-time we had a great disturbance."

Here Boulder gasped over his ham, and I felt painfully nervous. Boulder went on: "'Jack,' said I, 'you shall never more look on that book.' I put it on my own library table. I peeped into it. I looked into it. I read bits of it. I read more of it. I liked it. I studied it. I threw myself heart and soul into it. I comprehended it. I bought a hammer."

Here Boulder caught his hammer up and flourished it again. He was evidently stone mad.

"With this hammer, my boy, I break my way into the treasury of nature."

Here Boulder brought his hammer down and smashed my teacup.

"Ah, good!" he cried, taking a fragment up. "A lucky accident! Look at the crystalline fracture. What's here? Clay. What makes the clay crystalline in its fracture? Fire. Theory of the igneous rocks. Thickness of the ponderable crust of the globe, 800 miles. Depth at which most of the rocks ordinarily found at the surface would exist in a molten state, say five and 20 miles. Undercrust of the globe, granite. Here's a bit."

My excitable friend took from the mantelpiece a handsome paper-weight of polished stone.

"Some ass of a man has polished this fine specimen of primitive rock." With one tap of his hammer, Boulder broke it in two. "Observe," he said, "the exquisite fracture."

"Exquisite! Confound—"

"Never polish a fine specimen. The geologist, my dear boy, is most particular to show you a clean fracture and nothing else. He breaks a stone, and takes pains not so much as to dim with a finger's touch the brilliancy of the broken surface. Now fractures are of various sorts, conchoidal or shell-like, even, uneven, smooth, splintery, hackley. Only look in this beautiful bit of granite at the silvery gleams of the mica and the suety bits of quartz speckling the solid pudding of the felspar. Quartz is of simple minerals one of the hardest. I knock out a little chip of granite, and you will observe that it is impossible to powder the quartz in it by blows of a hammer on the hearthstone. You perceive the hearthstone breaks, but the quartz grains remain uncommuted."

"Mr. Boulder," I began faintly. I was made somewhat weak and helpless by my cold, or I should have met vigor with vigor.

"Pardon me, Smith! They remain, I say, uncommuted. Let me advise you to be a geologist. I am going to the hills to-day on an excursion. Come. Ah! you have a cold. Well, I will stop exactly half an hour." Here he pulled out his watch. "I do want you to share my enjoyment. I do want to make you feel the delight caused by the study of geology. I didn't think that I should take it up myself when I turned out Jack's drawers. Page over-persuaded me. He's just the man to bring the science home to you. Ah! Mrs. Boulder doesn't know it; but I've carried up her spare sheets and blankets into one of the attics, and have a most beautiful experiment on the formation of mud-banks from aqueous deposit in her linen-chest. I've mixed up earth and shells and a shilling's worth of shrimps. In a few days, when I drain the water off, you come over to me, and I'll show you how the top crust of the world is formed, and how the remains of extinct animals get to be mixed with it. Only, if Mrs. B. should by chance go to the chest before the experiment is finished! O, those women! Those women!"

"But now, Smith, as you've got a cold, and can't go to the hills, I'll show you how a geologist need go no farther than his own room for a study of incomparably the most glorious of sciences. I'll give you to-day only an elementary lesson. When I come next, we'll go into the thing more completely. Now, look here!"—down came the hammer on a corner of my mantelpiece—"I break off this little bit of metamorphic rock; the character has been destroyed by polishing; but now, what beauty have I not revealed?"

"Boulder," I cried, "give me your hammer. Let me send your hammer down into the hall."

"Thank you, thank you; I shall be going presently. 'Tis not worth while. Dismiss from your mind what I was just saying about aqueous rocks. Above the igneous you have the metamorphic—you have, to speak familiarly, the mantelpiece upon the paper weight, and not the paper weight upon the mantelpiece."

"I have, have I?"

"To be sure you have. Heat and the pressure of the super-incumbent strata have given to these metamorphic rocks their crystalline appearance, though it is believed that they were once deposited by water, and contained fossils of which all trace has been extinguished. Well, then, Smith, on the top of metamorphic rocks, on the top of the mantelpiece, we place Sir Roderick Murchison."

"Can it be possible?"

"Yes, Murchison and the Silurian rocks defined and discovered by him. They used to be called, along with some others, the Greywacke formation."

"Oh, indeed!"

"Yes. Here we have certain sandstones, shales, limestones, flagstones, and the slates near Bala. By Jove, Smith, you've a slate top to that console table. If it should be Silurian, you happy dog! If it should be Silurian!"

Up leaped my friend, and up leaped I, but not in time to save the chipping of a rather costly bit of furniture.

"Boulder!" I cried, hoarse with rage and

rheum together, "break another piece of furniture, and we are enemies forever!"

"Ah! my boy, you have your enthusiasm yet to come. I'll promise to break nothing of any value. But of what value are these precious polished specimens of yours? Their value's doubled when they show the fracture and the cleavage and that sort of thing. Nay, I'll break nothing more. Well, then, above the Silurian you have the old red sandstone, and then above that, ha!—but it's all fair to break coal—above that the coal."

A heavy lump of coal was suddenly whipped out of the coal-scuttle and being hammered into fragments on the breakfast cloth before I could effectually interfere.

"It is most interesting to search coal for the remains of extinct vegetable life. The markings sometimes are of the most beautiful description. The whole of yesterday I spent in our coal cellar, and a more delightful day I never—"

A loud knock at the street door startled us. Mr. Boulder was picking carefully about the contents of the coal-scuttle, and had spread some choice bits on the rug for further investigation, when a servant appeared to report that Mrs. Boulder wished, if Mr. B. was disengaged, to see him instantly.

"Ah!" said my friend, laying another coal upon the rug, "she has been to the linen press. Smith, go and pacify her."

Hints on the Making of Pocket Money.

[Contributed.]

There are many women in the middle walks of life who find useful ways of spending every cent of money which is brought in by the head of the family, and who are often glad of some means of quietly earning a dollar for "pocket money" now and then to supply themselves with the hundred and one little things a woman finds use for.

Those who live in the country always have eggs and chickens to dispose of and make quite a little in this way, but their less fortunate sisters in town who have not this resource have few ways of supplying themselves with pin money. There is one thing I would suggest, which, though small, it seems to me ought to be successful, and that is the raising and drying of immortelles for florists. There are many beautiful kinds of varied colors, purples, reds, pinks, yellows and whites, and with many different shapes. Their growth requires no care, as they are quite hardy and flourish in any ordinary garden soil, starting quickly and growing in a few weeks to quite a size from seed. They are very prolific, most varieties growing and blooming month after month, giving a fine showing in the garden and producing vast quantities of young flower buds which may be cut and dried. The great trouble in the ordinary dried immortelles, which are often seen, is the late stage of flowering at which they are usually picked. The half or wholly open flower, which looks well on the bush, is useless for drying, as it opens wide and dries a flat, yellow-centered affair, in my eyes by no means a thing of beauty. The flowers should be gathered every day or at least every day or two just in the bud when, having attained their full color or whiteness, they are about to begin opening. Cut them with long stems, tie them in bunches (the stems being kept straight) and hang them by a loop of the string, flowers downward, in a dark place. If hung in the sun or light, not only will they open to a wide, stiff flower, but their bright colors fade.

It will take them some weeks to dry, and even when apparently wholly so, they are not ready for use till the stems are stiff and brittle.

My attention was first called to their usefulness by seeing some of them being used by an ingenious friend of mine who, having more ingenuity than pocket money, was inventing Christmas presents out of nothing, so to speak. She had grown and dried some nicely, and taking some of the then fashionable oval plaques, she arranged the most delicate of the immortelles on them in a loose bunch, stems up, interspersing them with bits of delicate feather-grass and other grasses of the daintier kinds, a few of which she bought at the florist's. Having arranged them as lightly as possible on the plaques, she then fastened them on at the stems with a large bow of flame-colored satin ribbon. The effect was charming. Had she thought of doing it earlier she might easily have sold a number of these at a good price, as not only did a florist, struck with the beauty of the individual flowers, ask to buy some of her immortelles and also those thus arranged, but having left some at a friend's store to be carried home by him to his family for presents, they being laid in the show-case to preserve them, at least a dozen persons inquired the price and wished to buy them inside of a day or so. Since immortelles are so much in demand by florists, it might not be a bad idea for some woman to try raising and drying them. It will have the merit of being an entirely new departure, and is an easy way of earning a dollar once in a while.

EFFECTS OF CIGARETTE SMOKING.—Out of 20 young men who competed for a West Point cadetship at Westfield, Mass., ten were rejected by the physician because they had "the tobacco heart," brought on by cigarette smoking. They were unfit for West Point service.

Which One?

[Original.—By S. C. B.]

Some day, (who knows) with fearful eyes,
Standeth one, by its earthly shrine;
Sadly over the precious dead—
Sending tributes of love divine.
Which one? Not best that we should know;
Ready and waiting, faithful heart,
Pray that our lives each other bless
By word and deed, till "Death us part."

"Death parts!" 'Tis only for awhile,
"Over there" is a "Grand Forever;"
Where we complete earth's woof begun,
In weavings ne'er to sever.
The fabric beautiful is ours,
On Earth, in Heaven, to waste or weave;
Of our free will—we bring defeat,
Or glorious highs achieve.

Homes Versus Houses.

[Written for the RURAL PRESS by JEWELL.]

"Be it ever so humble,
There's no place like home."

I pity that nation whose language has no word signifying "home." No wonder its people are noted for their frivolous external and immoral lives, wholly given up to extraneous amusement and pleasure. They seem to have substituted patriotism, the love of country, for that of home. On the contrary, our German neighbors cling to the home rather than country. They willingly congregate in America, settling down to make home nests for themselves and families, and bring home-customs with them, rearing large families, and making good citizens, virtuous, thrifty and honest. Although Webster makes but little distinction between house and home, yet I see that a home is more than a "covering for protection," it is the place where one lives. Dryden says "Home is the sacred refuge of our life."

How singular the fact that so few houses are truly homes, in the broadest, truest sense of that word. Pass along a city street, with its rows of dwellings, and one can almost feel the difference in the houses, side by side, built exactly alike. What makes that difference, so keenly felt and easily seen?

Do you notice that silent, clean house front, every window closed to keep out the dust and city noise? Even the shades are down too low for a glimpse out into the street. Not a bird nor flower visible, not a child, nor traces of any about? Now, there dwells a proud, selfish man and his family. They use their house as a "covering and shelter," merely. How do I know? Because they apparently care more for appearances than they do for health, comfort and a home, as a generous nature would do. They lose half of God's best gifts by excluding light and air from their house even if they did get dust and noise. The wife and grown-up companions, if they have any, reserve their best for evening amusements—which are purely artificial and wrong—as the darkness is made for rest and sleep, not toil or recreation. Consequently, their lives are filled with duties; even their pleasures taking the form of a duty they owe their "set in society." I have been in houses where everything betokened wealth and culture, but which oppressed me as a tomb. Investigation proved the trouble: the parents were estranged, and the children, of course, were unsatisfactory, as a result of such a union. Harmony must prevail to develop the finest types of humanity.

Let us pause at this house adjoining the other spoken of. See the open blinds and sunshine streaming on the bright carpet; hear the singing birds; note the baby carriage in the hall; and best of all behold the happy mother and children occupying the pleasant room in the house for sitting-room. While the reception-room is that back one, pretty and attractive, but a north one seldom used; a freshness in the atmosphere speaks of outdoor air freely admitted, and the rosy cheeks of mother and children prove the fact. Now this grown daughter finds no desire to go to a nunnery, or run away with the coachman for excitement. Every hour is fully occupied with study, work, and recreation, and the night is given to rest and sleep, except now and then when some fine treat in lecture or concert is indulged in. From such a "home nest" come our model men and women, no matter if it be a cabin or palace. Where the heart is there is the treasure, and only from a home full of peace, love, joy, and duty can high-toned, right-minded men and women graduate.

How few are such homes in our land, and what wonder, then, that our boasted civilization and wealth is a snare and a curse oftentimes! O mothers of our land, do we realize the duties imposed on us? Do we do our best to make our homes what they ought to be, or do we make them the shelter of our boys and girls only, pushing them out of the nest early in life, without ever knowing or feeling the sacred love of a home? Memory carries me back over 40 years, and I again see the dear familiar walls, hung with pictures and bric-a-brac, of those days, most gorgeous to my childish eyes! The rooms seemed deep and high, the staircase long and steep, leading up to the fourth floor, and the merry hours passed there with brother and sisters were delightful, while my parents were models of cheerfulness and beauty in my eyes! Happy childhood, how our added years change even permanent material structures! Years after I visited the old home. Only

a brick house in a narrow street in New York—how small its rooms, low its ceilings and stuffy the atmosphere, while the backyard, once a model of flower beds and grass plat, in my childish eyes a very park to play in! How small and contracted it has become, and how bare of flowers and grass and even room to play in! Well, I am sorry I visited the old home—better have the old childish memory than the later one. It proves, however, that Dryden is right; it is the one "sacred refuge of our life." Thank God for our homes and home memories.

Los Gatos.

A Word to Wives.

(Original.—By F. M. P.)

There are many paragraphs written counseling wives, which apply just as properly and often more to their husbands, and many words of advice or reproof aimed at the women of the family, which should by rights be sent to the men; but there is one subject on which I want to say a word which really may be said to them rather than to their husbands, and in a direction in which I think we women are very apt to be at fault more, perhaps, than they, and that is on the subject of dress at home. There are few men who do not dress neatly to go to their business, and are, therefore, tidy during their home hours, but a woman who is busy all day at work that demands an old dress is very apt to get so tired and "fagged" as to lose ambition about her personal appearance. Don't do it, wives—it pays to look pretty and neat. Fashionable dress is one thing, neat or tidy dress is another and comes within the means of every one to an extent. Granted that the men are neat because they are going out on the street, and have no dirty work to do, still it doesn't alter the fact that they are neat, and that they cannot help feeling the difference between their tidiness and the slovenly dress of the wife, if she be careless. There is no man living, I am almost willing to state it as a fact, who does not notice or feel the difference between careless or natty dress, nor is there any man but likes to see his wife look well at home or abroad. Remember how in those far-off courtship days you used to put on the ribbons he liked best, smooth your hair and look carefully in your glass to see if you were looking your best to meet his eyes. You think he doesn't care now, may be, but he does, cares more than you know, and appreciates it, too, when you look pretty and fresh even more than you imagine. Try and keep up as nearly as possible all those little things which made him admire you when you were a girl. There never was a saying which aroused my ire like the common one, "Oh, my market is made, it doesn't matter." I get righteously indignant every time I hear a woman say that, and more than indignant—sad—for I believe that saying put into practice has ruined more homes, which would otherwise have been happy, than any other one thing. Our market is never made in the sense that we shall relax our desire to please and hold our husbands' love, and the woman who makes light of these little things does so to her cost, as she will some day find.

Society to Encourage Studies at Home.

This society was founded in Boston in 1873, and in 1876 an agency was established in San Francisco. Its purpose is to induce ladies to form the habit of regular and systematic study, in which they are aided by frequent correspondence with teachers eminently fitted to direct their work.

The methods of a course of instruction confined to correspondence are based upon the practice of making memory-notes, and the requirement of abstracts and frequent examinations on topics or books. Each student is treated according to her special needs, there being no classification except by records of individual progress kept by the teachers, and there are no competitive examinations.

There are six courses: History, literature, science, art, French and German. The terms of correspondence are from October 1st to June 1st.

Circulars and further information may be obtained from the secretary of the associates for the Pacific Coast, Mrs. E. B. Barker, 14 Stanley place, San Francisco.

Hen and Kittens.

A while ago a veteran hen on George F. Church's ranch, near Fresno, made up her mind to set. And when a hen makes up her mind to set, says the *Expositor*, she sets. Nothing can equal her in firmness and persistence in that direction, except a man hired to work by the day. The hen usually tries eggs, but if the market price thereof is too high, she does not kick—door-knobs, cymlings or porcelain imitations of hen-results will do, and she will devote herself to incubating them for three weeks and never once let on that she is joking. This was the way with the hen at Mr. Church's.

After some time he concluded to see what her henish had accomplished, so he got a pitchfork and lifted her off the nest, when to his astonishment he found it full of kittens. The hen quarreled and clucked and insisted on gathering her brood of young tabbies under her wings, and taking care of them.

Mr. Church desires some scientific friend to tell if there be anything in the Darwinian theory of the origin of species as to hatching kittens of door-knobs, etc.

YOUNG FOLKS' COLUMN.

The Talking Spoons.

(Original.—By ZILPHA.)

Tinkle, tinkle, tank! The silvery sound comes from a long-closed box in an open closet, and is made by the moving of six tiny silver spoons which have reposed side by side for 12 years, and, having grown tired and becoming suddenly gifted with the magic power of motion and speech, they turn against each other, and one says to the others:

"Are you not tired living such an idle life? I am. Don't you remember what bright times we had before we were shut up in darkness?" Another one replied:

"I, for one, would rather not be thought so much of if I have to be always like this; but still, if we were used as much as by our former mistress, we would not last long. Just think how hard we were thrown, jingling, down, and that twice a week our poor faces were rubbed until they shone, all unmindful of our suffering!" The third one to speak said:

"Yes, I well remember all our pain, but then, how much comfort we took in reposing on the snowy table-spread, and how many admiring glances were cast at our beautiful forms, and how often were flattering remarks made of our polish, to all of which we returned our brightest reflection! What stories of love and hope we silently heard, but not always these, for there were sometimes dark days and troublous times in our household in our younger life. The metal composing us was taken from its ore bed in far-away Mexico, and conveyed to England, and there, amid the smoke of manufactories, we were fashioned into shape, and sold from one merchant to another, were again taken a long voyage across the ocean and at length were owned by a thrifty jeweler in an interior town in New England, from whom we were purchased an age ago for active life."

For a long time the spoons tinkled forth their musical sounds in conversation with each other, but the magic power given them for a brief period ceased to be exerted and all was still, and naught broke the quietude of the room save the slight creaking of the wooden wheels of the ancient clock that stood in the room. Everything has a history, and inanimate nature talks to few, while to the many it is dumb. One of these few heard and knew the language of the spoons, and from it and other sources learned their interesting history, in which the forethought and filial devotion displayed might well be imitated by many in these days.

About the beginning of this century, away in a lovely valley of the Green mountains of Vermont, in the vicinity of Rutland, lived a family by the name of Ruthford, which consisted of parents and two children named Susan and Letha. Their ages at the time written of were nineteen and seventeen years respectively. Luxuries in the line of dress at that early day were comparatively unknown among those mountain dwellers, and to these girls a bow of ribbon and a few yards of lace (which had been their mother's maiden possessions) was a treasure fondly cherished and as carefully guarded as misers do their hoarded gold.

Youth, health and beauty need very little to enhance their charms, and the girls were rich in all of these. Loving their father, they idolized their mother, and sought in every way to render her happy. She had long cherished the wish to be the possessor of a set of silver spoons, but there seemed no likelihood of its fulfillment and so never expressed this desire, yet her daughters instinctively felt and knew of its existence. Many a time they secretly conversed about it, and thought and discussed vain plans by which they could get the coveted treasures. No way seemed to open to them by which they could earn the amount necessary to purchase the spoons, for in those days they cost much money, and that being a very scarce article, almost all transactions were by barter and trade. After weeks and months of thinking on the subject of "spoons," their father came into the kitchen one day and announced that eight little pigs had just been born in the pen close by. Hastily all sallied out to the sty and Letha's quick eye and active brain at once perceived that those little pigs would in time become full grown and might possibly be disposed so as to secure the spoons.

During the day she and Susan discussed the matter, and, forming their plans, asked their father to give them "two of the tiny pigs to have for their very own," and in return offered to feed and care for all of them. Vainly seeking to learn their object, he agreed to their offer, and during the weeks and months that followed, the sisters impartially but faithfully cared for the rapid-growing pigs. At last they were big and fat enough for sale, but the nearest market was 40 miles away over the mountains to Montpelier, and, as their father could not drive them there, the two girls knew that they must do so if they would accomplish their object. Brave, tender-hearted Letha almost despaired at the thought of such a journey, but, taking their father into their confidence, he reluctantly consented to their departure and all united in securing the consent of the mother, who was kept in ignorance of the intended outcome of the trip. So one bright and frosty morning in autumn the girls bade their parents a tearful good-by, and, driving the pigs before

them, started on their journey. Onward they slowly toiled over the mountains, down through narrow valleys, crossed sparkling brooks and rested beside huge trees by the roadway. The country was sparsely settled, and their journey slow, so at nighttimes they sought needed repose and welcome shelter in the humble log-cabins of the hardy settlers, who gladly cared for their animals as well as themselves. Footsore and weary, they finally reached the town where a kind-hearted blacksmith turned their pigs into a pen while they sought a purchaser. After several hours they succeeded in finding a jeweler who would trade solid silver spoons for the swine. The bartering articles were mutually examined and the spoons finally chosen from a limited assortment, and, to the weary but happy sisters, how beautiful they looked; how they shone in their silvery brightness, and they thought them incomparable in their loveliness! Soon their mother's initials were engraved on their brilliant surfaces, and gleefully they started on their homeward journey. What minded they fatigue? The radiant face of their beloved mother, and their father's grave smile, rose before them, and they imagined how each would enjoy their tea with such spoons, and that the golden, delicious maple sugar would taste finer, coming in contact with the silver beauties; their steps grew faster and hearts beat lighter at their mental picture. Again they crossed the babbling brook, but its words were sweeter than before; the mountains appeared more green, the sky more blue and every falling leaf in its rustling seemed to sound a mother's benediction. Miles grew less and less, and at length, as the lightening shadows of evening fell, they, footsore and travel-stained, crossed the familiar threshold and were welcomed with fond embraces and loving words. Letha took from her pocket an oblong box, and, opening it, displayed to the surprised mother the shining treasures therein contained. How that mother admired the gift obtained by the laborious efforts of her loved daughters none ever knew; but no happier girls could be found in all the Green mountains than Susan and Letha; and when, in the course of time, the loved mother passed peacefully away, her surviving daughter inherited the spoons, so well and bravely earned by her in maidenhood, and from her they have been handed down from one generation to another, until now they are in the happy possession of the writer of this true history.

GOOD HEALTH.

Philosophy of Longevity.

There is much in modern life that tends to shorten existence and to diminish the probability that a man or woman will reach 90, to say nothing of a hundred. We lead more exciting and wearing lives. It is vain that a person has a splendid constitution to begin with, wears flannel, or the equivalent of flannel, next to his skin; dwells in a warm, dry house, and eats and drinks everything that is good and wholesome, if at the same time he habitually overtaxes his strength, looks upon his muscles as mere machinery to be driven at high pressure, and ruthlessly calls upon his nerves to squander their reserve power when every other source of energy is exhausted. Men or women who intend to be centenarians in these days must combine something of the old mode of life with something of the new mode of living. They must, while availing themselves of all the scientific discoveries and sanitary appliances of the age, imitate their grandsires in the steady and tranquil habits that prevailed before the invention of locomotives and the telegraph. They must have their eight hours of sleep regularly; they must have intervals of repose and vacancy in the daytime; they must spend a goodly portion of their waking hours in the open air. Nor will that suffice; there will have to be regularity in the hours of their meals, and discipline in the ordering of the dishes of which the meals are composed. We cannot believe that anybody will ever live to 100 who eats a heavy dinner every night of his life at eight o'clock. Champagne in abundance, and Bordeaux or Burgundy *ad libitum*, should be forsworn by persons who deliberately set before them the attaining of their hundredth birthday. Neither, with such an end in view, would the active life of a politician, a lawyer, or a doctor be a sane enterprise. In order to reach that distant goal there must be a training, if not severe, at least regular and unflinching. Most of all there must prevail in the existence of such a person a tranquil serenity, an unruffled calm. Neither generous passions nor enthusiastic ideals must be allowed admittance. The pulse must never be driven up beyond a certain point, either by work, by anxiety, by fear, or by hope. At the same time, mere stagnation will, in all probability, never enable a person to live to 100. There is such a thing as rusting out as well as wearing out. If a candle does not burn brightly enough, it does not consume the wax with rapidity, and goes out for want of adequate combustion. It is so, no doubt, with the human body and the human spirit.—*London Standard*.

THE BEST TIME TO BATHE.—It is best to bathe just before going to bed, as any danger of catching cold is thus avoided and the complexion is improved by keeping warm for sev-

eral hours after leaving the bath. A couple of pounds of bran put into a thin bag and in the bath-tub is excellent for softening skin. It should be left to soak in a small quantity of water several hours before being used. The internal aids to the clear complexion are most of them well known, and the present season is the best for a thorough cleansing and purifying of the blood. The old-fashioned remedy of sulphur and molasses is considered among the best. Charcoal powdered and taken with water is said to be excellent, but it is most difficult to take. A strictly vegetable and fruit diet is followed by many for one to two weeks.—*London Lancet*.

THE MEDICINAL PROPERTIES OF VEGETABLES, ETC.—Spinach is believed to act as a stimulant on the kidneys. Dandelion as a tonic and laxative. Asparagus as a blood cleaner. Tomatoes is attributed a special action on the liver. Beets and turnips are said to be tonics. The red onion a nerve of some value in sleeplessness and neuralgia.

DOMESTIC ECONOMY.

BOILED FLOUR.—The boiled bowl of flour should be in every housewife's store-closet at this season, for it will cure bowel disturbances without medicine. In a stout muslin bag tie up a large coffee-cupful of flour, leaving a little room for it to swell. Drop into a pot of cold water, place on the fire and let it boil steadily four hours. Turn out the flour ball and let it dry all day in the hot sun. Grate a tablespoonful of this wet with a little cold water, and mix in a cup of boiling milk and water, seasoned with salt. It is very nice food.

DRESSING FOR SLICED TOMATOES.—Beat two eggs well together, add one teaspoonful sugar, one-fourth of a teaspoonful of salt, the same of prepared mustard, one tablespoonful of sweet cream and three tablespoonfuls of vinegar. Place the bowl containing it in a basin of boiling water and stir till about the thickness of cream. It will take above five minutes if the bowl is thick and the water boils at the time. Cool and use as needed.

GINGER COOKIES.—Two teacupfuls molasses, a teacupful each of butter and sugar, two teaspoonfuls each of ginger and cinnamon, three teaspoonfuls soda, half cup boiling water, and alum the size of half a hazelnut. Dissolve the alum and soda in the hot water, then add the other ingredients and sufficient flour to roll out without sticking. They should be somewhat thicker than ginger snaps. Bake in a hot oven.

PRESERVED APPLES.—Pare and core 12 large apples; cut each into eighths; make a syrup of one pound of sugar and one-half a pint of water and boil; put in as much apple as can be cooked without breaking; remove them carefully when tender; after all are done, add to the liquid one cup of sugar and boil 10 minutes slowly; flavor with lemon and pour over the apples, or grate nutmeg on them instead.

GRAPE MARMALADE—AMBER COLOR.—Separate the skins and pulp of the grapes and cook the pulps until the seeds separate, strain it, and to four quarts of pulp add two quarts of sour apples, measured after cooking, the grated rind of three good lemons, and nine pounds of sugar; let it get hot before the sugar is put in, and cook for half an hour after it begins to boil.

ORANGE CAKE.—One egg, one cup of sugar, 1½ cups of flour, one-half cup of milk, small piece of butter, two teaspoonfuls cream of tartar, one teaspoonful of soda. This makes three cakes. For icing use white of one egg, juice and grated rind of one orange and a little sugar. Lay between the cakes.

WALNUT CAKE.—One cup of sugar, nearly one-half cup butter, 1½ cups of flour, one-half cup of cold water, two eggs, one-half teaspoonful of soda, one teaspoonful of cream of tartar, one-half pound of walnuts. Cut the nuts into fine pieces. Frost the cake and put whole nuts on top.

APPLE JAM.—Select nice winter apples (Spitzenburgs are the best), pare, core and chop; make a syrup of the same quantity of sugar, a fresh lemon and fresh white ginger, not shredded fine, add apples and boil until the fruit looks clear and yellow. This can be canned or not.

SCOTCH SHORT BREAD.—Two pounds flour, one pound butter, one-fourth pound sugar; roll the sugar and mix in the dry flour, boil the butter and stir it in the flour and sugar. When mixed let it stand two hours before baking; prick it well and put on caraway comfits or citron.

SOFT GINGERBREAD.—One egg, one cup of brown sugar, one-half cup of molasses, one-half tablespoonful of butter, one-half cup of sour cream, one-half teaspoonful of soda, one teaspoonful of ginger, flour enough to stiffen. Bake in a moderate oven.

PUFFET.—One quart of sifted flour, in which mix thoroughly two teaspoonfuls of good baking powder, butter the size of an egg, two teaspoonfuls of powdered sugar, two eggs well beaten, mix very smooth and add one pint of sweet milk; bake immediately.

TOMATO SALAD.—Peel ripe tomatoes with a sharp knife, slice crosswise, lay in a salad bowl and season on the table with salt, a little sugar, pepper, oil and vinegar. Keep the tomatoes on ice until actually served. They cannot be too cold.



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The Week.

The autumnal fairs are now in mid career. Last week witnessed the successful run and close of those at Redding and Grass Valley, and this week the Oregon State and Los Angeles Pomological, as well as our own State Fair at Sacramento, are auspiciously opened, while the Mechanics' Institute, as elsewhere noticed, goes on prosperously. Next week there will be a brief breathing spell, and then the beneficent epidemic breaks forth afresh in many places.

Governor Waterman.

Robert W. Waterman, who succeeds to the executive chair made vacant by the death of Gov. Bartlett, is a native of the State of New York, but spent his boyhood in Illinois. He visited California in 1850, and came hither in 1860 to stay, purchasing a ranch in San Bernardino county, where he devotes much attention to stock-raising. His mining enterprises in what is now the Calico district, however, appear to have yielded him most profit.

Elected last year Lieutenant-Governor by 2500 votes over his Democratic opponent, W. F. Tarpey, he enters upon the gubernatorial office under peculiar and trying circumstances. But although inexperienced in administering public affairs, he is a man of such devotion to what he deems the right, and so conservative in his principles, that he should have the sympathy and support of all good citizens in his endeavors to steer aright the ship of State.

Gov. Waterman has an intelligent and amiable wife and a charming family, well fitted to grace the executive mansion of California.

California Great in Almost All Things.

From the much that our home press has been saying lately in praise of California, it is greatly to be feared that people abroad will begin to think we are sadly given to self-laudation. If to tell the simple truth with some iteration and a spice of enthusiasm may be construed into vaunting, then are we amenable to the charge. But the fact is we have ourselves been taken partly by surprise. Not until recently did we ourselves fully appreciate or even understand the many advantages that pertain to California; and if now, having discovered so much that is new, we talk with more assurance than to others may appear seemly, this is but natural and should be overlooked. Having through ignorance of its resources failed for so many years to duly advertise the State, it is proper enough that we seek now to make up for lost time.

But in all we have said in praise of California we have nothing to take back and not much to qualify. It is really a great State—great in extent and great in its wealth-producing and population-sustaining capabilities.

And first of its area. Place the noble old commonwealth of Massachusetts in the center of this State, and surround it with a cordon of the smaller sisters of the Union, and the margin left will convey some idea of the magnitude of California. With its resources but moderately developed, this State would be capable of sustaining 10,000,000, perhaps even 20,000,000 inhabitants instead of the 1,000,000 or a little more that now inhabit it, but which number is bound to be rapidly increased. If its population is comparatively small, let it be remembered that more than half the people who came here during the first decade of its existence went away again, having enriched themselves from its mines, and thus accomplished the object of their visit. Nor is California a very old member of the Union, having just completed the 37th year of her statehood.

As California is territorially large, so are many of her industries large, as well as much besides that pertains to her. She produces more gold, wheat and quicksilver, and contains within her borders more valuable salines, has more quartz-mills, large reservoirs and water ditches, than any other country in the world. She contains also as many miles of railroad in proportion to her population as any other. She makes more wine and raises than any other State in the Union, while in the matter of wool and barley she takes no lower than a second rank. In the size of her wheatfields and vineyards, hotels and dairies, she has probably no compeer. The soil of California is prolific beyond example. Its excellence renders it probable that our ideas in regard to the locality of the original Garden of Eden have all been wrong. Even the brute creation shows here a marvelous fecundity; as did the political rounder vote, so do our sheep and kine bear "early and often."

As for the healthfulness of our climate, if only Ponce de Leon, when in search of the Fountain of Perpetual Youth, instead of floundering about in the swamps of Florida, had come this far west, he would have found the object of his search as nearly as it ever will be found on earth.

Coming back to big things, it may be said that California contains the biggest trees and the most of them; the highest waterfalls, the grandest canyons, and, with one exception, the loftiest mountains in the United States. She can also boast of having the most extensive dry and barren deserts on the continent, there being thousands of acres in Death valley on which a horned toad cannot live, because of its heat and aridity. We will not affirm that our rattlesnakes exceed all others in size, but the reptile with us is sufficiently large for all practical uses. Men grow large on this side of the Sierra Nevada. A majority of the women, if not extra large, are good looking—and they nearly all belong to the majority, certainly the most of them!

Then this imperial State of ours has some things that are peculiar to herself. Here only grows the redwood, most useful and noble of trees; here only is found the grizzly bear, most powerful and ferocious of beasts; and here alone do the "Dead rivers" proper occur.

Californians are fond of doing things on a large scale. We farm and mine, make lumber, speculate and gamble in that way. Our quartz-

mills are noted for the number of stamps they carry. Our drift mines excel all others in the amount of gold taken out, while the hydraulic operations prosecuted here dwarf those carried on in other countries. Even our amusements are of the heroic and expansive kind. If we wish to engage in the pastime of sliding down hill, we do not build the puny toboggan, as in the East, but climb the snow-incrusted mountain to the height of 1000 feet or more, and speed down its side on the Norwegian snow-shoe with almost lightning rapidity. Here is sport worthy the Californian!

But not in all respects does California take the lead; not in everything is she distinguished above all other countries. When it comes to earthquakes, cyclones, sun-strokes and the deadly lightning, to epidemics, drouths and floods, she is obliged to lower her standard. As a meteorological extremist, California is a failure, if it is ourselves that have to make the humiliating confession!

Glimpses in the Pavilion.

The Mechanics' Fair this season is a very marked success. More exhibits have been put in place since our last issue, and the attendance is highly gratifying to all concerned. Last Saturday, it is reported, the sales of single admission tickets numbered more than 4000, and in the evening the crowd came quite as near being a crush as was comfortable. On Wednesday afternoon we paid a brief visit to the pavilion, the southern side of which is largely given to displays made by interior counties, and made some hurried notes on what was most apparent.

The first thing to strike the eye, as one entering the pavilion looks toward the left, is the Solano county exhibit—an exhibit at once interesting by reason of the beauty of the horticultural products which are set out in a style of almost severe simplicity, as if the exhibitors believe thoroughly in the proverb that "Beauty unadorned is adorned the best." This display consists chiefly of fruit, green, canned and dried. Of the handsome pears and peaches, a considerable portion (placards tell us) "has been treated and kept in its natural state since the first week in August by the Allegritti Green Fruit Storage Co.," and is a good witness to the efficacy of the process. A large number of photographs, illustrating the scenery of the county and the horticultural features of life there, embellish the tables. Plates of almonds are quite numerous. Perhaps the greatest novelties in the whole output are the clusters of dates from Wolfskill's, hundreds and hundreds of the fruitlets hanging in a pale-green mass upon their yellow stems.

Just beyond this one meets the advance guard of the Contra Costa exhibit—a long table sustaining big squashes, beets and other vegetables, and a fair array of apples, pears and quinces which have had "no irrigation," while across the alley is the hollow square of tables, whereon lie contiguous Contra Costa's grapes, Kern's wool, honey and orchard trophies and Stanislaus' fruits and corn, above all which sheaves of grain, sprays of pepper foliage and heavy hopvines are gracefully disposed.

Over the railing, down in what we used to know as the Garden, one catches sight of an extended army of bottles, marshaled as in quadruple line of battle; and just above them appears the legend "Napa county," beautifully wrought with apples and grape clusters on a purple background. Nearer approach reveals the fact that not only the expressed and fermented juices in glass, but countless plates of the unbroken fruits, ending with golden citrus spheres, stretch from the wall next Larkin St. to the cool grotto by the fountain.

Passing through the shady archway, we come upon Placer's plums, pears and peaches in lavish outlay.

With a few hasty glances about the annex where Nevada county's minerals sit over against Sonoma's serried sheaves and horticultural treasures; and one long look across the intervening restaurant-stands to where the broad signs aloft: "San Benito county, no irrigation;" "Humboldt county," "Pajaro valley, the most fertile valley of the State;" and San Luis Obispo—no irrigation," invite to near acquaintance; we become aware that our time is up for to-day, and that closer scrutiny and detailed description must be deferred to a later issue.

The State Fair.

Opening Days at the Pavilion.

[Editorial Correspondence.]

Though the State Fair is but opening as we write, and but few exhibits are in complete form, there is enough to demonstrate to an experienced fair-goer that this year's exhibition will be notably fine. In fact one begins to believe it as soon as he catches glimpses of the exterior of the pavilion between the beautiful trees of Capitol Park. The last Legislature declared that the State buildings in this grand inclosure should receive a new coat of paint, and the contractors began with the agricultural pavilion. The colors are well chosen, and the illuminated pictorial work in the four gables of the building is, it strikes us, very well brought out. Entering the building, one is confronted with the new interior decorations, and they are striking in color, unique in design and generally well fitted to give the building a gala aspect which suits well its architecture. These gifts of the people to the society have a counterpart in the excellent work now being rapidly done by the best of exhibitors, and warrant the prediction that before this hasty preliminary sketch can reach the reader the pavilion will be fit to draw visitors from the utmost distance to which its fame shall reach.

The County Exhibits

This year will occupy far more space than ever before. The counties competing for the awards will be greater in number, and the area of the space to be occupied by some counties is also greatly increased. The two counties taking the greatest space so far are San Joaquin and Colusa, each of which has one of the four conservatories in the angles of the buildings. This is the first year that a county exhibit has taken such space. The San Joaquin county display was undertaken by the members of the county Pomona Grange, and citizens outside of the Order have rallied to their support. We found on Monday J. D. Huffman of Lodi, as Chairman of the committee, gracefully discharging the function of commander in chief, at the same time working like a beaver at the undertaking; the others (similarly engaged, each at the work for which he or she was best suited) were Mr. and Mrs. S. C. Waters, Mrs. W. D. Ashley, and Mrs. Joseph Adams. The material they were opening and arranging at the time of our visit showed that San Joaquin would appear in the infinite variety and singular excellence of her products.

The Colusa county exhibit is in charge of F. C. Radcliffe, assisted by F. W. Willis. Mr. Radcliffe says he did not begin early enough with his collection to amass the material which he desired and which his county affords. It was evident, however, that the space had been laid out well, the decorations in commanding style, and we shall be disappointed if the boxes now being opened do not make a very good show on the tables.

Sacramento county has the largest space in the wing usually given to horticultural displays. A great variety of ornamental tables, pyramids, etc., are being erected, and the space is being ornamented as well as a parallelogram can be. The exhibit begins with a large collection of handsome grapes from the Natoma vineyard, upward of 60 varieties being set out by Mr. Platte. The other displays in the county cannot now be specified. Another day will bring them well forward. The Sacramento county exhibit is undertaken by the Pomona Grange of the county, and others are assisting. Those immediately engaged in setting up the display are as follows: G. C. McMullen, L. H. Fassett, E. Greer, Thos. O'Brien, and the ladies Mrs. McMullen, Mrs. Geo. Rich, Mrs. Daniel Flint, Mrs. Greer, Miss Plummer and Miss Aiken.

El Dorado county has space alongside of Sacramento county, and the display is being made by W. R. Selkirk. It will include both mineral and agricultural products, and enough is set out to show that the collection will repay careful study. A large gathering of photographic views of scenes in the county is an excellent feature which all counties should give some space to for the benefit of visiting strangers.

Placer county has a large wall-table and floor space on the other side of the hall. A great profusion of produce is being set out. Placer county did grandly last year, and pro-

poses to keep it up, as this year's collection shows. The display is in charge of B. M. Berry as chairman of the committee, and he is aided by J. W. Terry, H. E. Parker and J. F. Madden.

Humboldt county enters the lists for the first time this year, and does well to step forward, for her grand resources are but little known. The display is by Commissioner Fred W. Bell, who had to bring his material 45 miles by pack train, 300 miles by water, and then from San Francisco to the capital. He deserves great credit for his enterprise in getting up the display, which certainly speaks well for the resources of the county. Many things will bear comment later, but now we can but mention two gems of the display—redwood planks, one 18 feet long by 80 inches wide; the other, a sectional out of a plank showing a width of 11 feet, which is supposed to be the widest plank ever sawed.

Tehama county is having an exhibit set up by P. H. Coffman. H. W. Hand is doing like work with Napa county products. We saw space also set apart for Solano county. These and other county exhibits, which we may have overlooked, will be taken up at another time.

There is some unique architectural work being done with fruit and vegetables by W. R. Strong & Co., two designs, each in a commanding situation. B. N. Bugbey is erecting a fine display of all kinds of agricultural materials from his fine property in Sutter county.

The University is setting up on the main floor a display of cereals in sheaf and grain, a collection of economic plants and a spread of apples and pears from the Standard orchard in Berkeley.

Unique Display.

The honors for unique displays of merchandise seem to fall this year to Weinstock & Lubin and Huntington, Hopkins & Co. The former have a store in miniature all inclosed in glass, fully fitted out with different departments, and the whole complete with modern appliances. In the store the clerks and purchasers are all children in picturesque and grotesque costumes, acting their characters in pantomime. It is wonderfully pleasing in effect, and the aisles are crowded with beholders.

The display of Huntington, Hopkins & Co. has been for weeks in preparation. It is built entirely of hardware and represents an ornamental pagoda with revolving turrets, on which are electric lamps that flash colored lights in every direction. The main tower is some 30 feet in height and the architectural design most beautiful. In front of the structure, on a well-laid track, runs a locomotive and tender. The engine is a perfect model of one of the passenger locomotives, has bell, whistle, air-brake attachments, etc., and is self-acting. The track is something over 40 feet in length, the locomotive and tender 4 feet. The locomotive runs to the end of the track, the engine is reversed automatically and retraces its course, keeping up a constant going and coming, ringing of bells, whistling down brakes, etc.

Notes.

Machinery hall promises to be full and interesting. In the agricultural machinery the newest thing is Lubin's pulverizer, shown by P. P. Mast & Co. of S. F. It is plainly a very effective implement. A great variety of implements and machines is being set up and will be noticed next week in detail.

Report says the stock show at the park will be very large, as all stalls are taken.

The fair and the boom have struck Sacramento together. The streets and hotels are full of people.

The Railroad at Santa Barbara.

One by one the cities and towns of the State of California are being connected by rail with the transcontinental system. The latest one of prominence to receive the benefit of the railroad is Santa Barbara, one of the most charming spots on the coast. This important event was appropriately celebrated on August 19th and 20th, when the first trains came into the city from San Francisco and Los Angeles. The engraving on this page is from a photograph taken on the arrival of the first train.

The Santa Barbara branch connects with the main line at Newhall. It goes through the Santa Clara valley in Ventura county, then along the coast, and back into the Carpinteria valley, and again follows the coast to Santa Barbara itself. It opens up to railroad traffic a large area of agricultural country, and will be of great benefit to the farming communities along the line. The road is to be pushed rapidly north through the Gaviota pass to San Luis Obispo and San Francisco, opening up one of the most picturesque routes in the country.

Santa Barbara has been made a terminal point by the S. P. R. R., and has equal freight and passenger rates with San Francisco and Los Angeles. The city has also the advantage of a harbor, where the steamship lines on the coast trade.

Santa Barbara has, until this time, been comparatively isolated, being only reached conveniently by sea from other centers of population. The climate of the region is unsurpassed, and the city takes high rank as a health resort. There are beautiful homes all about it, and fine business blocks line its streets. The region surrounding the town is famous for its splendid soil and agricultural products. With its new transportation facilities the country thereabouts is put on an equal footing with the most favored localities. Santa Barbara is a picturesque and handsome city, and will now be more largely visited than ever by the thousands of tourists who visit this coast. Not only the town but the whole country is greatly benefited by the advent of the railroad.

The members of the State Forestry Commission have sent out cloth posters containing the section of the Penal Code in relation to setting woods or grain on fire, and inviting citizens to report to the Board any violation of the Act, as well as cases of cutting timber on State or Government land. A reward, ranging from \$25 to \$200, according to the importance of the case, will be paid for information on which an action at law can be raised.

BUTTE AND PLUMAS have the finest and largest sugar pine forest in the United States. Lumber from this region is now being shipped to Australia, and before long large shipments will be sent East.

CENTRAL ARIZONA.

[NO. 3—CONTINUED.]

[Written for the RURAL PRESS by O. C. WHEELER, LL.D.]

Products and Profits.

When the products of a district or a country cover nearly every species and variety between the lichen of the polar North and the sensitive clematis of the torrid South, it seems a useless, as well as a vain, task to attempt to enumerate them. Yet it is perhaps due to a country so little known as this that a partial enumeration should be given.

Central Arizona produces, in addition to the vastly numerous and rich varieties of minerals already enumerated, such grains as wheat, barley, rye, oats, buckwheat, Indian corn, Egyptian corn; also sugarcane and cotton. Cane seems quite at home and yields as regularly and as heavy crops, perhaps, as are grown in any of the sugar districts of the South or in the Pacific islands. Cotton is here no experiment. Long before the whites settled in Arizona, the Indians cultivated and utilized this plant in various ways. More than 350 years ago, Alvar Nunez Cabeza de Vaca, the first white man that ever saw Arizona, found the Indians along the Gila using a cloth, spun and woven by their own

hands, from the cotton they had raised on what is now the Gila and Pima reservation.

The various grasses found anywhere north of the 23d parallel of latitude grow freely and yield abundantly. Alfalfa, perhaps the richest forage plant anywhere cultivated and adapted to general use, often is cut six times in a year, yielding an average of two tons to the acre at each cutting. It is also being rapidly increased in its acreage for pasture, on which, in addition to its common use, thousands of cattle are driven to finish up the "fattening process" after having received all the benefit their mountain ranges would afford.

Among the productions of the soil in Central Arizona, fruits are prominent. While all varieties do well, some are so marked in their yield and in their quality as to arrest the attention and excite the interest of every intelligent person who examines the subject. The grape, in all its varieties, has absolutely nothing to check the rapidity or impair the perfection of its development. This is especially true of the varieties adapted to the production of raisins. The White Muscat of Alexandria, pre-eminently the raisin grape of the world, has been known to mature and ripen fine, large clusters in less than seventeen months from the time the unrooted cutting was placed in the ground; and the regular yield of full-grown vines is enormous. Apples, pears, quinces, peaches, plums, cherries, apricots, nectarines, gooseberries, currants, blackberries, raspberries, and the whole range of garden and field vegetables, all seem perfectly at home here, and with nearly all other fruits they ripen and are ready for market from two weeks to 20 days earlier than the same varieties in Southern California. This is an important desideratum to the producer. Every kind of fruit that is successfully produced within the temperate zone, and has been tried in this district, has developed as freely and fully as though it was indigenous to the soil.

It is, therefore, safe to say that any desirable agricultural product may be relied upon here to readily and fully reward the labors of the tiller of the soil.

As to profits, it is here designed to give

only a few well-authenticated facts, leaving the reader to form his own conclusions as to the probability of general results. Land for a raisin vineyard, uncultivated and without water rights, can now be had at very low prices, ranging from \$5 to \$10 an acre, average say \$7.50. It can be cleared and put in order for planting for \$2.50 an acre. Cuttings for raisin vineyard (8x8 feet, 680 per acre) at \$2 per 1000, \$1.36 an acre. Cost of planting, \$1.50. Water for irrigation, \$1.25. Labor, irrigating and cultivating, \$10.

The entire outlay for labor and water to the end of the third year, with interest at .10 per cent added, need not exceed \$63 per acre, while the third year will produce a crop of grapes worth \$80; and thenceforward the product will increase until a fair average yield will be six tons to the acre, equal in value to \$240.

The profits indicated by the foregoing appear large, but they are far less than have been realized again and again, and will be realized in the future as often as like effort is put forth. Nor are they larger than may be secured by the culture of other fruits, such as peaches, apricots, nectarines, plums, and many other varieties. The cost of land, water rights, clearing, planting and cultivating, of every kind, will not materially vary from the figures given for the production of grapes, nor will the time of beginning to bear (the third year); for, in this climate and in this peculiar soil, and the free use of water, just when needed, trees make very rapid growth and reach the bearing age much earlier than in other condition.

Planted 16 feet apart each way, which is quite enough in this unusually fertile soil, under an almost cloudless sky, there will be 170 trees to the acre. The third year will average 25 pounds to the tree, which, at two cents a pound on the tree, will produce \$85 to the acre. After that they will produce 50 per cent more each year until they average 100 pounds to the tree, equaling 17,000 pounds, and being worth on the trees \$340 per acre each year.

Large as these figures are, and great as are the profits they indicate, they are considerably less than have been realized and officially reported in numerous instances, by practical pomologists whose veracity is beyond all question. And they surely dispose of the question of profits in a way sufficiently inviting to the investor.

The cost and profits of a raisin vineyard, referred to in the foregoing, may be tabulated as follows:

Land.....	Per acre.	\$7 50
Water rights (perpetual).....		7 50
Preparations for planting.....		2 50
Cuttings (8x8—680, at \$2 per M).....		1 36
Planting.....		1 50
Water.....		1 25
Labor (irrigating and cultivating).....		10 00
Total to end of first year.....		\$31 61
SECOND YEAR.....	Per acre.	
Filling vacancies, irrigating and cultivating.....		\$10 00
Water.....		1 25
Total for the second year.....		\$11 25
THIRD YEAR.....		
Labor (irrigating and cultivating).....		\$8 00
Water.....		1 25
Total for the third year.....		\$9 25
Total for the three years.....		\$52 11
Allow interest on \$52.11 at 10 per cent per annum for 2 years (which is surely liberal).....		10 42
And we have a grand total, to end of third year.....		\$62 53
The third year will produce one-third of a crop, or two tons fresh grapes at 2 cents per pound on the vine.....		\$80 00
Or 1333 lbs. of raisins at 6 cents per lb.....		79 98
Recapitulation.....		
The figures in this exhibit are the result of actual developments, and in no sense the theories of speculators. They foot thus:	Per acre.	
Borrowing all the money for all outlay of every kind, and paying 10 per cent interest, hiring all the work, we have, at the end of the third year, expended.....		\$62 53
And have received from partial crop of third year.....		80 00
Or have received over and above the entire outlay.....		17 47
And will have a vineyard free from all incumbrance, each acre of which will henceforth produce above all expenses, more than 10 per cent on.....		1,000 00

(To be Continued)



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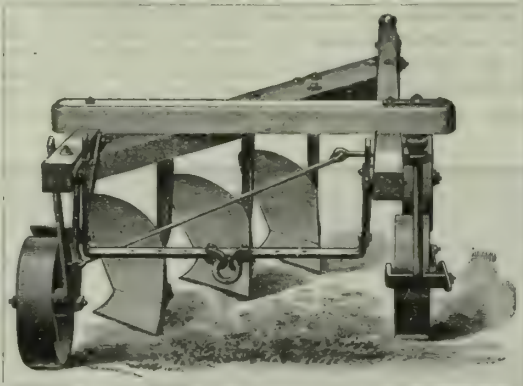
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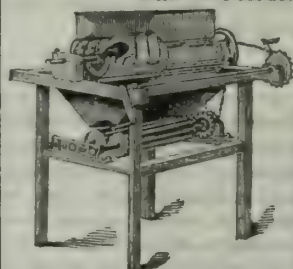
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Vacaville, June 12, 1887. I. W. A. GILMORE.
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Laguna, July 15, 1887. W. H. J. AITKEN.
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Stockton Nursery, July 15, 1887. E. C. CLEWES.
Before writing I wanted to test the Drier also on peaches, apples and pears. Am now doing so with the very best results. Upon the whole, I am greatly pleased with the Drier.

Batavia, July 29, 1887. (Rev. Dr.) W. ALEXANDER.
I am doing fine work with the Drier (No. 3). I bought it in company with Mr. A. J. Lay, and he, after trying it, takes it all. You can refer to me and I will try to sell more.

Glenwood, August 5, 1887. C. C. MARTIN.

I have been using a Zimmerman (No. 3) Evaporator on my apricots this season, and cheerfully attest the fact that its performance is fully up to its promise. Its simplicity is such that, although novices, we have succeeded in turning out admirable work, and its economy and facility are quite remarkable.

August 9, 1887. (Of Kittle & Co., S. F.) JAS. PALACHE.

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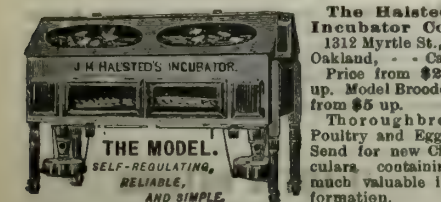
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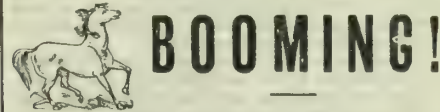
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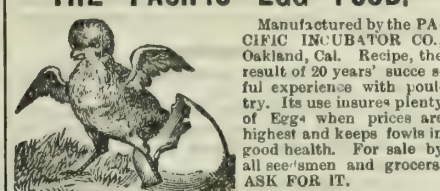


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S. F. MARKET REPORT

NOTE.—Our quotations are for Wednesday, not Saturday, the date the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Sept. 14, 1887.

The past week has been all that could be desired for raisin-makers and fruit-driers. Farmers are reported to have warehoused all their surplus grain and hay. The past week has shown no material change in the Eastern and European wheat market. Although there has been no change, still there is an impression that prices will improve after the farmers have garnered their grain. To-day's cables were as follows:

LIVERPOOL, Sept. 14.—Wheat—Supply large; new No. 2 winter, 6s and dull; do. spring, 6s and dull. Flour—Holders offer freely at 9s 2d and dull. Corn—Holders offer moderately; spot and September, 4s 3d and steady; October, 4s 2½d and steady; November, 4s 3½d and steady.

Eastern Wheat Markets.

NEW YORK, Sept. 11.—Wheat is steady and the tone of the market is heavy. Closing prices: Sept. 79½c, Oct. 80½c, Nov. 81½c, Dec. 83½c, Jan. 81½c, Feb. 85½c, and May 88½c.

Crops at the East.

WASHINGTON, Sept. 10.—The statistical report of the Department of Agriculture for September presents a heavy reduction in the condition of cotton, corn and potatoes, with little change in the status of wheat and other small grains. There is a further loss in the condition of corn from 80.5 to 72.3 per cent. The depreciation is nearly all in the West. The States of the Atlantic Coast and the Gulf report larger crops than last year, and that they are already beyond the reach of disaster. In the seven corn-surplus States the average of last month was 74; it is now 64. The average condition of winter and spring wheat when harvested is 82. In the spring wheat region, Dakota returns 81, a small gain; Minnesota and Wisconsin 72, Iowa 71, and Nebraska 76, a slight reduction from last month. The increase of acreage will make the difference still less between the present crop and that of 1886. The average for rye is 82.2, that of oats 83.4, against 85.6 last month, showing a slight decline. The average for barley is 83, against 86.2 last month. The reduction in buckwheat has occurred from 99 last month to 89. The average condition for potatoes is very much reduced, from 80.8 last month to 67. This is the lowest record for September that the department has ever recorded. The reduction is mainly in the West.

WASHINGTON, Sept. 11.—The weather crop bulletin of the Signal Office for the week ending Sept. 10th, says: In the corn-growing region the crop is reported to have been harvested, and below the average in Nebraska, as out of danger from frost in Minnesota, and more rain is needed for the late corn in Central and Western Kansas. Cutting is in progress in Michigan. Pastures are reported good from Nebraska, as improved in Minnesota, Michigan and Southern Illinois, and as dried up in Northern Illinois. Light frosts have injured sweet potatoes in Northwestern Carolina and Indiana, and occurred in Northern Illinois on the 8th. Killing frosts were reported on the 10th from Central Tennessee and Upper Michigan, and on the morning of the 11th from Northern Vermont.

California Fruit at Chicago.

CHICAGO, Sept. 10.—For the last week the market has been overcrowded with all varieties of home-grown fruits, causing fruit from California to sell considerably lower. The market is rather dull to-day for all kinds. The following prices were received for fruit in good condition: Beurre Hardy and Clairgeau pears, \$1.75 to \$2.25 per box; Tokay grapes, dbl crts, \$2.25 to \$2.50; Muscats, \$2 to \$2.25; quinces, \$1.75 to \$2 per bx.

CHICAGO, Sept. 13.—The market rules lower for pears, but as receipts of home-grown fruit are decreasing, hopes of higher prices for California are entertained. Grapes rule firmer and have a good demand. The following prices were received for fruit in good order, all else lower: Muscat grapes, dbl crts, \$2.25 to \$2.50; Tokays, \$2.50 to \$2.75; Beurre Clairgeau pears, according to condition, \$1.50 to \$2; Duchess pears, \$1.50 to \$1.75; Beurre Hardy pears, \$1.50 to \$1.75; Doynene pears, \$1.50 to \$1.75; quinces, \$1.75 to \$2.

California dried fruits remain steady and firm. There is a good demand and consignments have been taken with such readiness that very little stock remains in first hands. Apricots, sun-dried, bleached, choice, 17½¢ to 18¢; prime, 15½¢ to 16¢; not bleached, 12½¢ to 13¢; peaches, peeled, evaporated, choice, 23½¢ to 25¢; good, 21½¢; unpeeled, unevaporated, fancy, 18¢ to 18½¢; choice, 16¢ to 16½¢; good, 14½¢ to 15¢; unpeeled, sun-dried, 13½¢ to 15¢; plums, pitted, new, 13¢; raisins, loose Muscat, old, 14¢ to 15¢; London hyans, 14¢ to 15¢.

California Products in New York.

NEW YORK, Sept. 11.—Canned California pears, 2½¢ and 3 lbs, \$3.25. Dried Fruits—California raisins continue jobbing at full recent advance in price, 2 crown, \$1.40; 3 crown, \$1.60 to \$1.70; London, \$1.75. Mustard—Yellow California, 4¢ to 4½¢; brown, same, 5¢ to 5½¢.

NEW YORK, Sept. 12.—The Commercial Bulletin reports that the new crop of California prunes is now offered for early shipment. California shippers have offered 60's (avg) at 12½¢ and 40's (avg) at 12½¢, though no sales have as yet been made.

Eastern Hop Markets.

NEW YORK, Sept. 9.—Advices are received concerning the hop crop from various parts of this State. The tornado of the present week damaged the crop to some extent. A sale is reported at Cooperstown of one crop at 20c. Oneida advices are that dealers' contracts are made for hops to be delivered later on at a range in price of from 18 to 20c. Growers have not been in so great a hurry as usual, the reason being the absence of vermin and mold, and a noticeable improvement in the quality of hops which are allowed to hang a few days longer on the poles.

NEW YORK, Sept. 11.—The market moves at an

easy pace and has not sufficient life to develop any remarkable strength. There is a firm tone in London, with a good demand for fine qualities. Coast crop, 1886, best, 13¢ to 14¢; same, common to good, 10¢ to 12¢; same 1885, good to prime, 6¢ to 9¢.

CHICAGO, Sept. 13.—There are no arrivals of new hops, except a few sample bales. The market remains very quiet. Brewers have placed a few orders for small lots, but there is no large demand from any source. New York advices say that the crop has been pretty well secured with most favorable results. Few lots have been sold. Holders are very firm in their views. At the same time buyers lack confidence and are not disposed to take hold. The market is yet hardly settled and for the present rules quiet. There was no change to note in values. Pacific's new crop, choice, 24¢ to 26¢; medium, 20¢ to 22¢; 1886, choice, 20¢ to 22¢; medium, 14¢ to 16¢; Pacific's 1885, 6¢ to 8¢.

Eastern Wool Markets.

BOSTON, Sept. 10.—The market shows some improvement, and although transactions are small, manufacturers are more willing to buy in advance of their actual wants, but prices are still too low to please owners. The total sales for the week are 2,000,100 lbs, as against 4,902,400 lbs, for the corresponding week last year. Among sales are 270,000 lbs spring California, part at 13¢; 250,000 lbs Eastern Oregon at 15¢ to 21¢, and 344,000 lbs Territory at 16¢ to 24¢.

NEW YORK, Sept. 11.—There is no decided change in the situation. Sales include 25,000 lbs spring California at 20¢ to 21¢; 50,000 lbs Territory at 21¢ to 25¢.

The Philadelphia market has not improved in any respect. Sales include 60,000 lbs Territory fine at 15¢ to 20¢; 90,000 lbs Territory grades at 15¢ to 24¢; 50,000 lbs same, medium, 20¢ to 21¢; 50,000 lbs same, choice fine medium, 23¢; 3000 lbs Oregon medium, 19¢.

Local Markets.

BAGS—The market is quiet but firm at from 7½¢ to 8¢ standard Calcuttas.

BARLEY—Receipts are falling off, but the demand holds up, causing a stronger tone to rule, particularly for the more choice grades. On Call there has been more doing at fairly steady prices. To-day's sales are reported as follows:

Morning Session: Buyer season—200 tons, \$1.12½; 300, \$1.12½. Buyer 1887—400 tons, \$1.04; 200, \$1.04½. October—300 tons, 95c. Seller 1887—100 tons, 94½¢ to 95¢.

Afternoon Session: Buyer season—100 tons, \$1.12½; 100, \$1.12½ to 1¢.

BUTTER—Receipts, compared with last year, are light, while the demand is larger. The increase in the call comes chiefly from the south. It now looks as if a still higher range of values will obtain.

CHEESE—The market shows another advance in sympathy with higher values at the East and light supplies here.

EGGS—Receipts continue light, and as the demand is strong, prices are higher for choice.

FLOUR—At the low quotations the market shows an improving tone. The demand is increasing.

WHEAT—Millers are in the market for all parcels of choice obtainable at quotations. Shippers are bidding down, but on Call options continue mysteriously high, when the low bids made by shippers are considered. To-day's sales on Call were as follows:

Morning Session: Spot—500 tons, \$1.27½; 200, \$1.27½; 100, \$1.28½. Seller 1887—100 tons, \$1.28½. Buyer season—100 tons, \$1.42½ to 1¢.

Afternoon Session: Buyer season—100 tons, \$1.43; 400, \$1.42½ to 1¢.

[COMMUNICATED.]

Market Information.

Cereals.

The London correspondent of the *Northwestern Miller* estimates the surplus of the wheat-exporting countries at 260,000,000 bu., and the wants of the wheat-importing countries at 248,000,000 bu.

Quantity of wheat on passage to France Aug. 19, estimated at 680,000 bu., against 1,280,000 bu. same date last year.

The average yield of wheat in the vicinity of Devil's Lake, Dakota, is estimated at 25 bu. per acre. The yield in Eddy county is estimated at 20 bu.

A letter from London, dated Aug. 20, says: Root crops, and those of hay, straw, and beans, are short, and much feeding stuff will be required during the next 8 months.

Quantity of barley on passage for the United Kingdom on Aug. 18, is reported at 1,190,000 bu., against 1,190,000 bu. last year.

The exports of wheat from Jan. 1 to Aug. 1 amounted to 6,696,000 bu., against 7,520,000 bu. for same time in 1886.

Quantity of wheat on passage to Antwerp Aug. 19 is estimated at 680,000 bu., against 1,000,000 bu. for corresponding time last year.

Exports of wheat from India for the week ending Sept. 3 were 95,000 bu., of which 64,000 bu. were to the United Kingdom and 32,000 bu. to the Continent. The total shipments from Jan. 1 to Sept. 3 were 24,796,000 bu., of which 12,204,000 bu. were to the United Kingdom and 12,592,000 bu. to the Continent.

The Cincinnati *Price Current* says: It is a significant matter that while the exports of wheat and flour at Atlantic ports during the past 8 weeks have been 10,000,000 bu. in excess of corresponding time last year, the marketing at primary centers have been 6,000,000 bu. smaller than last year, and the price of wheat in Chicago now 8c a bu. lower than a year ago.

The New York *Produce Exchange Reporter* says that the shortage in the crops of hay, rye, oats, barley, beans, peas, potatoes and beets here and in Europe, seems to be overlooked by the trade; they do not appear to attach much importance to the loss, while on reflection they admit that their places will have to be filled by some other food, but the great shortage in the corn crop in this country exceeds the deficiency in all other cereals, and the question naturally arises, how is this great deficit to be made good? We answer by drawing on the next cheapest food obtainable. The cheapest food now in use is wheat-flour; this is especially true of the lowest grades, and being cheaper than Indian meal, they are quite certain to be in active request for feeding

live-stock. When this becomes very general here and in Europe, then we shall look for a speedy change in the situation. Wheat and corn will command attention and will not require many friends to defend them. The exhaustion of old wheat in this country is every day becoming more and more apparent, and our visible supply of old wheat is more than 50 per cent less than at the corresponding time last year. Very few millers in the winter wheat States hold any old wheat of moment, and traveling correspondents assure us that farmers hold far less old wheat than usual on the 1st of September.

The latest statistics of the domestic movement at the East, of wheat and flour, are given in the following table:

WHEAT MOVEMENT, EIGHT WEEKS ENDING AUG. 27.

	Bushels, 1887.	Bushels, 1886.
Rec'd, 8 primary m't's.	26,488,042	29,335,225
Rec'd, 8 Atlantic ports.	35,730,159	29,772,439
Exp'd, 8 Atl. (and flour).	23,848,335	21,809,377
Exp'd, A. & P. (and flour).	32,379,613	10,154,027

—or about 28.15 per cent of our total probable wheat surplus available for export sent abroad in about two months of the new crop year. This is at the rate of 210,000,000 bu. per annum, while the calculated available surplus for export, wheat and flour, July 1, 1887, to July 1, 1888, is equal to about 115,000,000 bu. The visible wheat in the United States and Canada Aug. 27, 1887, was 30,572,750 bushels, against 31,998,593 bu. Aug. 20, 1887; 41,285,035 bu. Aug. 28, 1886, and 44,646,759 bu. Aug. 29, 1885, being 10,712,285 bu. less on Aug. 27, 1887, than it was a year ago, and 14,074,009 bushels less on Aug. 27, 1887, than on Aug. 29, 1885.

In this State farmers are reported to be holding, now that they have their wheat warehoused, under the impression that prices are so low that any change will be for the better. Millers are also taking this view and do not lose an opportunity in buying choice milling wheat at anything near \$1.45. As many commission houses or firms in this city working with English export buyers, managed to kill off Dresbach, there is no demand from exporters, and will not be if English exporters can help it, until they get wheat down at about cost of production. Many firms here working in their interest are said to be bearing the market, trying to get farmers to sell at very low prices.

Corn has ruled fairly steady throughout the week, the demand being restricted, owing to the near approach of the new season.

Barley has been in good request, and as receipts have fallen off stocks are lighter. There is a good shipping demand for both chevalier and brewing grades, for which good prices are paid. It is now generally conceded that the supply of barley will not equal the demand up to June, 1888.

In oats the market exhibits more strength, but as yet the demand is in a hand-to-mouth kind of way. Rye and buckwheat are steady, with the more choice grades fetching a slight advance.

Feedstuff.

The advance in bran and middlings was caused by the filing of a heavy order from Honolulu. The quantity taken was about 4000 sacks. The filling of this order leaves the market barely steady, with lower prices looked for, unless another heavy order is received. The home demand is quiet, owing to the high prices asked by millers.

Roller barley is firm, but no higher, as are other feedstuffs.

The late rains are reported to have taken the nutriment out of the old grass, which will operate in favor of hay. The consumptive demand continues free. Choice grades are firmly held under a growing scarcity.

Vegetables.

Onions, if choice and good keepers, sell freely at full prices, but poor are slow.

Potato receipts continue free, but under a good demand prices are well maintained, with, at times, something extra placed at our advance on quotations.

Summer vegetables fluctuate daily, being governed by the supply and demand; therefore, even daily quotations are misleading. All shippers have to take chances on receipts being light. Tomatoes are still taken by canners.

It is generally claimed that the West will take all of the cabbages later on in the winter, as the crop there was short.

Fruits.

Choice pears and peaches, suitable for canners and driers, are in good demand. Choice plums, prunes, and figs are in lighter supply, causing stiffer prices to obtain.

Apples are in heavy receipt, causing the market to drag for all that are not strictly choice.

Strawberries and blackberries sell for more money, as do choice figs.

Grapes are coming in freely, with prices favoring buyers. Wine grapes are being gathered, and as offerings are free, prices are a shade lower.

In raisins there is nothing new to report, although present advices indicate an active demand.

In dried fruits, to-day's *Herald of Trade* says that peaches are developing the main strength, though, as in canned goods, a reaction is slowly setting in. Good prices, however, are going to be maintained right straight through the season, handsome prices. Dried prunes are developing strength daily, owing to the concentration of forward French supplies and the rumor of a short crop. There has been an advance of one cent a pound over last quotations. The principal holders are asking an average of 12½¢ delivered East, and it is said that negotiations are on foot looking toward the control of the prune crop of California.

The London *Grocer* in remarking on raisins says that the quality and condition of Valencia are satisfactory for first arrivals, but the long prevailing dry weather has been prejudicial to the size. Of Sultanais the same journal says: The quality and size are stated as being much inferior to last year, and the overland samples which have arrived fully confirm this report. The quantity is estimated at about 20 per cent less than that of last year.

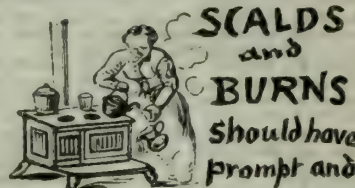
Live-Stock.

Bullocks are steady, with the more choice conditioned and handy sized fetching a slight advance. Mutton sheep are barely steady, under free offerings. Young calves are more inquired for. Hogs are weak at a shade lower quotations, owing to the offerings being in excess of the demand. The packing establishments are running to their full capacity.

(Continued on page 237.)

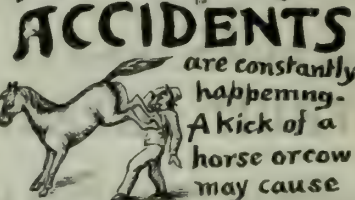
Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and, as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription rate, \$3 a year. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.



SCALDS and BURNS Should have

proper care or they may prove very dangerous and perhaps FATAL.



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Any of these things may happen to one of YOUR family at any moment.

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It has no equal for the cure of Scalds, burns, cuts, swellings, bruises, sprains, sores, insect bites &c.—All Druggists sell it.

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WANTED—AGENTS FOR THE BEST selling book in this country; 360 copies sold in a town of 3900 people; 66 in a town of 620; the largest sales ever known; agents have sold 10 books a day for 4 weeks in succession; ask for the agency for "The Child's Bible," over 400 illustrations. CASSELL & CO. (limited), 906 Broadway, Oakland, Cal.

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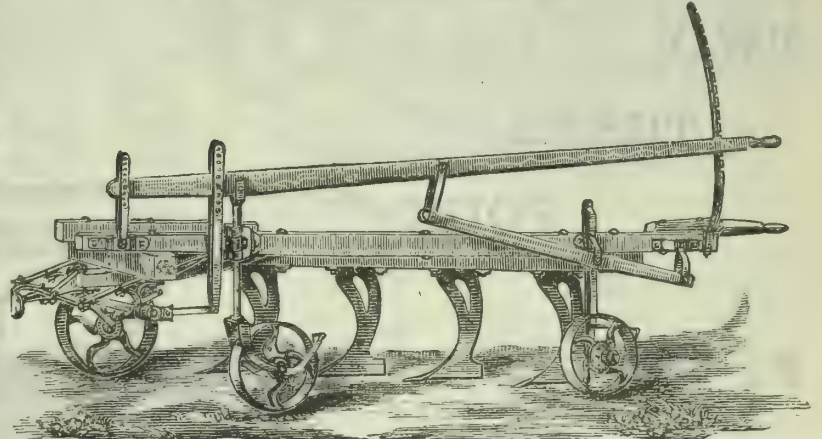
Hardware and Agricultural Implements. IMPROVED GRANGER GANG PLOWS.

WITH ONE EXTRA SHARE TO EACH BOTTOM.



The Improved
GRANGER GANG,
as now constructed, is con-
ceded to be the best Bench
Beam Plow in use. It has
superceded the reversible
Mold Gang wherever intro-
duced; it being more du-
rable, lighter draft, does
not require the amount of
team, and leaves the
ground in much better
condition.

WITH LIFTING DEVICE.



Its success has been unparalleled, and meets a long-felt want for a cheap and effective Gang Plow in a very satisfactory manner.

It has demonstrated conclusively that our plan of putting shares on the bottoms, instead of using what are called "reversible" molds, is the right one. We have proved that one of our small, thick, cast steel shares will last as long as both edges of a double-edged mold, and when it is worn out it can be replaced for less cost than a reversible mold.

A reversible mold is necessarily of an awkward, clumsy shape, being simply a concave piece of steel, just as a board would warp if laid in the sun.

By using shares on our bottoms, we are enabled to make the mold-boards of a form that will draw as easily, and turn as well as those used on any plow.

We put from three to eight plows in a Gang. They cut from 8 to 10 inches each, and will plow from two to six inches deep. This plow is made in a style never before attempted in this State. The frames, which are clear, well-seasoned lumber, are put together in the strongest manner, and are well painted. The wheels are provided with improved detachable hubs, that can be cheaply replaced when worn out.

One of the forward wheels is a castor, thus permitting the plow to run freely, and effecting a great saving in the draft. The bottoms are provided with our chemically-hardened steel molds, that will wear three times as long as the soft sheet steel molds used by other manufacturers. The shares, which are of double thickness near the point, are cast steel, and can be easily and quickly sharpened when necessary.

These Gangs do their work evenly, leaving the ground in light friable condition. They have been thoroughly tested in the field, and the set of the plows on the frame carefully adjusted to secure the lightest draft consistent with good work. SEND FOR ILLUSTRATED CIRCULARS AND PRICE LIST.

GRANGERS' BANK

OF CALIFORNIA.

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Authorized Capital, - - \$1,000,000
In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$624,160.
Reserved Fund, \$26,500.

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LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

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San Francisco, July 1, 1887.



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Stationary Engines and Boilers.

Portable Straw-Burning Boilers & Engines.

IRON AND BRASS CASTINGS.

Machinery of all kinds furnished at shortest notice.

Heald's Patent Wine-making Machinery, including Grape Crushers and Stemmers, Elevators, Wine Presses, and Pumps, and all appliances used in Wine Cellars. Irrigating and Drainage Pumps. Heald's Patent Engine Governor, Etc.

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MANUFACTORY AT LINCOLN CAL.

MERY'S IMPROVED PIONEER

VALUABLE IMPROVEMENTS HAVE BEEN
ADDED THIS YEAR.



This Mill has been in use on this Coast for 6 years,
TAKEN THE PREMIUM AT THE STATE FAIR

Four years in succession, and has met with general favor,
there now being

Over 200 of them in use in California, Nevada & Oregon
It is the most economical and durable Feed Mill in use. I am sole manufacturer of the Corrugated Roller Mill. The Mills are all ready to mount on wagons.

DURHAM, May 21, 1887.

Mr. M. L. Mery—DEAR SIR: In reply to yours of the 19th, would say that I crushed from two to two and a half tons per hour, but could crush three and a half tons per hour if my elevators were large enough to carry the barley from the machine. The No. 1 machine I used at Gridley was run on a sack a minute, but if we got behind we could run through five tons an hour, and do good work. The machine I use here is a No. 2.

Yours, WM. M. TAYLOR.

GRAINLAND,

BUTTE CO., CAL., June 9, 1887.

Mr. M. L. Mery—DEAR SIR: We have used one No. 2 Roller Barley Crusher now for eight years and have used it steady during that time; have crushed 45 tons a day, and the crusher is as good to-day as when it came out of your shop. I am satisfied that it is the best mill made. You may reconstruct this testimonial to the best advantage for you and sign our names, for you cannot overrate the merits of your mill.

F. E. REAM,
JOHN P. SUTTON.

ORLAND, CAL., August 5, 1887.

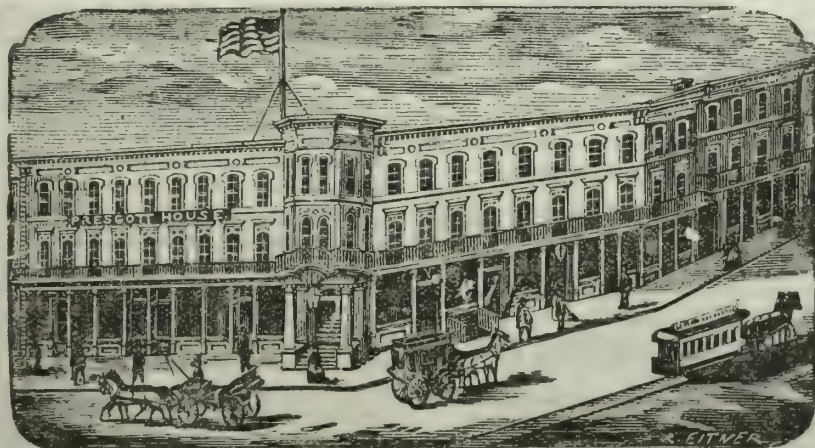
Mr. M. L. Mery—DEAR SIR: In reply to yours of August 1, 1887, regarding the mill I bought of you, would say that the No. 2 gives perfect satisfaction, and that I can crush from 1000 to 1200 sacks of Barley per day. I will recommend it to the public for good work and lots of it.

M. C. DILLMAN.

I thank the public for the kind patronage received thus far, and hope for a continuance of the same.

M. L. MERY,
CHICO IRON WORKS, CHICO, CAL.

PRESCOTT HOUSE.



S. W. Corner Kearny and Montgomery Avenue, San Francisco.

Free Coach to and from the House.

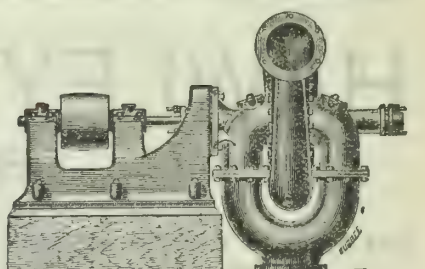
J. W. BECKER, Proprietor.

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Elevator 12 Front St.

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WE ALSO CARRY IN STOCK THE LARGEST LINE OF

MACHINERY

In the UNITED STATES,

Consisting of Wood and Iron Working
Machinery. Pumps of every
description.

ENGINES AND BOILERS A SPECIALTY.

HORTON & KENNEDY'S

FAMOUS ENTERPRISE

Self-Regulating

WINDMILL

Is recognized as
THE BEST.



Always gives satisfaction. SIMPLE
STRONG and DURABLE in all parts.
Solid Wrought-iron Crank Shaft with
DOUBLE BEARINGS for the Crank to
work in, all turned and run in adjust-
able babbitted boxes.

Positively Self-Regulating.

With no cone springs, or springs of any kind. No little rods, joints, levers, or anything of the kind to get out of order, as such things do. Mills in use 6 to 12 years in good order now, that have never cost one cent for repairs. All genuine Enterprise Mills for the Pacific Coast trade come only through this agency, and none, whether of the old or latest pattern, are genuine except those bearing the "Enterprise Co." stamp. Look out for this, as inferior mills are being offered with testimonials applied to them which were given for ours. Prices to suit the times. Full particulars free. Best Pumps, Feed Mills, etc., kept in stock. Address,

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120 Front St., San Francisco.

AGENTS LOOK HERE

and farmers with no experience make \$2.50 an hour during spare time. J. V. Kenyon, Glens Falls, N. Y., made \$18 one day, \$76.50 one week. So can you. Proofs and catalogue free. J. E. SHEPARD & Co., Cincinnati, O.

STILL TRIUMPHANT!

OVER ALL COMPETITORS.

THE "NEW DEAL" GANG PLOW.

Manufactured by JOHN DEERE & CO., MOLINE, ILLS.

TWO,

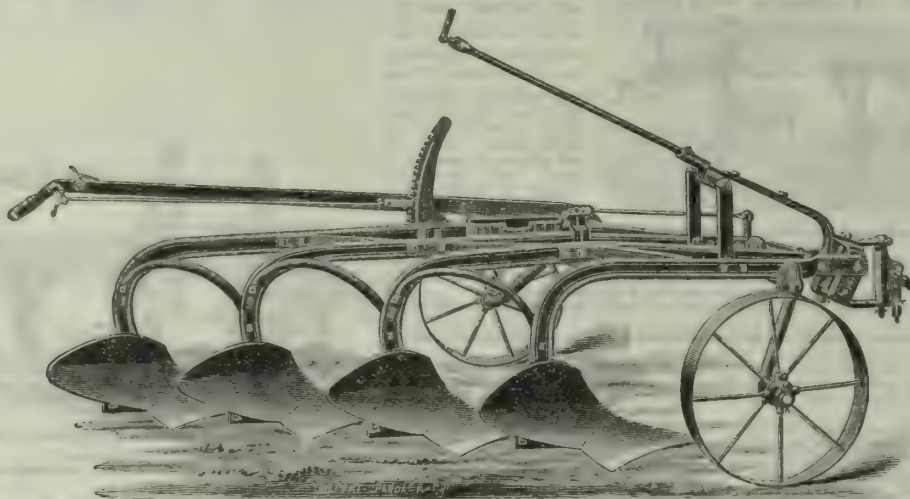
THREE,

FOUR

—AND—

FIVE

FURROW.



EQUIPPED

—WITH—

EIGHT, TEN

—AND—

TWELVE-INCH

PLOWS.

Three seasons' experience has thoroughly demonstrated their adaptability to the various soils of California.

FOR LIGHTNESS OF DRAFT, EASE OF MANAGEMENT, STRENGTH, DURABILITY AND QUALITY OF WORK,

The "NEW DEAL" is Without a Parallel.

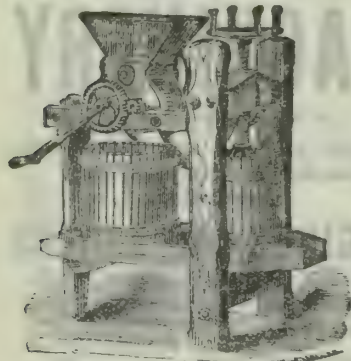
Further Description, Testimonials, Prices, Etc., Given on Application to

HAWLEY BROS. HARDWARE CO.,
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 SOLE AGENTS FOR THE PACIFIC COAST.

Also Agents for the JOHN DEERE MOLINE GANG, SULKY and SINGLE PLOWS, SOUTH BEND CHILLED PLOWS, HOOSIER GRAIN DRILLS, SCHUTTLE FARM and SPRING WAGONS, KEYSTONE DISC HARROWS, all kinds of Large and Small Farming Implements, HOWE SCALES, Etc. SEND FOR CATALOGUE.

1887. THE FARMERS' FRIENDS. 1887.

IMPROVED CHAMPION CIDER MILLS AND PRESSES.



THREE SIZES:

Senior, \$40. Medium, \$30. Junior, \$25.

MOST EASILY WORKED.

Built Stronger and Will Last Longer

Than any other Cider Mill manufactured.

THEY HAVE AN ADJUSTABLE THROAT,

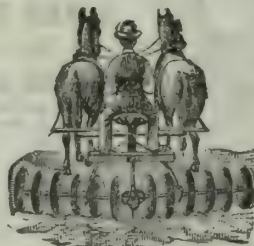
Which adapts them to all kinds and sizes of fruit.

THE GRINDING ROLLERS are ADJUSTABLE.

They Grind Finer than other Mills.

They are Light, Substantial and Handsomely Finished.

LA DOW JOINTED PULVERIZING HARROW.



Points of Superiority in Which it Excels:

It will do better work.
 It is MUCH easier for the team.
 It is easier to manage.
 It has a LEVER to change the angle.
 It is not heavy on the horses' necks.
 It has no side draft.
 It leaves no ridge at the center.
 It has self-feeding oil cups.

It has a wrought iron frame.
 Its chilled bearings cause it to wear longer and work easier.
 It is easier to ride.
 It conforms to uneven surfaces perfectly.
 It can be made rigid if desired.
 Its journals are protected from dirt.

PRICE LIST.

No. 12 cuts 6 feet, for 2 horses, has 12 16 inch discs, with weight boxes. FOR VINEYARDS.....\$ 65 00
 No. 16 cuts 10 feet, for 4 horses, has 18 16-inch discs, with weightboxes, 100 00
 No. 17 cuts 15 feet, for 4 horses, has 24 16 inch discs, without weight boxes..... 150 00

Thousands in use, giving entire satisfaction.

PRICES REDUCED!

FANNING MILLS.

JOHNSON & FIELD'S

IMPROVED WHEAT CLEANERS,

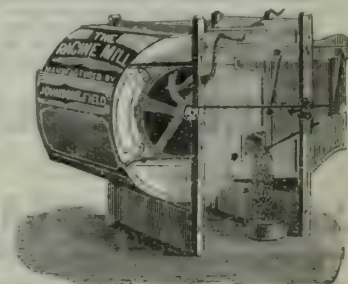
BEST IN THE WORLD.

Will clean more wheat in less time than any other Mill manufactured.

Unscrupulous parties are trying to force upon farmers and dealers a worthless imitation of our new Cleaner under a name so similar as to be mistaken for the GENUINE Cleaner.

No. 1. Farm Mills, 24 inches wide.....	\$ 30 00
No. 2. Farm Mills, 30 inches wide.....	40 00
No. 2. Warehouse Mill, 40 inches wide.....	50 00
No. 3. Warehouse Mill, 48 inches wide.....	60 00
No. 2. Separator, without Suction.....	135 00
No. 3. Separator, without Suction.....	160 00
No. 2. Separator, with Suction.....	175 00
No. 3. Separator, with Suction.....	250 00

The Mills are First Class in every particular.



The Superior Grain Drill.

BEST HOE DRILL IN THE MARKET.

Does Better Work and Takes Less Seed per acre than any other kind of Hoe Drill.

Can be worked in trashy and on ground where other kinds will not. Has the best Adjustable Force-Feed in the market, a feed especially adapted to drilling.

OATS and BARLEY, WHEAT and RYE, FLAX and MILLET.

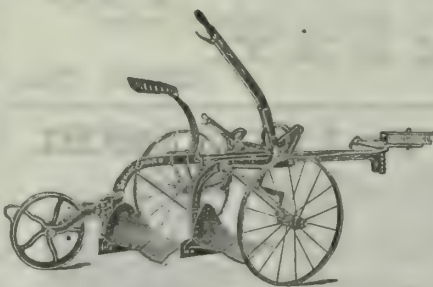
IT IS THE CHEAPEST DRILL, Because it saves and returns more on the investment.

The only Gang that will Turn a Square Corner.

RADLEY'S NEW Square Corner Sulky and Gang.

REASONS WHY THEY EXCEL ALL OTHER:

1. They embrace a new principle in construction.
 2. They combine lightness and strength.
 3. They are extremely compact.
 4. They are very light draft.
 5. They work equally as well without a pole as with.
 6. They turn a corner without strain on the wheels or plow.
 7. They are easily operated.
 8. They plow level furrows across corn rows.
- Don't buy until you have seen them.



We are Agents for David Bradley's Celebrated Garden City Clipper Plows, Harrows and Cultivators. Agents for Calvin Toomey's Truss Axle Sulkies. SEND FOR CATALOGUE AND CIRCULARS.

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SAN FRANCISCO, CAL.



TWENTY-FOUR PAGE EDITION.

Vol. XXXIV.—No. 13.

SAN FRANCISCO, SATURDAY, SEPTEMBER 24, 1887.

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SINGLE COPIES, 10 CTS.

The Land Boom Supplemented by an Immigration Boom.

To the non-resident, and even to the careless observer at home, it will doubtless seem that the people of California are greatly overdoing the business of selling real estate. That there has been, within the past year or two, a wonderful and unexpected activity in this kind of property, accompanied by a proportional rise in prices, must be admitted. But it seems equally true that this movement is based on a solid and enduring foundation. Were only land, town and city property included, we might consider these prices extravagant and this activity premature. But there has been in this State an advance all along the line. It has not been confined to any one industry or class of values, but has extended to nearly all. Almost every branch of business has here been prospered of late, a very material increment of population having meantime taken place. It is to this widely diffused prosperity, coupled with an abiding faith in its continuance, that we are to look for the underlying causes of these extensive sales and high prices of land. The movement is but an expression of popular confidence in the future of California; and, if in some few instances the business has been overdone, we need hardly anticipate anything like a general, much less a speedy and violent reaction.

The steady increase of immigration that has marked this era of advancement, appears likely above anything else, to insure for it permanence and stability. From 1872 to 1886, inclusive, the westward travel over the Southern Pacific Company's lines amounted to 815,656—eastward, to 500,828, denoting a net gain to the population of the State of 314,828, for these 15 years. Add gains, meantime, through other channels and increase for the present year, and there will have been added to the inhabitants of California during these 16 years hardly less than half a million people. Since 1880 the travel both ways has been steadily augmented, the westward bound for 1887 being estimated 120,000; eastward, 75,000, making a gain for this year of 45,000.

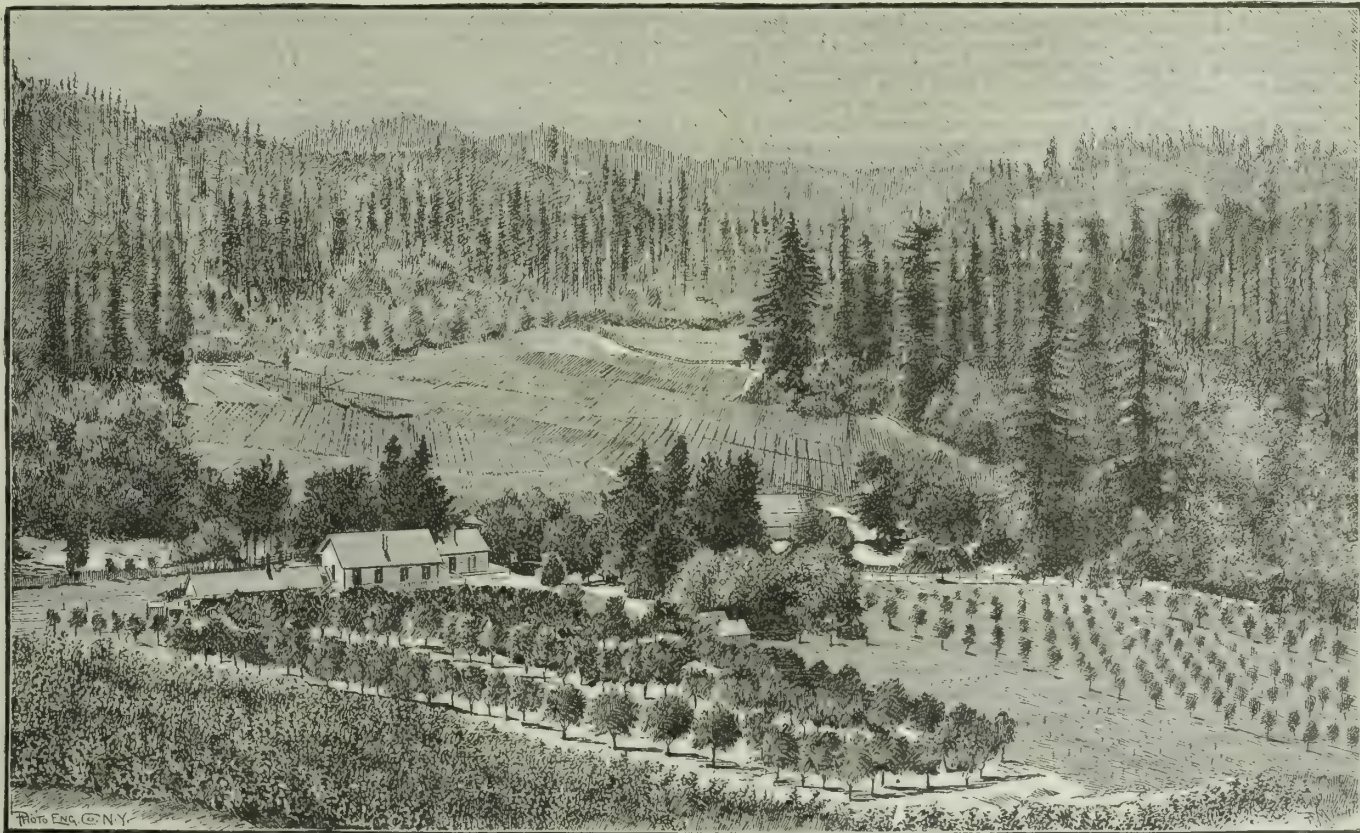
The natural advantages of California constitute its principal attraction to the immigrant, and yet low fares have much to do with promoting immigration, the periods of low prices being those in which the westward movement

has been most active. In 1875 first-class passage from New York to San Francisco by rail was \$138; emigrant, \$65. These rates are now \$95.30 and \$62.50 respectively, while immigrants are brought through in much less time than formerly. The latter rates were inaugurated in February, 1886, since which date travel over the S. P. Co.'s system has been increased fully 75 per cent. Should the rates by rail be reduced no further, California is bound to see an immense influx of people from the East, the calculation being that a much larger number

be that the company on full consideration will not see their way to such results as would warrant their carrying it into effect. But it is a grand conception, and put into execution would bid fair to fill the measure of California's prosperity to overflowing. It would do more—it would glorify the age in which we live. To carry the poor but deserving immigrant so long a distance free, or nearly free, of charge, were an act of provident magnanimity whose like has never been witnessed in the annals of commercial enterprise. In the countries where

A Mountain Home.

The accompanying illustration affords a glimpse into one of the most picturesque and lovely regions of the State. The scenery of the Santa Cruz mountains is world-famous for its variety and beauty. Glen and mountain, forest and stream, are there blended in delightful fashion. The combined effect is nowhere more pleasantly shown than at the Summer Home Farm, near Glenwood, owned by Mrs. B. C. Brown, of which the picture is a bird's eye view. The cottage is surrounded by vineyards and orchards of prunes and pear trees. On either hand the mountains rise to a great height, covered with redwood and fir. Here and there springs of cool, clear water ripple forth. Near by a mountain stream flows through a romantic gorge. At the farm, its waters are collected and formed into a lovely lake, which, lying in the deep shade, affords excellent facilities for bathing and rowing. Over all broods a climate at once delightful and salubrious. Intense heat and severe cold are alike unknown. A refreshing breeze comes from the ocean, only eight miles distant, and the surrounding air is always charged with the healthful odors of the mountain woods.



VIEW OF SUMMER HOME FARM, SANTA CRUZ MOUNTAINS.

will arrive during the next six months than have ever before come in a like period.

In fact, the land boom being well under way, there is now talk of an immigration boom, the latter a sort of corollary or sequence of the former. Having so much land to sell, we naturally want buyers, to which end there must needs be more people brought into the State. The majority of those already here either have as much land as they want, or are engaged in pursuits that preclude them from owning land to advantage. They are residents of towns and have their occupations therein, or miners, lumbermen, mariners, fishermen, etc. The land-hungry are oftener those who come to us from abroad, especially the peasant classes from continental Europe.

At this juncture there comes a rumor that the S. P. Company have it in contemplation to adopt a schedule of prices still more liberal than that now in force upon their system of roads—in fact, the new plan would virtually amount to the free transportation of certain desirable classes of immigrants were they minded to come to California.

This policy, however, has not been determined upon, but only talked about, and it may

they are, these poor people, work and save as they may, can make no more than a wretched living, and often not even that. Remaining there, they can neither escape from nor hope to improve their condition. And yet in California is room for them all, if by any means they could get here. To enable them to do this were the part of genuine philanthropy, though self-interest were the impelling motive. A very refined species of selfishness, this, that works its end through so much good to others!

Were this scheme, or something like it, carried out, it would make a new era, not only in the history of California, but also in the history of passenger transportation. As it would bring us generally people of the right kind, it would be the means of enhancing the value not only of land but of every species of property throughout the State.

THE sheepherders who make annual visits to the mountain ranges of Inyo, Mono and Alpine counties are causing great destruction by setting fire to the brush and allowing the flames to communicate to the timber, and large sections of the finest timber in the Sierras are destroyed.

IMPORT DUTIES ON FRUIT.—At the July meeting of the State Horticultural Society, B. M. Lelong, E. H. Rixford and Rev. A. H. Perkins were appointed to consider a circular sent out by the N. Y. Tribune in regard to revising the tariff on foreign fruits. The committee met on Tuesday last and agreed to refer the matter back to the society for further discussion at the meeting to be held Friday, Sept. 30th, at the rooms of the State Board of Horticulture, 220 Sutter street, S. F. All interested are invited to attend.

MORE than 200 men are at work at Palo Alto on the buildings of the Leland Stanford, Jr., University. The walls of the four main buildings are now about three feet in height. As grouped, the buildings present a combined front, to be joined by a stone arcade of 576 feet. The chapel, the foundations of which are laid, is in the center of the group of buildings as planned, and the entrance to it will be directly by the main entrance to the buildings.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Santa Barbara Notes.

EDITORS PRESS:—The Lima bean harvest has commenced. The crop does not promise to be heavy, but prices have an upward tendency and probably will be higher than for several years past. Some of last year's crop has been sold lately, and the new crop is being contracted for.

Walnuts are dropping unusually early. The crop is very heavy, and much of it has been contracted to San Francisco parties. A great deal of fruit has gone to waste, and that mostly on account of the high freight rates and length of time taken for transportation. The growers had hoped for a quick transportation at reasonable prices by the railroad, but were doomed to disappointment in both cases, and thus considered it better for the fruit to rot in the orchard than to ship without profit.

The Santa Barbara County Horticultural Society has become an incorporated body, with the following gentlemen as directors: H. C. Ford, P. C. Higgins, O. N. Cadwell, E. Harper, Thos. Hosmer, Jos. Sexton and S. L. James. The officers of the society are H. C. Ford, president; O. N. Cadwell, vice-president; Jno. Spence, secretary, and Edward Harper, treasurer. The members number 34. The society is a live one.

Mr. Higgins of Carpinteria has sold a quantity of asphaltum, and the buyers are now busy digging and blasting it out. It is being used for street-paving and sidewalk purposes. The deposits on the coast are immense and will prove a bonanza to the owners.

The real estate business is booming and affairs are greatly unsettled as a consequence. Five town sites have been, or are being, marked out in the Carpinteria valley, thereby cutting up some of the finest ranches, one or two in Montecito and so on up the coast on the line of the railway. Several franchises for street railways have been granted in Santa Barbara and building of the roads commenced. A franchise for a road to connect the valleys of Carpinteria and Montecito with Santa Barbara has also been applied for. New houses are going up in Santa Barbara with increasing vigor, and the lumber business is exceedingly brisk. Land in the vicinity of Santa Barbara is becoming too high in value for agricultural purposes, and many ranches have been sold for high figures. Several Carpinteria farmers have sold their places and bought land at Lompoc and vicinity, at which place they will make their homes.

Carpinteria. L. B. CADWELL.

Matters in Yolo County.

EDITORS PRESS:—Our part of the State is beginning to feel the impetus of the "boom," as is evinced by the activity of our real estate market. At first there was a good deal of "jack-knife trading," with a bonus every time between residents, but lately there has been a good deal invested by outside parties, some for speculation and others for locations. Town lots are most in demand; still vineyards and orchards are changing hands frequently. Last week a Mr. Hoffman, on Cache Creek, sold his 21-acre vineyard for \$4100 to a San Francisco gentleman; also Mr. A. J. Hall sold his 80-acre vineyard for \$250 per acre, and the purchaser has been offered \$2500 for his bargain.

Wildcat speculation does no good to a community; on the contrary, it does harm. But a healthy influx of home-makers from the overcrowded portions of the East is welcome, and to such we say: Come among us and help develop our vast resources and build up a home that can be surrounded by temperate and semi-tropical fruits, where one can sit under his own vine and fig tree, where there is no fear of blizzards, sunstrokes nor cyclones. These things alone are worth enough to justify investment in a home.

The writer has spent the greater part of his life on the bleak prairies of Central Iowa, and the contrast between there and here is so great that after nine years' residence in this State there is no question as to desirability of location.

After a stay of five years here, the writer had occasion to visit the East during fall and winter. A week was spent at his old home, and the blizzard that then interviewed him will never be forgotten. The mercury went down to 34° below zero—it almost makes him shiver yet, when thought of. But this is disagreeing. Judging by the preparations now being made, this winter will be the busiest one ever experienced in our county in the way of tree and vine planting. Along with that there are other enterprises afoot that will assist materially in business activity. Among them is a cannery, a paper mill, and a woolen factory in Woodland. The first is almost an assured fact, the others are likely to be, and there is a probability of our having communications opened to Marysville again over the old railroad from Knights Landing, on the Sacramento river, which was abandoned several years since on account of the grade being too low for high water, as it crosses the tules. Now, however, since communications are being opened up to Oregon it becomes valuable to the railroad people as a short cut. At least, that is the talk and general opinion.

Ruin-making is in "full blast" now, and

every available man, woman and boy is employed picking or packing grapes, and picking hops along the river. There never has been a time in the history of this county when our help was so scarce and in such demand. The hop-men very largely employed white help this year to the exclusion of the Chinamen. It is getting pretty thoroughly demonstrated that Chinese help, if cheap by the day, is dear by the job, and the tone is so healthy in that respect that any in the East who contemplate coming to this country to labor need not delay longer on account of the Chinaman, as he will not figure to any extent in the fruit and hop business if white help can be obtained.

J. R. SPRINGER.

Woodland, Sept. 1887.

Sonoma County Notes.

EDITORS PRESS:—The early rain has laid the dust, and roads are in fine condition. Dry feed was much damaged. The air is as pure as spring's, and were it not for falling instead of budding leaves, one might well think it the beginning of another year, so pleasant is out-of-door life just now. Thrashing was suspended for a few days, owing to the rain, but the grain was not damaged in the least.

Fruit harvest is well-nigh over. The yield has been very large, and prices have ruled high. Dried fruit, of which there is much in the county, is bringing profitable prices. Canneries and driers have done a slashing business this summer. The Santa Rosa Packing Co. is now busy putting up green corn.

Sheep-shearing—fall clip—is now receiving attention from those who are engaged in the care of the flocks. The wool is said to be unusually free from burrs and dirt and of excellent growth. No doubt the price will correspond.

The grape crop is much better than at first reported. The earlier varieties are now fully ripe, but the better sorts of wine-grapes are not yet mature. None of the wineries have commenced operations, but most of the cellars are being put in order, and about the 20th of this month wine-making will begin. The price for grapes has not been named either by buyer or seller, though indications are that they will be somewhat cheaper than last year.

Rumor, somewhat well authenticated, says that cars will be running from Santa Rosa to Benicia by the first day of January, 1888. We should all like the honor of celebrating New Year's Day by an excursion to Carquinez straits and the good old town of Benicia. One thing is sure—the road is to be built, and that soon.

Sonoma county real estate is in good demand at good prices. No boom, but a square, fair sale, with full value for the price paid.

Santa Rosa is soon to have another street-car line. This is a sure sign of steady growth. It is reported also that railroad fares to S. F. are to be reduced. We hope it is true.

OCCASIONAL.

Santa Rosa, Sept. 13, 1887.

METEOROLOGICAL.

Dr. Gally on Cloudbursts.

EDITORS PRESS:—Did you ever take note of a rural boy—a stout boy—at home, walking one way while looking another way, when he fell over a log? You did—all right. Now, if that young ruralist was possessed of an observant turn of mind, he would arise and investigate that phenomenon, and then, being possessed of a good memory (as, mark you, most investigators are so possessed), he would carry his conclusion, whatever it might be, forward into life as part of his stock of information. That is the way I, myself, became owner of several and sundry portions of information outside my regular business. I fell over them, unless, as was sometimes the case, they fell over me. That is what makes my contributions to the RURAL PRESS rather miscellaneous. Well, here we go again. When I was mining in Nye county, Nevada, and laying the foundation of the town of Tybo, in that county, I took a long, roundabout, roadless ride on horseback of over 100 miles, to Eureka, Nevada, "all on a summer's day" or two; and very hot days they were. I forget the day or the year, but perhaps it was in 1871 or 1872 A. D. All day long, the first day, as I rode the homeless, houseless, roadless desert alone, there loomed in front of me the tall crest of the Diamond mountain, situate some miles north of my destination, and on its side, away up toward the summit, was one spot of white snow—the snow of last winter still not thawed; and though I then supposed that there might be several acres of snow up there yet, in the long perspective of 50 to 75 miles of the distance I was shortening, stride at a time, it looked to be just about as much icy substance as I then needed to cool my "parched tongue." I could not help seeing that snow all day long, for I was riding right at it. It was a great aggravation, because in the clear desert atmosphere, 50 or 70 miles is to the eye but a short promenade, and I was plainsman or desertman (which you choose to have it), enough to know that. The nearness to the eye and the fairness to the fact concerning that exalted spot of ice-cold, "hope deferred" so forcibly reminded me of one of the

songs my best girl used to sing, when I leaned away back East, on the corner of the piano, turning the music sheets, that I thought I would sing to myself (and the horse):

"beautiful star,
Thou art so near and yet so far."

And now, whereas, in remote former times—*temporibus antiquissimis*, in fact—I could troll a ditty with the best beau in the county, on this occasion the failure was so dismal and the dry croak so alarming that I wheeled the horse about to see if some other fellow wasn't doing that; and when I wheeled about I saw a cloud in the sky coming from the southeasterly. I had not seen a cloud, barring a dust cloud, for many months, because in Southern Nevada a fog cloud or rain cloud is what you seldom see, and this was not a very big cloud—not to the eye bigger than a country schoolhouse, but it was flying toward Diamond mountain and flying pretty fast; and I noticed that it was a rather dark, though not what is called a black, cloud. I turned my horse's head again toward my spot of snow, and then I beheld another cloud coming, away off, from the opposite direction toward this first cloud, and both clouds heading for the Diamond. As they approached each other and the mountain they both grew larger and they both got blacker. I was approaching the Diamond at the gait of six to eight miles an hour, but my cloud (that is, the one I first saw) soon, like Mac's dagger, "marshaled me the way that I was going," and outran me as though I stood still; but I could see him all the same, and as he neared the mountain he began to growl and rumble in a sort of big, low roar. The other cloud set up the roar as he approached the mountain, and both clouds flashed red, now and again. By and by both clouds came together around or over the Diamond mountain, in a canyon of which is situate the mining town of Eureka, and there they roared and bolted and spit sheets, streaks and zigzags of lightning for about 30 or 40 minutes, and then all was again clear and still; but my spot of snow was gone.

I slept that night, after a very long day's ride, alone in the desert to the reverberant music of the cumulative coyote. Next day, about noon, I rode down the canyon into Eureka, but when I had reached the forks of the canyon, I found the bottom washed out of the road, and general destruction of everything that water could sweep away. Meandering among gullies and scaling along hillsides, I reached Eureka, and there was a scene of havoc, mourning and ruin. Several persons were dead—drowned—or rather choked with mud; and the main street of a prosperous town, almost a city, was a yawning ditch ten feet deep and twice that many feet wide. The rink, a large wooden structure, was whirled off its base, houses were torn to pieces, iron steam-boilers were carried clear below town, and great, heavy quartz-wagons broken into stove wood. Three to five miles below town, out of the canyon in the Diamond valley was a dump of debris about a mile long, consisting of parts of everything used by a civilized, industrious people, mixed with branches of trees, stones, and mud. And yet not one drop of rain had fallen in Eureka or within two miles of that town. The water—the flood—had all come of and from those two clouds which I had watched and listened to on the day previous. The same clouds which blotted out my spot of snow and destroyed my hope of a gulp of ice water. It was a "cloudburst."

The Theory of Cloudbursts

Is that two currents of electricity, particularly in our higher metallic altitudes, get up a sort of a footrace in a contest to find out and prove which can get to the summit of a high mountain first, and, being of a very thirsty nature (as is a well-known fact regarding electricity), and the race across the horizon being a long and dry one, they sometimes overdo it by carrying too much water, and, not steering straight, they come together kerwhack and spill everything on top of the mountain. This theory, however, does not suit me so well as the one upon which my pious father, who was a Methodist exhorter, used to rely when singing—

"God moves in a mysterious way
His wonders to perform;
He plants His footsteps on the sea
And rides upon the storm."

I am becoming each day more and more satisfied that my father's solution of scientific phenomena is based upon a very complete and handy basis. I think that eventually, if I survive my own errors long enough to be otherwise wise than in my "own conceit" I will adopt the parental philosophy.

I had another interesting—that is, it was interesting to me at the time, very—interview with a cloudburst, which I will probably relate on some future occasion.

Perhaps, when all is said, the "cloudburst" is but a form of the cyclone, modified by the shape of the country. At a cursory glance from an unscientific eye, the true cyclone on land is a phenomenon peculiar to great interior valleys opening toward the north or the south pole; and we will remember that the space of territory between the great ranges of the Rocky and Sierra Nevada mountains, though terribly tossed, tumbled and broken, is, after all, a great valley; and I am willing to suppose that if a philosopher could go ballooning about and around at a level of 6000 feet above tidewater for about 20 years in the territory I have last spoken of he would be struck by a regular cyclone. For I think the cyclone is up there. I have thought so ever since I saw those clouds

whirling across the sky in Nevada as hereinbefore related.

I would say that if any really scientific gentleman should wish to use the description of how the cloudburst at Eureka was born as an instance of that character of phenomena, he need not be deterred by the levity which seems to be evinced by this writer. The facts as set down are facts—the great cloudburst at Eureka, Nevada, is a historic fact.

Watsonville, Cal.

J. W. GALLY.

ENTOMOLOGICAL.

The Cottony Cushion Scale.

Important Discussion of its Identity.

We have been favored with the opportunity of presenting to our readers in previous issues several most important contributions to knowledge of the cottony cushion scale (*Icerya purchasi*). This week we have the first publication of an interesting letter from the entomologist who named the insect, W. M. Maskell, Registrar of the University of New Zealand, and comments upon the letter by Prof. C. V. Riley, U. S. Entomologist. Though the letters include some technical matters, which only an entomologist can fully appreciate, we deem the publication still of value to all our readers as an incentive to more wide and close study of the pest which is doing such great injury in some parts of this State. We omit the introductory paragraphs of Mr. Maskell's letter and begin at the point where he takes up the subject at issue:

Mr. Maskell to Prof. Riley.

I will come now to the points directly raised in your letter of May 19th, viz., the original dwelling of *Icerya purchasi* and its identity with, or difference from, *Icerya sacchari*. First, as to its home. I have not myself much doubt that it came originally from Mauritius, as I indicated in my letter to Mr. Klee; but it is quite probable that it came to us in New Zealand and from Australia. I say no more than probable, because much Mauritius sugar comes to Auckland, and *Icerya* might have come direct; still, its appearance here, and at the Cape, and in California, on Australian plants, points to Australia as the "distributing center." You did not send me the extracts from Mr. Kirk's letter to you on this subject which are referred to in your article in the PACIFIC RURAL PRESS, but I understand from him that he considers Fiji made us a present of *Icerya*. Certainly, it might be indigenous there as well as in Mauritius, though I doubt it; but Fiji was out of the lines of communication when *Icerya* traveled to the Cape and to California, and the suggestion is, I think, quite erroneous. In my letter to Mr. Klee I went no further than saying that Australia presented this pest "to you and to us." I clearly indicated that, in my opinion, Australia had received it from Mauritius, and I hold that opinion still.

For one reason I regret that this conclusion should be correct. I gather that your object in America in ascertaining the home of *Icerya* is that you may attempt the introduction of some parasite or other for its destruction. I fear much that the prospect is not encouraging. It is held by some that climate does not greatly affect insect life; this view I have heard supported by many "practical" men. It is not easy, in the face of facts, to see how it can be seriously entertained. That care and attention, combined with time, may acclimatize anything, may be true. But would not the difficulties be very great, if not insurmountable, in the case of insects from a tropical climate transported to a temperate one? In your Southern California districts the change may, perhaps, be startling, but even there could you venture to turn out loose a few specimens of Mauritian Hymenoptera in the hope of their breeding on *Icerya*? As for this country, I feel convinced that the experiment would be useless. Insect parasites are of no help to us now, and there is little hope from introduced ones. It may be said that *Icerya*, having borne very easily a change of climate, its parasites might also bear it. But *Icerya* is exceptionally and, indeed, wonderfully hardy, and may form by no means a good criterion.

Secondly, as to the identity of *I. purchasi* to *I. sacchari*. As you have asked my opinion on this point, I venture to trouble you with it in some detail. Should you find my notes too long or wearisome, I beg you to pardon me. In my paper of 1878 (N. Z. Trans., Vol. XI, p. 221) I mentioned the following points as marking the specific differences between the two:

1. Color, yellow for *I. sacchari*, reddish-brown for *I. purchasi*.
2. More complete cottony envelope for *I. sacchari*.
3. More hairy larva, and different arrangement of the hairs on larva of *I. sacchari*.
4. Tritubed lobes (*lobes en troffe*) on abdomen of larva of *I. sacchari*, not on *I. purchasi*.
5. More distinct segments of *I. sacchari*.
6. In my paper of 1883 (N. Z. Trans., Vol. XVI, p. 140) I added the following:
7. Absence of longitudinally grooved ovicac in *I. sacchari*.
8. Absence in *I. sacchari* of the great tufts of black hairs.
9. Smaller number of circular spinneret-orifices in *I. sacchari*.

In my letter to Mr. Klee I remarked: "May there not be two in Mauritius?" The question

was based on the foregoing points of difference, on which I now proceed to remark.

Nos. 1 and 5 may be set aside as of little importance. All the specimens of *I. sacchari* which I have seen are undoubtedly yellow and *I. purchasi* is always brown or reddish brown; but a difference of food (sugar as against citrus or acacia) might account for this.

2. *The Cottony "Envelope."*—By this I meant to indicate, not the ovisac, but the cotton on the dorsum and sides of the adult. Here I am still of opinion that there is a difference, but am open to the view that it may be accidental, as I have seen so few specimens. Still I observe two things: First, that my specimens of *I. sacchari* do show more dorsal cotton than *I. purchasi* show in New Zealand; secondly, that Signoret says that adult appears "sous la forme d'une masse cotonneuse." This could hardly be said of *I. purchasi*.

3. *More Hairy Larva and Different Arrangement of Hairs on Larva of I. sacchari.*—Here we have a clearly "specific" difference. I based it originally on Signoret's description of the larva: "Excessivement remarquable par la longueur de la pubescence... sur les cotés et à l'extrémité de l'abdomen." I have compared specimens of larva of both insects quite lately, and it seems to me clear that the hairs of *I. sacchari* are probably more numerous, and certainly longer and thicker than those of *I. purchasi*. I would therefore feel inclined to alter my opinion on this point.

4. *The "Trifoliated" Lobe.*—This I must abandon, as examination shows me that the larva of *I. sacchari* has not a "lobe en trefle," but the six small lobes of *I. purchasi*. Signoret seems to have been in error here.

6. *Absence of Longitudinally Grooved Ovisac.*—I am still unable to decide as to this, as none of my specimens of *I. sacchari* show a fully developed ovisac. Yet I remark that in every specimen I have seen of *I. purchasi*, where the insect is just beginning to form the ovisac, the grooves, even from the first, are plainly to be made out; and this is not the case with any I have seen of *I. sacchari*. For the present, therefore, I am inclined to adhere to the opinion that the ovisac of *I. sacchari* does differ somehow from that of *I. purchasi*.

7. *Absence of the "Tufts" in I. Sacchari.*—This character must, I think, be maintained. When I received specimens from Dr. Signoret I dissected one and mounted another on a micro-slide for my cabinet of coccids. In neither of these two was there any appearance of the great black tufts so characteristic of *I. purchasi*. The body exhibits a number of short, fine hairs indiscriminately scattered, and possibly these may be more numerous at the two extremities; but I see nothing like those of our insect. Here and there some longer and thicker hairs are seen, sometimes singly, sometimes in pairs or threes, but no "tufts."

I recognize as very important the statement in your article in the PACIFIC RURAL PRESS that "the tufts of black hair are extremely variable in quantity, sometimes making the insect look quite dark; at other times, so scarce that the insect has an almost uniform reddish-brown appearance." But you do not affirm that in any case they are absent altogether, as in the specimens I have examined of *I. sacchari*. And as regards *I. purchasi* in New Zealand, I think it may be said that the tufts are always present and conspicuous. I never, in my earlier examinations, saw one without them, and since receiving your letter have examined 16 others, adult females, and they all exhibit the tufts, even the lightest colored among them.

I venture, therefore, for the present, to maintain as a specific character this, which appears so constant in *I. purchasi*.

8. *Smaller Number of Circular Spinnerets in I. Sacchari.*—This character again was taken from the two specimens I examined, one dissected, the other mounted. Comparing to-day my mounted specimen with one of *I. purchasi*, I find that the number of circular orifices on our insect may be considered as nearly double of that in *I. sacchari*.

Considering, therefore, the whole of the above points originally supposed by me to be distinctions, and after eliminating those which may be taken as untenable, there seem to remain quite sufficient to warrant the retention of *I. purchasi* as a distinct species. I allow, of course, that if plenty of specimens of *I. sacchari* can be obtained, and if they fail to corroborate what I have advanced, the two insects must be taken as identical. To make this clear, however, a search at Mauritius itself would be desirable; for, if examination is confined to specimens sent from there, one could never be sure that the sender was fully conversant with the insects. My own impression is, as I said to Mr. Klee, that there are two in Mauritius, and this would have to be well ascertained first of all.

The distinctions which I draw are, of course, purely for purposes of scientific classification. As regards economic purposes, it does not matter whether the insects are distinct or identical, provided that we are sure that Mauritius is the original home; and this, I take it, seems irresistibly the conclusion from the evidence.

Permit me to add a word or two about the male insect. At the time when you wrote your Departmental Report and your article for the PACIFIC RURAL PRESS, you could not have been aware that I had already described the male. Our New Zealand transactions unfortunately can only be issued once a year—about June. I read in January last a paper embodying a description of *I. purchasi*, male. The

paper was really written three or four months previously, but I kept it back to the last moment, in case I might have some other coccid to add to it, and my "Eriochiton hispidus" so turned up. I forward to you herewith a copy of the paper in question, together with another on coccid honey dew. At the time I wrote I knew of no published description of the male *Icerya*.

Dr. Signoret sent me six females of *I. sacchari*. Of these, as I said above, I mounted one and dissected another. Two I presented, along with a large collection of coccids, to the Colonial Museum here. One I propose to keep for myself for future use; and the sixth I send to you herewith, in a small registered box which I trust will reach you safely. In the box I have ventured to include also some specimens of a few of the more curious of our New Zealand coccids; it would give me great pleasure to send you more, but my collection has been so denuded by repeated gifts to different people that I have none to spare. However, should you wish it, I shall be glad to collect for you as many species as possible. Those sent herewith are in alcohol, which has taken all the color out of *Ctenochiton viridis*, which should be bright green.

Comments by Prof. Riley.

EDITORS PRESS:—Just as I was about to sail for Europe several interesting communications from New Zealand came to hand, among others the foregoing from W. M. Maskell, which contains so much of importance bearing on the question of the original home of the Fluted *Icerya* that (having his permission) I send it to you. From Mr. Maskell's own showing, differences Nos. 1, 4 and 5, which he indicates between *I. purchasi* and *I. sacchari*, may be set aside. They have no specific value whatever. Nos. 2, 6 and 7 have been discussed in my last communication to your columns on the subject. They may, without serious question, I think, be disposed of, as sufficiently accounted for by known variation in the species and the condition of Signoret's materials. To dry cabinet specimens, Signoret's expression "sous la forme d'une masse cotonneuse" will often apply, and there is great variation in this respect, while the absence of an ovisac in *sacchari* with all the other structural characters generally similar is inadmissible until we have more positive knowledge of *sacchari*. The tufts of black hairs, as I have already shown, are a very variable quantity, and often entirely lacking, their obsolescence being, in fact, a characteristic of the male larva. I noticed also that these tufts were obsolete in the females in proportion as the general surface was covered with the white or greenish-white secretion.

We have, therefore, but the differences Nos. 3 and 8 to seriously consider. As to the former, Maskell finds that the hairs in the larva of *sacchari* are "probably more numerous and certainly longer and thicker" than in *purchasi*. But all the range of difference mentioned is found in our species, according to the stage of growth and the sex. Your readers who have followed my description will remember that I separated the male larva in the second stage, not only by his narrower form, but by his longer and stouter legs and antennae, and by his body being more thickly clothed with the stout hairs than is the corresponding female stage. So that such differences have no specific value until stage with stage and sex with sex are strictly and accurately compared.

In this connection, let me state a fact not yet published, viz., that not only can the sexes in *Icerya* always be separated after the first molt (2d stage), as I have shown, but even from birth. In order to get at the differences, I had very large numbers of newly hatched larvae collected and mounted, and found that the male may be separated from the female even in this first stage by his smaller size, narrower, more elongate form, stouter femora, stouter terminal joint of antenna, longer anal bristles and longer hairs around margin of body. Finally, in reference to No. 8, or the number of circular spinnerets, this must also be a variable quantity, according to age and sex, as it is from these that the surface secretion arises, and in the rough sketch of their appearance in *sacchari*, which Mr. Maskell sent with his interesting communication, the proportion seemed wonderfully similar to those shown in the figure in my report of those of *purchasi*. (Pl. II, Fig. 6.)

For these several reasons my suspicion as to the specific identity of the two insects is yet as strong as ever, and will not be weakened until we know more of the sugar-cane form from Mauritius or Bourbon. I have taken steps to obtain material, and hope soon also to be able to study Signoret's material in person. In 1871 I was in correspondence with, and visited this veteran homopterist in reference to the identity of an insect (*Phylloxera vastatrix*) which, like *Icerya*, was of international importance, and which had also been described under different names. The settlement of what appeared at first a mere question of synonymy or a quibble between specialists, was one involving vast and material consequences, as history subsequently proved. It may turn out to be equally important in the case of *Icerya*. C. V. RILEY.

On board City of Rome, Aug. 18, 1887.

A NOVELTY IN DOOR KNOBS.—The newest thing in door knobs have a glass end, like a bull's-eye lantern, in which the number of the house is seen in black paint by day and black by night when the little lamp inside the knob is lighted.

THE STOCK YARD.

Colorado Stock-Women.

"I assure you," said a prominent cattleman to a representative of the Denver Republican the other day, "that of all the failures made in stock-raising in this Western country, not one of them has been made by women. You can say what you please about the gentler sex not being able to 'rustle' with the stern necessities of bread-getting, but you can trust the stock women, sir, to look after their own interests every time, and never, to my knowledge, has one of them been left. They are worth altogether several millions of dollars, and they have got the clearest heads and the best judgment as regards managing stock that I have ever seen displayed by anybody."

"No, sir, I never heard of a stock-woman failing in business yet, and I don't believe you ever did. They take their risks, of course, but not unadvisedly. They know what they are doing, and invariably make instead of lose. If you don't believe this you can consult all the stock journals in the country, and they will prove that what I say to you is true."

"Are you personally acquainted with many women engaged in the business of cattle-raising?" asked the reporter.

The cattleman gave a long, low whistle. "Well, I should think so," he said. "I've studied them for years. You want to know what kind of women they are? I'll tell you what sort they are, young man; they're ladies; that's what they are. Now, I don't mean by that that they would be afraid of soiling their hands if occasion required; no, indeed; nor of doing a charitable action which would necessitate some personal exposure on their part, for they are generous to a fault. What I mean to say is that they are, as a rule, refined and intelligent women, who read and think, and are capable of making a good appearance in society. I don't know as I have ever seen one of them who is phenomenally intellectual outside of the judgment they exercise in the stock business, which is phenomenal. Most of them have a genius for business, and nine-tenths of them know how to appear in a drawing-room."

"In most instances they are rich and know well how to use their money to advantage so as to get the most out of life. Many of them are wives and mothers, and when they are such I assure you they are both wise and kind. You will find that they rule their households with firm hands, and that their husbands and children, to use a biblical expression, 'rise up and call them blessed.'"

"I dare say you thought that women who engage in stock-raising were all centaurs. Come now, didn't you?" continued the cattleman. "Riding like the wind, half clad, their tresses flying behind them, and all the rest of it, for all the world like a picture from mythology. Confess now, didn't you?"

"I assure you, you could not have had a more erroneous impression. Stock-women are much like others, save that they have wider judgment on practical subjects. They are thoroughly business-like, because they appreciate the vast interest which they have at stake, and the quick conception with which all women are gifted enables them to see clearly what the inevitable results would be of one false move. They know that their decisions must be well weighted, that they must act only under the most careful consideration, and that once having acted they must abide by their decision with a calm, unswerving spirit. It is a good training school for a woman. It takes all that idiotic nonsense about nerves out of her and gives her brain a cool, common-sense poise which many a man might envy."

"I know of no position in life which I had rather my daughters would fill. It is one burdened with great responsibility, of course, but what mode of life is not where there is anything to be gained? I assure you I should not consider that a clear understanding of the cattle business interfered in any way with the refinement of those whom I hold most dear."

"But you have doubtless met stock-women of a directly opposite class, have you not?"

"Oh yes; there are necessarily exceptions to all rules. The uncouth woman of the ranch, who rounds up her own herds and sleeps in the saddle, is not altogether a creature of the imagination. Uncouth and ignorant she may be, but she is always a good woman, and one whom all the cowboys respect. I know several instances where these women can swing a lariat like a man and know quite as well how to manage the herd. A very few of them personally supervise their own animals, however, and these in most instances are those who have not as yet accumulated much wealth, although there are some very rich cattle-women in Colorado who ride after their own herds. This, however, is very unusual. A woman usually manages her cattle through a foreman, whom she often supplies with brain-power. She does not usually live on the ranch, but rather in a handsome house in some neighboring town. But all the same she is the bone and sinew of the business. Her clear head manages it all, and it is through her directions that her foreman always proceeds. She often spends the summer on the ranch, where a comfortable dwelling is fitted up for her, much on the order of an English shooting-box."

"You want to know something about the un-

married women who are great stock-raisers? Well, the main thing that can be said of them is, that men of position and prominence everywhere want to marry them, and not purely out of money considerations, either, for some of these unmarried stock-women have a fund of good sense and useful intelligence which cannot be eclipsed, and besides this many of them are quite accomplished and good looking. But few of them are 'on the marry.' Most of them are past their first youth, and they have a shrewd way of looking at things, which augurs ill for the stranger who looks with longing eyes upon their flocks and herds."

"Colorado women generally have gone into the stock business," concluded the cattleman, "through a direct line of inheritance—that is, they have inherited small herds, vast ones, or a taste and inclination for the life. I know of numerous instances where a father has died leaving his daughter a very small herd, and she has gone steadily on with it, making thousands where her father before her made hundreds of dollars. Again, there are widows who have come into possession of vast stock interests through the death of their husbands, and who have managed the business left to them until its receipts run way up in the millions."

"I know resolute women, too, who began without a dollar, and have gained wealth and standing in the stock business. The most highly novel sight I ever saw was a 14-year old girl herding cattle away up in Montana, with only her little brother to assist her. The father of these children had died, leaving them a small herd of cattle, and I would be willing to wager my last dollar that that little brown-skinned girl away up there in that wilderness will yet count her dollars by thousands. Of the 800 stock-women now doing business in Colorado, all are well and favorably known among cattle and sheepmen, any one of whom would gladly befriend them in case of an emergency, but whom, on the other hand, they are quite capable of advising in many practicable matters relating to stock-raising."

The Lifetime of Alfalfa.

We have often been asked, says the Denver Field and Farm, how long will alfalfa live and produce without being reseeded? We conclude that there is no one living who could answer the question with intelligence. It has lived on in the country from which we have obtained it through many generations of men, and nowhere in history can we find it has ever died out. We read that 300 years ago the Jesuits from Spain sailed the south seas, and as a precaution against starvation of shipwrecked mariners, planted alfalfa on the little barren islands of the ocean, and left a few pairs of goats—male and female—that they might eat this ever-living plant, and reproduce their kind, and possibly be the means by their flesh of saving human life.

We have knowledge of fields of this plant still flourishing near the ancient City of Pueblo that were planted in the days of Cortez, the invader. In talking on this subject with Col. Eli M. Wood of this city, he who traveled Old Mexico long before the reign of Santa Ana, we learned some interesting facts about the plant, and from one who has observed its growing for half a century. Said the Colonel: "I was in Chihuahua as early as 1844, and to feed my mules purchased alfalfa cropped from a field near the city. Forty years later—in 1884—I again returned to the country, and on seeing the same field fresh with that beautiful grass plant, I inquired of the proprietor—who was the same Castilian I had purchased the hay of in the olden time—if this had ever been reseeded or the land fertilized, and was told it had not. He informed me that from his best information the field had been planted by his ancestor 100 years prior to 1844."

In the grand valley of Taos, near the village of that name, is a small field of this plant growing that has yielded three crops per year for more than 100 years. We were informed by the proprietor of this Taos meadow, a few days since, that he had cut the grass from this field for 60 years, and he believed the crop of the present season was stouter than it had ever been before. Now from all these evidences, we conclude that the alfalfa is a never-dying plant.

KEEPING SWEET POTATOES.—The season of the year is now at hand when this crop will be ready to gather, and as it is still a debatable question as to the best method of keeping them, we give the following from a Georgia standpoint: "I have tried several methods of keeping sweet potatoes in the winter. The best of all is putting in old-fashioned banks or hills, filling the interstices between the potatoes with perfectly dry sand. Dig, if possible, in dry weather; if warm, do not cover too deeply at first, but as cold weather advances put dirt on freely."—Rural and Workman.

ELECTRIC RAILWAYS.—It will surprise many to learn that there are now running in this country 11 electric railways, equipped with 68 motors and motor cars. It is estimated that they are now carrying at the rate of three and one-half million passengers a year, and when the roads now under contract are completed twice that number will be carried.

VARNISH FOR HARNESS.—A good, black bright varnish for harness may be made by grinding "black" into a quick-drying body varnish.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

A Good Grange Day at Oakland.

Last Saturday Temescal Grange, by the assistance of a large delegation from Eden Grange, had another good Harvest Feast. After conferring the third and fourth degrees on Miss Lucy Blackwood of East Oakland and (by request of Eden Grange) Mrs. Capt. Armstrong of Hayward, Bro. Joel Russell, who was present with his son and Sister Russell, gave some leading remarks at the festive board. He spoke of the social and educational aims and purposes of the Order in an eloquent and impressive manner, not forgetting to show up not only the uselessness but the baneful influences of the drinking saloons in elections and their costliness to the general public. Farmers should certainly unitedly try to protect themselves from all abuses and nuisances which may threaten the welfare of themselves and their own families and those of coming generations.

Bro. Blackwood spoke of the necessity of farmers discussing and acting advisedly as concerning taxation, the protective tariff and other matters which will properly come before the State Grange. The woman suffrage question he thought would receive a good share of attention. Brother Blackwood was in favor of having all intelligent women who wished to vote do so.

Brother Goodenough kindly welcomed the new candidates to their new field of Grange work and spoke noble and encouraging words to both old and young members, urging all to strive faithfully on and persevere to the end and receive the reward that must surely come of good doings.

Brother Dennis recited one of his interesting incidents. Brother Kelsey gave some extended views on the tariff question. Brothers Perham, Renwick and Frink, and Sisters C. Deming of Vallejo, Kinney of the Girls' Union, Smith of Yuba City Grange, Babcock, Sheldon, Kelsey, Brooks, Blackwood and Dewey all assisted in making the after-dinner occasion a lively and exceedingly delightful literary repast. Sisters McGrew and Clara Deming MacLise, Past Pomona of the State Grange and members of Temescal Grange, were listened to with interest.

Brother Perkins was obliged to retire, saving, no doubt, for the State Grange or the next Harvest Feast a first rate speech.

Among other welcome visitors were the mother and sister of Sister Sharai, Secretary of Eden Grange.

The tables were, as usual, well and handsomely filled and beautifully decorated with floral offerings.

The absence of Brothers Webster and Bagge and families was mentioned with regret. The loss by death of Sister Heller, a charter member of Eden Grange, was alluded to with sincere sympathy by the Master of Temescal Grange.

Repairing to the Grange Hall, Sister Jessie Weed gave an interesting recital in a most eloquent manner. She was followed by a nice recital of a humorous poem by Sister Smith, a young member of Yuba City Grange.

Sister Roxy Dennis, receiving a hearty encore, favored the audience, by request, with a solo, "The Last Rose of Summer," accompanied by the organ, all seeming more than usually delighted with her successful efforts.

Several good speeches were made by different members which we wish could have been listened to by a larger number.

A resolution was adopted favoring the holding of the State Grange session of 1888 at Oakland, and requesting the representatives of Temescal and Eden Granges to confer on the matter with the representatives of neighboring Granges.

An application for membership was duly received and referred. Eden Grange holds another session to-day in which matters relating to the State Grange session will receive a large share of attention. Temescal Grange will hold its last meeting before the State Grange, Saturday evening, Oct. 1st.

Eden Grange has largely increased in membership and interest during the last year. Temescal has received but few new members, not being surrounded by a populous farming district. Its meetings, however, have usually been well attended, and its exercises quite interesting.

Last Saturday will be numbered among the bright and happy Grange days harmoniously enjoyed by the sister Granges of Alameda county. The wish was heartily expressed that all present should meet at Santa Rosa with many more of their fellow-Patrons from their own and other counties throughout the State.

National Grange, P. of H.

The following notice has been issued by the secretary of the National Grange:

WASHINGTON, D. C., Sept. 15, 1887.

In accordance with the provisions of its Constitution, and the resolution adopted at the session of 1886, the twenty-first session of the National Grange, Patrons of Husbandry, will be held in the city of Lansing, Michigan, com-

mencing on "the first Wednesday after the second Monday in November," 15th, at 11 o'clock A. M.

The sessions of the Grange will be held in Representative hall, in the State House, which has been kindly tendered by the Board of Control for the use of the National Grange.

Accommodations for the National Grange have been secured at the Lansing house, at the rate of \$1.75 per day each, where two occupy the same room, or \$2 where there is only one occupant, including the heating of rooms. By order of the Executive Committee.

JOHN TRIMBLE,
Secretary National Grange.

For Santa Rosa.

As the time for the next meeting of the State Grange draws nigh, the common question among members of the Grange is: "Are you going to Santa Rosa?"

It is six years this fall since the annual session of the State Grange was held in the charming "City of Roses." All who attended the session in 1881 will testify to the charms of Santa Rosa. It is but fair to say that during these six years she has grown wonderfully. In the way of public and private buildings, remarkable advances will be noticed. Street improvements will also be worth the special notice of all who may attend.

From all reports, Santa Rosa Grangers, assisted by the members of Sebastopol, Two Rock, and Bennett Valley Granges, are doing everything in their power to make the session a success, to render the visit of all Patrons enjoyable, and to see that the true worth of their respective localities is fully known.

Judging from the importance of the work that is to be done, there is every reason to expect a large attendance of Patrons. The election of officers of the State Grange for the term of two years ensuing is of itself a sufficient reason why every Subordinate Grange in the State should be represented.

There is no one thing of more importance to subordinate Granges than that a corps of competent, energetic officers, from the Worthy Master to the Lady Assistant Steward, should be selected. Let every subordinate Grange and its proper representatives remember this and attend at Santa Rosa and participate in everything that tends to the "Good of the Order." A careful selection of proper officers is a big start in another term of success.

The amendments to the Constitution of the State Grange are also of vital importance to the Order. Let them be considered carefully, and if adopted be adopted wisely. There are many other important subjects which will claim attention at the next session of the California State Grange, so remember and be at Santa Rosa Tuesday morning, Oct. 4th, at 10 A. M.

Buy your ticket via Donahue broad-gauge line to Santa Rosa and return. Pay \$2 for it. When at Santa Rosa be sure to have the ticket countersigned by E. W. Davis, otherwise it will not be good for return trip. The regular fare to Santa Rosa is \$1.75, but the Grangers get the round trip from San Francisco to Santa Rosa and return for \$2—a very liberal reduction. But be sure to ask for "Grangers' round-trip ticket," and then be sure to have it countersigned at Santa Rosa as above directed.

Good and Faithful Servants.

In an interview with a reporter for the Marysville Appeal, Dr. C. E. Stone, the newly chosen president of the Anti-Debris Association, said that the past management of its affairs had been in every way honorable and satisfactory. When a member of the Board of Supervisors, he thoroughly investigated the appropriations made by that body for anti-debris purposes, through the association, found all correct and so reported. The board, he says, is now owing the association for money expended for the county's benefit. He further says that the association has accomplished a great deal, and all that could be expected, considering the difficulties it has had to contend with, among which have been the suits to prevent the supervisors of Yuba from paying anti-debris bills. The county is now owing anti-debris claims to the amount of about \$10,000, and these should be paid without further delay.

Dr. Stone is as uncompromising as ever in his opposition to debris and debris dams.

In speaking of C. E. Sexey's many years of faithful and arduous service as president of the Anti-Debris Association, the Sutter Farmer says: "That he was honest and sincere, no respectable person ever doubted. He never received as much as a penny for his services and always contributed his full share in money when called upon. His chief abuse came from those who had never contributed anything.... Of his successor, Dr. Stone, it is but justice to say that he is the life-long friend of his predecessor; that he has been a member of the association from the beginning; that as a private citizen or Mayor of the city he has been an uncompromising enemy of hydraulic vandalism; that his integrity was never questioned, and that our knowledge of these facts has been obtained through 30 years' intimate acquaintance.... Our hydraulic enemies gave themselves liberty to vilify the late president in unmeasured terms; they are welcome to all the comfort derivable from the change."

Grange Work and Progress.

[Prepared Weekly by M. WHITEHEAD, National Lecturer.]

THERE are some who believe the Grange is short-lived. On what ground do they rest their supposition? It contains the elements of endurance and permanency not found in organizations that have lived and flourished much longer. It is helped on and sustained, not by one member of the family, but by two and often by half-a-dozen, who feel that they owe to the Grange much of the happiness and prosperity which has attended them for the past five or ten years, and they would almost as soon think of giving up their homes as their Granges. We believe the founders of the Order built upon solid masonry with the hope and expectation of a grand and noble future, and to-day there is every indication that the Grange has come to stay, and with increasing years and experience will come increasing benefits to all. To make our Order perpetual, then, let us "strive to secure entire harmony, goodwill and vital brotherhood among ourselves."

—Grange Home.

QUESTION for discussion by Subordinate Granges: What is the full Grange meaning of the words, "noted for fidelity"? On opening the discussion of this question the Lecturer will please read to the Grange the obligations of the four degrees, the obligations of the officers and the Grange charter.

NEVER in the history of agriculture in Massachusetts and New England has there been such earnest and wide-spread interest in the Order of Patrons of Husbandry as right now. Farmers are beginning to realize that organization and co-operation alone can solve their problems and overcome the difficulties which beset them. Giant Monopoly on one side and Giant Labor on the other threaten between them to annihilate Giant Agriculture, who, more powerful than both together, slumbers on in blissful ignorance of his own strength and danger, and the farmers, their lands and their homes are in jeopardy. Besides many local questions of importance, there are national questions which command our attention and action. The Department of Agriculture should, at next session of Congress, be enlarged and rendered more useful and its chief made a Cabinet officer. Interstate commerce must be properly protected. The Agricultural Experiment Station appropriations are to be secured and carefully used in the interest of the tillers of the soil. The patent laws are unjust and need remodeling on the basis of fairness to innocent purchasers of patented articles. We must make progress in agricultural and industrial education. The great labor and liquor questions will not be settled by the cities. Brother, is there not work enough? We must have all the progressive agriculturists working with us.—A. A. Brigham, Mass.

REFORMS have been agitated in our legislative halls that in a short time must elevate our calling to an equality in the benefits of legislation with those enjoyed by other industries, and agriculture be made to flourish and acknowledged to be, as it really is, the most important of them all.—H. H. G., Virginia.

The central idea of the Grange seems to be the development of brains by friction of the wits. The founders of the Grange saw the error of farmers doing too much work. While disposed "to do good" as scripturally commanded, the last part of the sentence "and to communicate forget not" was unheeded, hence the farmers' isolation and loss of influence in the affairs of men. This is a condition the Granges aim to correct. At our district meetings the past winter, literary exercises have been the leading features, calling for much thought and action, many taking a part and contributing to their stock of ideas. None seemed to regret their attendance. These meetings break up the isolation of farmers and other members and lessen their dumbness in meeting. Also in the local Granges there is talent developed. Much could be said of the benefit of our meetings from a social standpoint, all of which goes to prove the proposition that the central idea of the Grange is the development of brains by friction of the wits.—B. F. R., Vermont.

PARTY ORGANIZATION is no doubt a very convenient thing, but a great many people feel—and I feel very strongly with them—that when loyalty to party means disloyalty to country, and means what it seems to me is still worse—disloyalty to conscience—it is asking more than any good man or citizen should concede.—James Russell Lowell.

Fourth Degree.

Let it be borne in mind that nearly all meetings of the State Grange are held in the fourth degree, and that all Matrons and husbands are not only privileged to be present, but are heartily invited to come at the beginning of the session and stay to the last. They will not only be well rewarded for their attendance at the session, but will leave with pleasant memories of the enterprising and hospitable citizens of the beautiful "City of Roses," the home of Past Master Coulter and family, Worthy Steward Davis and other well-known Sonoma county Grangers.

SACRAMENTO GRANGE holds its next regular meeting Saturday, Sept. 24th—the last day of the State Fair—and cordially invites all brothers and sisters visiting the Capital to meet with them on the occasion.

Anti-Debris Funds and Yuba Supervisors.

At a meeting of the Board of Supervisors for Yuba county, held in Marysville Saturday, Sept. 17th, a communication in the shape of preamble and resolution was read, as follows:

WHEREAS, The Anti-Debris Association of the Sacramento Valley, through its Board of Directors and officers, have, at their own expense and out of the funds of the association, carried the anti-debris litigation to a successful issue so far as law and injunctions are concerned, and have also expended large sums in the enforcement of the law; and

Whereas, The Boards of Supervisors of the several complaining counties have from time to time paid from the county funds to the Board of Directors of this association;

Resolved, That it is of the greatest importance to the valley interests that we should know whether your honorable body desire to continue the policy heretofore pursued, or whether you wish all litigation should cease. An immediate reply to this communication is very respectfully requested, as, in our opinion, matters of such very grave concern need early attention, either from your honorable body or from this association.

C. E. STONE,
President of the Anti-Debris Association.

B. T. Walton, secretary, read other communications with reference to outstanding anti-debris claims against the county for counsel fees and other expenses for litigation, aggregating about \$10,000. No action was taken in the matter, consideration of which was postponed till the October session. Two supervisors from the mountain districts oppose payment of any anti-debris claim, but those of the valley portion of the county, including Marysville, are united with the Anti Debris Association.

AGRICULTURAL NOTES.

CALIFORNIA.

Amador.

WATERMELONS.—Jackson Dispatch: A fine specimen of a watermelon of the Cuban Queen variety, raised on Mr. Chapman's ranch, about four miles above town, weighing 47 pounds, was left in our office yesterday, and we were shown others of the same variety which weighed more. But it is not the size of the melon that we wish to brag on so much as the flavor, which is much superior to that of similar articles produced in the valleys.

Colusa.

ORGANIZED UNDER THE WRIGHT LAW.—Orland telegram, Sept. 11: The election in the Orland irrigation district yesterday was warmly contested by a few anti-irrigationists. The vote was 29 for and 13 against. This organized the district and elected the officers. The people are joyous over the result. This opens about 14,000 acres of good land to water, which has previously been confined to the production of wheat. This is the first district organized under the Wright Act in Northern California, and much interest has been taken in the matter all over the county. It is thought that other districts will now be formed.

Contra Costa.

GIANT SUNFLOWERS.—Antioch Ledger: S. P. 'age has a row of giant sunflowers growing in his yard, which were raised from seed received from the Agricultural Bureau at Washington. Several have attained a height of 15 feet, and none are less than 12. The flowers that vainly endeavor to turn their heavy heads to follow the sun are from 10 to 15 inches in diameter.

El Dorado.

RESISTING ROOST-HOBBER.—Bee: Mrs. Orr, who resides near Salmon Falls, in El Dorado county, has had a number of her chickens stolen recently. Her husband was not at home, and thieves took advantage of the occasion and raided Mrs. Orr's hen-roost several times. She grew tired of this, and a few nights ago stood guard near the chicken-house, armed with a shotgun. She saw two men in the act of tampering with the fowls on the roost, and fired the contents of one barrel into the legs of the man in front. The shot was small and the man got away. He is not likely to interfere with Mrs. Orr's chickens again.

Fresno.

MONEY IN PEACHES.—Republican: A. C. Brayn has a 20-acre tract in Washington Colony, set mostly to peaches and nectarines. The trees are nearly all young, and therefore not in full bearing. He has 54 Early Crawford peach trees, now five years old. This season he picked 10,800 pounds of fruit from these 54 trees, and sold the same to Geo. W. Meade & Co. at 1½ cents per pound—\$135, or an average of \$2.50 per tree. These trees occupy just one-half an acre of ground, are good average trees, have been properly taken care of and give an unequivocal affirmative answer to the oft-repeated question, "Does fruit-growing pay in Fresno county?" At the rate of \$270 per acre, there is a net profit to the orchardist of about \$240 per acre.

Lassen.

HEREFORDS FOR THE FAIR.—Susanville Mail: B. A. Bell, agent for Albert Gallatin, has six head of Hereford cattle at John Masten's ranch, which he proposes to exhibit at the exhibition to be held at Susanville in October. The herd consists of the bulls "Earl of March" and "Horace 22d," two sons, half-breeds, of the "Earl of March," and two heifers, sired by "Horace 22d." The bulls were raised by

the New Zealand Stock & Pedigree Co. The cattle at Masten's have had no particular care, but fared the same as other range cattle. Their condition shows the wonderful hardiness of the breed.

Los Angeles.

FRUIT-GROWING AT CRESCENTA CANYADA.—The *Herald* acknowledges the receipt of some choice fruit raised by General J. H. Shields of Crescenta Canyada. It consists of late Crawford peaches, second crop early York peaches, and a cluster of 16 white figs. Heretofore the General's fig trees have borne but three figs to the cluster, but this year he pruned off about six inches from the ends of the limbs, and was rewarded with an immense increase of fruit. His Hale's early peaches have produced two crops, and his apple trees, now loaded with fruit, are blooming for a second crop. The fruit is very fine. The General attributes the production of two crops to the fact that the trees are so far removed from surface water, with its attendant coolness, that the warm soil stimulates growth and production of fruit. It may be that the warm uplands will make deciduous fruit trees into evergreens.

Marin.

TALL DAHLIAS.—San Rafael *Journal*: County Clerk Bonneau is a floral connoisseur, as his beautiful garden attests. Among his especial pets are some lovely dahlias, which bend their proud necks and look down upon you from a height of 111 inches.

NOVATO APPLES ABROAD.—A large consignment of choice apples will be sent out from this place to Australia by the next steamer. The fruit is carefully assorted and packed with such care that it makes the long voyage of over 7000 miles via Honolulu, Auckland and Sydney, crosses the equator and reaches its destination in excellent condition.

OSTRICHES.—San Rafael telegram, Sept. 15: Stone & Knapp have leased the Austin ranch for ostrich farming, and have arrived with their herd of ostriches. Ostrich farming will be carried on extensively here.

Modoc.

LIVE-STOCK IN THE COUNTY.—The Adin *Argus* has been furnished by the assessor with an itemized list of Modoc's cattle, horses, etc. The total valuation is \$871,060. The list includes 11 thoroughbred horses, value, \$2750; 1683 American horses, \$89,945; 6889 graded horses, \$203,531; 2185 colts, \$30,845; 539 mules, \$19,577; 105 oxen, \$2410; 20,438 sheep, \$30,832; 647 beef cattle, \$12,799; 10,702 calves, \$85,467; 24,551 stock cattle, \$349,693; 110 fine cattle, \$4400; 1790 cows, \$35,283; 2830 hogs, \$3558.

HAY AND PASTURE.—*Shasta Courier*: Modoc raises more hay on an average, to the acre, than any other county in the State. It is the best county for stock-raising and pasturage in Northern California, as well as good for general farming.

Nevada.

PEAR PROFITS.—*Transcript*: John Ducray picked and marketed 1500 pounds of pears from two trees growing in his "bedrock" garden at Nevada City. Mr. Peabody, living near the railway in Grass Valley township, picked 1200 pounds of Bartlett pears from three trees, the trees growing in uncultivated ground and having been untrimmed or cared for for several years. John Rodda, nurseryman at Grass Valley, marketed last year 26 boxes of pears from a single tree 12 years old, the boxes weighing 40 pounds each. Felix Gillet sold \$11 worth of pears from a single Clairgeau pear tree last year. The tree is less than 15 years old and is growing in his Barren Hill nursery. E. Booth sold 130 boxes of pears from 18 trees growing in his orchard at Nevada, a majority of the trees being small and having only recently commenced bearing. The largest yield was 900 pounds from a tree 12 years old, the average of all the trees, large and small, being 350 pounds of pears to each tree. These pears were sold at 1½ cents per lb. on the tree, and the owner received \$2.50 per day for picking the fruit in addition to that amount, receiving his money as soon as the fruit was ready for shipment.

SOME PUMPKINS.—North San Juan *Times*, Sept. 16: The other day we shipped for exhibition at the State Fair a pumpkin which was raised in the garden of John German, and which weighed 153 pounds. On the same day a squash raised on the ranch of Henry Wichman, less than a mile from town, was shipped, which weighed 185 pounds.

Sacramento.

IRRIGATION ENTERPRISE.—Sac. cor. *Bulletin*: A new water company has been organized to take water from the American river to irrigate a large portion of the lands in Sacramento county. Three surveys are being made from points on the river; one to take water out at Folsom, another one and one-half miles below, and a third to take water out four miles below. The papers filed claim 80,000 inches—the canal to be 50 feet wide on top and seven deep. The Assistant State Engineer is making the survey. It is intended to run the canal so as to divide between the American and Cosumnes rivers, and follow down the divide, covering an immense area. Albert Gallatin and Judge Denison have charge of the matter.

San Bernardino.

CANNING AND DRYING.—Lugonia *Citrograph*, Sept. 17: The Colton cannery is running to its utmost capacity, handling about 15 tons of fruit daily. Pears and peaches are the staples

now. Over 250 hands are employed. The output for the season is estimated at 20,000 cases of canned goods and 40 tons of dried fruit. Lots of fruit from this section has been hauled 10 miles to this cannery because there was no market nearer home.

REDLANDS FRUIT ACREAGE.—We have been at the trouble of getting the figures regarding the area of land in the east San Bernardino valley set out in deciduous trees, orange and lemon trees and grape vines. The figures are very nearly correct and may be relied upon:

	Acres.
Apricots.....	541
Peaches.....	1028
Nectarines.....	15
Pears.....	25
Raisin grapes.....	510
Wine.....	375
Olive.....	12
Prunes.....	4
Figs.....	18
Walnuts.....	23
Oranges.....	499
Lemons.....	7

Total..... 3057

To this must be added the acres upon acres of young trees recently set out and not yet in bearing. The locality embraces all that country lying this side of the Santa Ana river, and all naturally tributary to a cannery here were one in operation.

FINE BANANAS.—San Bernardino *Index*, Sept. 17: Specimens of bananas grown by G. W. Beattie at East Highlands, in this county, are of good size and of fine flavor, and in the latter respect superior to any California-grown we have ever tasted. It is the best evidence we have yet seen of the wonderful fitness of our climate for the cultivation of semi-tropical fruits.

San Joaquin.

PREPARING FOR THE FAIR.—Stockton *Independent*: The directors of the Agricultural Society have had a large force of men employed at the park for several weeks past, putting everything in shape for the fair, which opens next Monday. The stables have been renovated and a large force of active whitewashers is now engaged in giving the place a neat appearance. Forage for stock is being delivered and a large sprinkling wagon drawn by four horses is kept on the streets leading to the entrance to the park. The track is in first-class order, and will be fixed for fast records when the fair opens. The demand for stable-room this year will exceed that of any previous year, but the directors have made provision to accommodate more stock than was ever shown here before. Cattle stalls east of the racing stables have been increased in number, and the row of stalls at the southeast corner of the grounds have been cleaned and made ready for cattle to be exhibited. The society furnishes forage free to all stock exhibited and entered in races, and the expense is very heavy. The State Society has placed a limit on the amount used daily at Sacramento, as follows: Cattle, 20 pounds per head; horses, 20 pounds per head; sheep, three pounds per head; show stock, one bale straw; racing stock, two bales straw. Here there will be no limit on the amount furnished, notwithstanding the fact that good hay is selling at \$14 per ton.

San Luis Obispo.

CROPS.—Thrashing is regarded as finished in San Luis Obispo county, being a month earlier than usual, which indicates a light crop. Wheat is of good quality and the yield on the coast about the same as last year, and in the interior half that of last year. Of barley the yield is more than last year. No wheat rusted, as it often does in very wet winters. The product of the county is about 350,000 centals of wheat. The bean crop is larger than last year and of excellent quality.

Santa Barbara.

FALL CLIP.—Santa Barbara *Press*: Sheep-shearing will begin on the Santa Cruz islands about the 25th of this month. An extra good yield is expected, as the season has been favorable.

A ROYAL IMMIGRANT.—She is one of the blue bloods of nobility, with such monarchs of ancestry as Exile of St. Lambert, Stoke Pogis 3d, Lord Lisgar, Victor Hugo, Bismarck and Jerry, and such queens as Fann of St. Ida, Allie and Anne of St. Lambert and Jersey Bell of Scituate. Her granddam Allie and her full sister Ida are the two largest officially tested butter and milk cows in the world. She and her offspring will make their future home with the Pioneer herd Jerseys of E. J. Packard.

HORTICULTURAL SOCIETY.—*Press*: The September meeting of the Santa Barbara Horticultural society was held at Burton Mound. There was not a very large attendance, but the order of business was preceded by a fine lunch. The general discussion on fruits elicited the fact that the yield this year was unusually large, and that apricots were among the best products of the orchard. The question of establishing a fruit-drier was debated at length. If built at Carpinteria, and properly managed it was thought it would yield a good profit. After the freights have been paid, there remains such a small profit to the farmer that he realizes very little for his time and labor, consequently tons of fruits go to waste yearly. An exhibit of grapes by Mr. Cadwell was very good. The scale-bug received some attention from Mr. Harper. Walnut production in this county was discussed at length by Mr. Opdyke and several other members.

It was decided not to hold a horticultural exhibit this fall as a society, but the members were asked to take part in the county fair. A new set of by-laws were adopted and the following members were elected directors: H. C. Ford, O. N. Cadwell, Edward Harper, S. L. James, Jos. Sexton, P. C. Higgins. After the meeting adjourned the Board of Directors met and elected the following officers: H. C. Ford, President; P. C. Higgins, Vice-President; John Spence, Secretary; Edward Harper, Treasurer.

Santa Clara.

CHAMPION PEACH-PICKERS.—San Jose *Mercury*, Sept. 17: N. Lee and E. M. Mott, whose ages average 61 years, picked in one day, for H. L. Woodburn, in the Willows, 164 40 lb. boxes of peaches. The peaches weighed over three and a quarter tons, and sold for \$100. Now let us hear from the boys.

Sonoma.

FOREST FIRES.—*Argus*, Sept. 17: Monday and Tuesday were exceedingly hot in Petaluma. It was occasioned by extensive forest fires in the neighborhood of Freestone. The lands of Hegelar, Crayne and Shuster were badly damaged. Several miles of fencing, hay, grain, feed and timber, standing and cut, have been destroyed.

GRAPES AND HOPS.—Healdsburg dispatch, Sept. 18: Picking of the hop crop is completed in the valley of the Russian river. The crop is of excellent quality and an average one. Grape-picking commences to-morrow. The vintage will be larger than at any previous harvest, from the fact of increase of bearing vines. The grapes are of good quality, and the crop will be an average one.

Stanislaus.

PROPOSED CANAL.—Modesto telegram, Sept. 16: The Board of Directors of the Turlock Irrigation District, at a meeting to-day, received estimates for a canal and distribution ditches for that district, from Engineer Manuel, under the provisions of the Wright bill. A call for an election to vote \$600,000 for the works has been issued. The election takes place Saturday, October 8th. The proposed tax is about \$3.30 per acre in the district, and the election will probably be carried by a very large majority.

Tehama.

BEARDESS BARLEY.—J. M. Howell in Red Bluff *Cause*, Sept. 17: Three years ago I received three sacks of this barley from a friend at Modesto, and have found it very profitable and valuable. 1st—I find it will produce full as much to the acre, if not more, than the bearded varieties, to winter sown; and I find it equally good for summer-fallow. 2d—I find it makes the best hay. 3d—The straw alone is nearly equal to hay on account of having no beard. 4th—It makes the best hog feed of any grain; and hogs will leave a wheatfield to feed on it, as the grain is soft and free from husks. 5th—I find it the best barley when you feed whole grain, for there is no beard to annoy stock. 6th—I find the stubble the most valuable pasture of all my stubble-fields, for the straw is soft, and there is neither beard nor chaff to bother or punish your stock.

COTTON.—Red Bluff *Sentinel*, Sept. 10: Last spring S. Doane of this place found a few cotton seeds and gave them to his children, who planted them in the rear of his residence. No attention was given the young plants except to put water on them occasionally. Sunday Mr. Doane showed us as fine cotton from the young plant as any one would wish to see. The plants are thrifty, and the pods large and well filled with fine cotton.

Yolo.

SIX WEEKS' RUN.—Woodland *Democrat*, Sept. 15: Geo. Dinadale this week concluded the season's run with his thrasher. He has, doubtless, had the longest run of any machine man in the county, 71 days. For the first 50 days the average was over 1200 sacks per day. The last 20 days the machine was engaged in tulle grain, where the yield was lighter. During the 70 days only two members of the original crew were displaced, which is saying a great deal for the employer and the employees.

FIGS BY THE TON.—One of the largest fig orchards in California is that of Wm. Russell, four miles north of Winters. It comprises 22 acres, and contains 1000 fig trees, all in bearing. Mr. Russell shipped 15 tons of dried figs last year, besides many more tons of green figs to the S. F. market. Most of the trees were planted in 1884.

Yuba.

BEARING BANANA.—J. G. Cohn, in Marysville *Appeal*, Sept. 16: I have been experimenting in the growth of a fruit that is not accustomed to this climate, and, after six years, have the satisfaction of seeing a bearing banana tree in the yard of my residence on D and Fifth streets. People, when I planted it, said that I was crazy; but by the first of next December, when I take down the bunch, they will see that my notions that bananas could be grown here were correct.

SMARTSVILLE ENTERPRISES.—Wheatland *Graphic*: The Excelsior Water and Mining Co. seem to have turned their attention from mining to farming, stock-raising and fruit-growing. Their 40-acre peach orchard, planted in the spring of 1885, has made an astonishing growth, and stands to-day heavily laden with luscious fruit, a living evidence of the superiority of our foothill soil and climate for fruit-raising. The company has a large supply of

water, and dug about nine miles of ditch last winter. They will probably extend the same the coming season to convey water on all the places north and west of Wheatland. What a transformation to contemplate! Our sheep ranges and wheat-fields turned into alfalfa meadows, orchards and vineyards. As an illustration of what may be done by irrigation, we noticed that Daniel McGanney was preparing to cut his fourth crop of alfalfa for this year, from a 60-acre field on the sidehill, about three miles south of Smartsville.

FOREST FIRES.—Marysville, Sept. 13.—Word has just reached here that forest fires have been raging near the Oregon house, about 30 miles northeast of here, for two days, but are now under control. Two houses, many miles of brush fence and a number of head of live-stock have been burned.

WHEATLAND CROPS.—C. J. Ripley brought up from Wheatland last evening some specimens of corn, 12 feet high, from Kelsor's ranch. A corn crop is growing there from seed planted June 15th, after a crop of four tons of hay to the acre had been cut. The corn will grow 80 bushels to the acre. Mr. Ripley reports the hop crop in fine condition. A yield of a ton to the acre is anticipated. On alfalfa land the fourth crop of hay this season has been cut.

NEVADA.

EDITORS PRESS.—Fifteen miles east of Paradise valley, the Jordan Valley Stock Co. have 10,000 acres of land—1500 acres of it being meadow and 250 acres in alfalfa, with an irrigating ditch 20 miles in length. They have 6000 head of cattle, including some white-faced imported Herefords; also 200 head of horses, including four fine stallions of Norman and Hambletonian breed. There is a nice vegetable garden on the place. I was shown one Centennial potato which weighed three pounds. One thousand tons of hay have been cut this year, but water has been scarce. Mr. H. G. Pratt is superintendent of the place and has erected a fine two-story stone building with 12 rooms. Five miles northeast of Paradise valley and just as you enter it, with the Santa Rosa mountains on your north and west, is S. B. Pierce's place. Mr. P. has a flour mill run by water power, with a capacity of turning out 50 bbls. in 24 hours. He has a two-acre orchard in apples, plums, pears and cherries, and 30 acres in alfalfa.—W. J. F., Sept. 18, 1887.

WOOL-GROWERS' ASSOCIATION.—Winnemucca dispatch, Sept. 18: The Nevada, Eastern Oregon and Idaho Wool-growers' Association closed its annual meeting here last night. There was a large attendance and the following officers were elected: President, Thomas Nelson; Vice-President, Charles McConnell; Secretary, George Turritin; Treasurer, L. A. Blakslee.

NEW MEXICO.

FRUITS OF THE TERRITORY.—Dispatch from Albuquerque, Sept. 13: The first annual exhibition of the Southern New Mexico Association opened to-day at Las Cruces and will last three days. The principal feature is the fruit exhibit, the production alone of Southern New Mexico, which, it is claimed, is not excelled by the far-famed fruit regions of California. Word from Las Cruces states that the opening was attended by an immense crowd, far in excess of the management's expectations.

The Advancement of Science.

The American Association for the Advancement of Science, which recently met in New York, numbered 721 persons present, of whom 321 were new—the largest meeting for several years. The papers offered were 272 in number, of which 256 were read before the several sections, of which there were eight.

One of the most useful and practical papers read was by Prof. W. O. Atwater, on the "Physiological and Pecuniary Economy of Food." This paper called for nearly a whole day's discussion. He said, in substance, that the cheapest food is what furnishes nutrition at the least cost; while the most economical food is what is both cheapest and best adapted to the wants of the user. Vegetable foods are, as a rule, less costly than animal foods, but not so richly nutritive. Flour is cheaper than potatoes, because the protein in the latter is inferior and less digestible. The worst form of American wastefulness is the waste of beef, lamb, veal, fish, flour and potatoes, fruit, and other kinds of food, and this is chargeable both on the rich and the poor. People buy more than is needed, and eat more than can be digested. Much of the excess is actually thrown away. Costly materials are used where less expensive ones would do as well. False economy is practiced in buying what seems to be cheap, but is really dear. Add to this the evils of wrong selection in marketing, careless keeping, bad cooking, and unskillful using in the home, and it will be seen that the financial loss is very great. The physiological waste is still greater. More harm is done by unwise eating and drinking than can be estimated. The rich suffer both in health and in purse, but the poor suffer most of all. The food of the wage classes is large in amount and costly in kind. The German standard calls for 118 grains of nutritive ingredients *per diem*, whereas the American workman consumes from 95 to 254 grains. But, on the other hand, the latter can do more work, and his superior capacity is largely due to his better nourishment.



Things That Never Die.

The pure, the bright, the beautiful,
That stirred our hearts in youth;
The impulse of a worldless prayer,
The dream of love and truth,
The longing after something lost,
The spirit's yearning cry,
The striving after better hopes—
These things shall never die.

The timid hand stretched forth to aid,
A brother in his need;
The kindly word in grief's dark hour,
That proved a friend indeed;
The plea for mercy softly breathed,
When justice threatens nigh,
The sorrowings of a contrite heart—
These things shall never die.

Let nothing pass, for every hand
Must find some work to do;
Lose not a chance to awaken love;
Be firm and just and true;
So shall a light that cannot fade
Beam on thee from on high,
And angel voices say to thee—
"These things can never die."

—Victorian Freemason.

The Love Cure.

"Aunt Emily, that girl will be the death of me."

The speaker, who had raised himself to a sitting position to deliver the energetic protest, sank back upon a lounge with a sigh of utter exhaustion.

The room, shaded from the summer sun by window awnings, expensively furnished, and speaking of invalidism in every detail, was painfully quiet, but from an apartment not far away came the sound of a rich contralto voice, indulging in the most astounding gymnastics of which the human voice can be supposed capable; while rapid fingering upon the key-board supported the vocal acrobatic feats. What the original air might have been could hardly be surmised, in the right scales, trills, cadenzas, and flourishes with which it was embellished. Suddenly a sweeping rush of notes, a crash of chords, and the piano lid fell with a bang that startled the speech above quoted from Craig Warrington. Aunt Emily, Mrs. John Chester, a blue-eyed widow, with one idol, her nephew, sighed, as she answered:

"She is a great trial, Craig! But we must endure it for a month or two."

"Down the burn, Davy, love!" floated in the open window, and in a moment a tall, handsome girl of seventeen came up the porch steps, having made a circuit of the house from the drawing-room window.

"Dear," said Mrs. Chester, holding up a warning finger, "do try to be a little quieter; your cousin is very nervous this morning."

"The idea of a man not 24 having any nerves," said Helen Warrington, putting aside the lace curtains to step into the room. "Poor little fellow!" she added in a soothing tone, approaching the lounge, "did it want to be quiet?"

Craig flushed under the keen sarcasm of the great black eyes looking down upon his tall figure, but said, rather fretfully:

"People in rude health have no idea of the sufferings of invalids."

"I suppose it is shockingly vulgar to have no aches or pains," was the reply, "but refined laziness was never my temptation."

"My dear, sickness is not business," exclaimed Mrs. Chester.

"No—but—"

That was all; but again Craig flushed under the scrutiny of the dark eyes.

A grating of wheels upon the gravel, and a voice calling Nellie, caused Miss Warrington to dash through the open window again, and in another moment she was standing beside a buggy in which was seated an elderly gentleman.

"One more drive, Nell?" he asked.

"Wait until I get a hat, papa."

She was seated beside him a moment later, her face very grave.

"What have you been doing?" her father asked.

"Singing to keep from crying; it is so hard to let you go."

"I know it, Nell; but it is my duty; your poor aunt is certainly alone in Nice, and some one must go to her. I will return as soon as possible. In the meantime this is a pleasant home."

"Pleasant!" the girl cried, with an expressive grimace. "Papa, you are a doctor; tell me if my cousin Craig is really sick."

"Yes, and no."

"I thought as much."

"He is certainly delicate, and both his parents died very young. But he pets his ailments till from dwarfs they become giants. If Craig were a poor man he would probably overcome all his weaknesses. As a rich man, he will probably die in a few years, of sheer want

of exercise and purpose. He is a dyspeptic from lying about on beds and lounges instead of walking and riding. He takes cold by keeping himself ever in an artificial atmosphere."

"And he has nerves," said Nellie contemptuously.

"Unfortunately he has, keenly sensitive ones," was the grave reply, "with only self-indulgence to foster all their vagaries. Understand me, Nell, your cousin does suffer more than you can realize, and he will suffer more and more as he encourages his troubles."

"Wants shaking up?"

"Exactly, mentally and physically."

"One thing is certain," said Nell; "either he or I will die before you return. I feel smothered every time I go into the sitting-room, and he groans every time I raise my voice above a whisper. It is too bad, papa, to see him so. I think he is the very handsomest man I ever saw, and he converses well, too."

"A fine fellow," the doctor replied, with a quizzical look Nellieward, but unobserved; "but I want to talk about you, now. While I am gone—"

And the doctor began a long string of directions for this, his only child, he was leaving for the first time in her life. It was bitter work for both, but they had made duty and self-sacrifice watchwords for so long, and there was no hesitation when these called for separation. Dr. Warrington's sister, widowed at Nice, was ill, and her brother had been summoned to bring her home. In the time of his absence Mrs. Chester had consented to give Nellie a home.

It roused Craig Warrington's chivalry the following morning to see the still, white face Helen turned from the last look at the carriage taking her father to the depot to start for New York. For a moment Mrs. Chester thought the girl would faint, but she rallied, saying with a dreary smile:

"We were never separated before. But I promised papa not to fret. But he lets me help him. When I left school a year ago, he had teachers for music and language come to the house for two hours every day. The rest of the time I work for papa. I have a ward in the children's hospital under my care, and I sew for the patients, and keep the laboratory of that ward in order."

"Keep it in order?" questioned Mrs. Chester.

"See that the medicine bottles are always filled, bandages rolled in the drawers, lint scraped, sticking plasters ready, the instruments at hand, and everything in order for instant use. In case of an accident, life may hang on one second for promptness or delay. Papa has taught me how to act in emergencies before physicians or surgeons can be summoned."

"A female doctor," said Craig, with a suppressed sneer in his tone.

"No, Cousin Craig; but, I hope, an efficient nurse. I have no desire to step out of woman's true sphere, or to usurp any of the duties and privileges of a man; but I try to do faithfully such duty as lies under my hand. We are very rich, as you know, and papa is training me to fill a noble, useful place in the world as far as I can."

"Forgive me," said Craig, frankly; "I was rude."

Helen bowed gravely, and walked out of the room to visit one or two of the village patients her father had left under her care. And Craig half pettishly wondered why her words had left such a sting. He was rich, too; but what human being was the better for any noble use of his wealth? His home was luxurious, and the most elaborate of invalid devices were arranged in his bedroom and sitting-room, but he could find no comfort that morning. His easy-chair might have been full of thorns for any ease he found there; his novel had lost its interest, and his nap was an impossibility.

"Craig!" his aunt cried, aghast, half an hour later, "you are surely not going out in the broiling sun?"

"Only for a walk to the village."

"But you can send Tom for anything you want."

"I will not walk far."

The sun was hot, and Craig was not strong, in spite of his tall figure and broad chest. Very soon he felt that he must either sit down or fall down, and, very pale, he entered a little porch and sat upon a seat there. When the first dizzy sensation was over, he heard a familiar voice on the other side of the window beside which he sat.

"Remember," the voice said—and Craig wondered at its low, sweet tone—"you are to make no exertion for the present. I have engaged Mrs. Riley to come here and do all the work and care for you. When you are quite strong again I will see that you have sewing to do."

"God bless you, miss! Your father and yourself are the true Christians!"

A rustle at the door, and Craig saw Nellie looking at him with such utter astonishment that her face was actually ludicrous.

"I came here to escort you home," he said, "and the heat was too much for me."

He was still deadly pale; but Nellie, stepping back to the house, returned with her handkerchief dripping with cold water, to lay it upon his head.

"You had better postpone your next walk till after sunset," she said, dryly; "meantime wait here and I will go for the buggy."

"No; I will walk back."

Nellie's ample sun-umbrella was a help on the return walk; but Craig fully justified his aunt's fears by the condition in which he

entered the house. Nell pelted him with sarcastic inquiries, all the time keeping cold water on his head, and otherwise taking such precautions as seemed best against injurious effects.

"You see what a useless animal I am," he said to her.

"I see that you chose a wrong time to walk after living in this cell all summer," was the reply. "This room is like a vault. I should die here."

"But you are strong."

"Very true. And I keep strong by activity and plenty of fresh air. If I took a drug shop every day I am not sure I should live a week. 'Three times a day,' she read, taking up one bottle. 'After each meal,' was on another. 'At bedtime,' a third directed. 'Do you know, Craig, my whole ward in the children's hospital would not puzzle me so much as keeping track of that table of bottles.'

"But I cannot sleep or eat without medicine."

"Poor fellow!"

Craig winced; Nell had an inflection on those two words that cut him to the quick.

He saw very little of her during the next week. Dr. Warrington, rightly judging that work was the best cure for loneliness, had hunted up a few cases during his week's stay in the village where Nell could minister to the sufferings caused by overwork and poverty, and Nell, missing her daily labors in the hospital, entered heart and soul into the field of duty. The first cases led to others, and home hours were taken up with sewing for some of the poorest of the children.

But in the intervals of work Nell took a mischievous delight in upsetting Craig's nervous system. She sang only her most dashing bravuras at the hours of noonday repose. She stole bottles of tonic and filled them with molasses and water. She made bread pills and put them upon the tray of dainty food especially prepared for the patient's delicate appetite. She put red pepper in the eau-de-cologne, pins in the lounge pillows, and paste on the afghan. She roused Craig to energy, if only to protest that she was the plague of his life.

He tried to save his conscience by offering Nell money for the proteges, and she told him brusquely that she had all she wanted.

Letters from Nice informed Nellie that her aunt was far too ill to return home, and after two months' death released her; and Dr. Warrington, being in the city once more, sent for his daughter.

A sudden dismay seized Craig. For the first time he realized how much of sunshine Nell would carry with her. He studied it well, and, to his cousin's unbounded astonishment, made her an offer of marriage.

"Thank you," she said, shortly. "I do not fancy home hospitals." Then, seeing the pained face, she added more gently: "When I marry, Craig, my husband will be a man doing a man's work, not a miserable hypochondriac, whining out his life upon a sofa."

It was caustic medicine, and Craig rejected it at first, but as the days wore on, the sting, ranking deeper, touched chords of conscience, and Craig Warrington roused himself to self-communing that was bitter but wholesome. It was not easy to cast off habits that were lifelong, fostered by some actual surgery, encouraged by his aunt, and most assuredly not discouraged by the village physician drawing a yearly income therefrom.

Nell's astonishment reached a climax at the new year, when Craig Warrington walked into the room where her father was giving her a lesson in practical chemistry.

"Uncle Rolf," Craig said, "Nell objects to home hospitals, but I have come to you professionally."

"My dear boy, what can I do for you? Look out, Nell; if you mix those acids we will have an explosion."

"To avert which calamity I will retire while Craig tells you his new ailments. Poor fellow!"

She flashed away, and Craig, looking after her, said:

"Uncle Rolf, I love Nellie!"

"Dear me! I thought she tormented you to the verge of insanity."

"So she does. Nevertheless I want her for my wife. She objects to nerves, so I have come to get rid of mine. Seriously, Uncle Rolf, I want you to take me for your patient, and see if there is stuff in me for a man useful and honorable, a man in short, that you will not reject for a son-in-law if Nell will have me."

"With all my heart!"

Nell was saucy and sarcastic when Dr. Warrington told her Craig was to be their guest, and yet the invalid knew that she gave him sweetest encouragement in a thousand ways. It was a hard task to follow Dr. Warrington's rule, and Craig might have often fainted by the way only Nellie was there to see, to rouse him by her wit, or by her gentleness to help him on.

With physical strength came a mental health, a desire to be up and doing in the world's work. Wealth, seen through this healthier medicine, was ennobled as a means of usefulness, and even labor became honorable where there was good to be wrought out.

It aroused Nell's respect first to see how selfishness was trodden down, how actual physical pain and weakness were conquered by resolution. And where Nell's respect was given, her heart followed, till she bent her proud, saucy head and owned her master.

"But if I marry you," said she, half laughing, "I may be the death of you as you feared."

"Not now; it will kill or cure; and I think I am cured."

And Dr. Warrington finds in his life works of charity and usefulness an active helper not only in the child his love trained to the duty, but in Craig, his son-in-law.

The Old Home Revisited.

A sharp-nosed, poverty-stricken "tender-foot" from a worn-out "red hillside" in an Eastern State, concluded a few years ago to "go out West" and try his fortune.

He came to Los Angeles, got thawed out in our golden sunlight, fattened on our "grapes of Eschol," amassed a fortune by investing in "gilt-edge real estate," had his "youth renewed like the eagle's" by quaffing of our perennial fountains of health, and then, being of those who would be discontented in heaven, concluded that he had had enough of California—he was going back to "the States," where the people took some comfort in living, etc.

He girded up his loins and went back.

He went in July, in order that he might be there "to smell the new-mown hay," etc. He smelled it.

He took in its fragrance by mouthfuls as he fled, pursued by a hoarse-voiced, red-eyed, slaving, 50-pound, "bedbug-crazy" dog that met him at the gate of the old familiar homestead.

As he sat in a stunted orabapple tree moping his brow and waiting for the neighbors to come and shoot the dog, he already began to think of Los Angeles, where there are no mad dogs.

The next day he went out "to live his boyish days over again by tossing the fragrant clover," etc.

A sunstroke and a race with a mad dog in two days. His thoughts relative to Los Angeles grew sorer and more serious.

The next day "a good, old-fashioned July thunder-storm" came to visit "the wanderer from the wild West." When it had taken its departure, with a little display of electrical pyrotechnics, for his especial benefit, that set the barn on fire, he went out to see "how Nature looked refreshed," etc. The hailstones went about six to the pound.

As he looked at the remains of the apple orchard he could not help thinking the apple crop would be light this fall. That night he laid awake and thunk, almost lovingly, of Los Angeles.

About a week later the grasshoppers made him a call. They did not take "the whole earth," but were contented with everything that grew upon its surface.

Then a cyclone visited the returned prodigal. It left nothing of "the dear old spot" but the bottom of the well and the cellar.

In the latter place the prodigal had retired to muse when he saw the wreck of a neighboring town whirling through the air to visit him.

But he swore he would stay until "Indian summer" anyhow, and enjoy "the sad and melancholy days of October." He staid until its close.

It closed unexpectedly. He retired one evening lulled and soothed by the poetic influences of the time and place.

He awoke to find both feet frozen and the thermometer 30° below zero. It was only one of the refreshing "changes of season."

In regard to Los Angeles, his thinking was now about 100 pounds to the square inch.

By great care he saved his feet, and as soon as the doctors would allow him to draw on his boots, he seized his overcoat and gripsack and started for the nearest station. He bought a through ticket to Los Angeles, and as the train whirled him away from "the beloved scenes of his boyhood" he remarked feelingly that "he should never see them again except in fancy."

He did not weep, either. In fact, the conductor says he swore.

That man now lives in Los Angeles. "His name is Legion." Beware how you mention to him a return to "the States" to live once more "amid the scenes of his boyhood," etc. He has been there.—Los Angeles Times.

A WELCOME FRAGRANCE.—It is prettily told in the current number of *Vick's Magazine*, how a party of Eastern friends, last spring, reached Alhambra at midnight, having been delayed several hours by an accident on the desert. It was a dark night, and as they walked up Garfield avenue, the main thoroughfare from the station, they were unable to distinguish their surroundings in this new, strange land. They were plodding along after their guide to the hotel, not knowing whether they were in the midst of sagebrush and cactus or palms and olives, when a wave of overwhelming sweetness came over them, and one lady cried, intuitively, "Orange blossoms! M—m!" And the others responded, "Yes, it must be! M—m—m!" And during the rest of that fragrant midnight walk the fatigue of travel was forgotten, and speculation ran rife as to the size and appearance of these wonderful trees, so near to one sense and so far from another.

YOUNG HOUSEWIFE.—"What miserable little eggs again! You really must tell them, Jane, to let the hens sit on them a little longer."

YOUNG FOLKS' COLUMN.

Nellie's Queer Idea.

(Written for the RURAL PRESS by O. B. SEEVER.)

Wee Nellie, with her dolls at play,
Was in the nursery one day,
Trying to teach them how to spell,
When ting-a-ling! pealed the door bell.

Straight to the window ran Miss Nell,
Throwing the dollies down pell-mell,
When, looking out, who should she see
But sister Emma's Mr. Lee.

A puzzling theme had vexed her brain
For many weeks; now came again
To bother her, and this, she thought,
The time to have the problem wrought.

So, hurrying down the stairs, she ran
Into the parlor, where the man
Greeted her with: "My little pet,
Your eyes are lovely—black as jet."

Then in came sister Emma, when,
The caller, like all other men,
Left little Nellie, and a flood
Of nonsense into Em's ears poured.

But Nell was not to be thus snubbed,
And climbing in his lap, she rubbed
Her fingers 'gainst his diamond quick,
And said in wonder, "It don't stick."

"Of course it don't," said Mr. Lee,
And then, the idea all at sea,
"You foolish child, why should you think
That diamonds stick?" (This with a wink

To sister Em.) Then Nell replied,
In accents grave and dignified,
Without a bit of mirth or haste:

"Why, Emma said your pin was *paste*!"

San Francisco, Sept., 1887.

A Day and What Came of it.

(Written for the RURAL PRESS by DAISY CAMPBELL.)

They were only two little Irish girls with shabby clothes, and barefooted, coming home from the great public school in East Haddon, one lovely day in June. Yet underneath rags there may be heartache, and an Irish heart can be as quick to feel unkindness as one of American nationality.

"Sure'n I wouldn't care at all if it was something we could help, but whin it isn't—" here Mary O'Reilly, the elder sister, stopped short.

"I hate 'em all," said Maggie, the younger, her black eyes flashing. "I wish to goodness we could lord it over 'em all once."

"We'd be as bad as any of 'em thin, Maggie, cushla," Mary answered, smiling through her tears. "It's just no disgrace to wear poor clothes whin you can't help it, and we must go to-morrow in the clothes we've got."

"I won't go and be laughed at," cried Maggie passionately. "I'll run away."

"Ah, no you won't, now, and make the mother feel so bad when she has so little to please her," Mary said coaxingly.

"Oh, why does the father drink? Why should we have all the troubles, and those dreadful girls have everything?" asked the younger girl, her bosom heaving with all the thoughts in her troubled heart.

"Well, we have 'em and we've got to bear 'em, and the only way is not to mind 'em, and have all the fun we can," Mary said with unconscious philosophy. "Come, Maggie, let's run a race to the nearest tree there beyant," and off they went toward home.

They were the poorest children in one of the four large schoolhouses in Haddon, and to-morrow was to be the last day of the school year, at which time there was always an exhibition and many visitors.

At recess this particular day the girls—most of them daughters of well-to-do mechanics in East Haddon—were talking over the coming event.

"I'm to wear the loveliest dress," said a bright-faced girl. "Mamma's been nearly killing herself to finish it in time. It's a white dress trimmed with the loveliest embroidery, and Aunt Ellen sent me a blue satin sash to wear with it."

"Hoh!" said Bridget O'Connelly in great scorn, "a white dress! I'm to wear a red surah silk trimmed with lace. And what are you to wear?" she asked suddenly, turning to the two O'Reilly girls.

Maggie flushed painfully and said nothing, but Mary answered gayly, "Oh, the finest dresses in the world; just wait 'till you all see them to-morrow. They'll take the shine off all the rest, but we won't be proud; and Mary's eyes twinkled merrily.

"Well, they'll be a sight better than any you've had since I've known you," said another girl, suddenly.

"Say, why do you girls go barefooted?" asked Kate Dunn, while the rest giggled.

Maggie opened her lips for an angry reply, when Mary answered quickly: "Sure'n it's coolin' to the blood on a warm day, and what's the use in botherin' with leather?"

There were several other slighting remarks, interrupted by the great bell calling them to school

once more. And this was what sent these two to their miserable home with sore hearts that bright June day. Maggie felt the taunts more keenly than her sister, but Mary felt them for Maggie. The elder sister had always shielded and protected the younger ever since she could remember. She inherited her happy, easy disposition, as well as her sense of the ludicrous and Irish humor, from her mother, who, poor woman! had need of it all to carry her through the trials which had fallen to her lot.

In Ireland, many years ago, Nora O'Connor was a pretty, gay girl with well-to-do parents, and singing and laughing from morning till night. Then she met handsome, dissipated Tim O'Reilly, and lost her heart immediately—poor Nora! In spite of the opposition of friends and family, she not only married him, but followed him to America. Her father gave her money enough to buy a nice little home on this side the ocean, and household effects for her marriage portion. For awhile all went well, then—it was during the war—Tim joined the army and took to drinking hard again. They were twice helped by well-to-do relatives West, but down they went from bad to worse, till now they lived in a miserable place, and had hard work to keep from starving, with a growing family to feed and clothe. In the meantime Nora's parents had died and she never would hint to her home folks how ill she had fared, partly from pride and partly from loyalty to Tim. Mary, the eldest child, was bright in her studies at school, and Nora was determined to keep her there as long as possible. She went out washing and house-cleaning, worked like a slave, yet through it all kept her sunny disposition, and, better than all, her firm faith in God.

The next morning Mary and Maggie started off for the exhibition. Nora had stayed up late the night before to laundry their dark calico dresses. Their hair, dark and abundant, was neatly braided and tied with bits of blue ribbon taken from an old hat. But shoes could not be bought. Mary had lain awake nights trying to think how Maggie could have a pair, but even her quick wit could not conjure a way out of such a difficulty.

Off they went, and Nora, as she watched them, said with motherly pride: "Now, where's a prettier face than my Maggie, and a quicker, smarter girl than Mamie?"

But Maggie's pretty eyes filled with tears as they left their mother far behind. "How I wish it was over!" she sighed.

"Ah, now, never mind them girls; let's play we're the queen's daughters in satin and velvet," said Mary; but her heart belied her words this time, for she dreaded the ordeal, too.

The superintendent, however, was not so blind as he seemed. He saw and heard more than the children imagined, and he and Miss Ryan, the teacher, determined to do what they could at the last moment to make their lot easier.

Mary was to take part in the second piece, and personate an Irish peasant girl. She was a born actor and threw herself into the character with all her heart, and kept the many visitors convulsed with laughter. She stood well in her studies, and the superintendent brought her out as much as possible.

Maggie was but an ordinary scholar, but she had a sweet, expressive voice. Miss Ryan whispered to her to sing a duet with Mary the sisters had sung before. Maggie's heart beat fast at thought of getting up before so many in her plain dress and bare feet, but Mary whispered words of cheer, and when they were on the platform Maggie's fright gradually left her, and she sang the last verse with all her heart. The applause was so great that Miss Ryan whispered to Maggie to stay and sing a little ballad she knew. The air was simple, but full of pathos, which brought tears to many eyes.

There was considerable interest in the two little girls, and after the exercises were over a tall, handsome lady stepped up to the superintendent and questioned him about them.

"Well," she said decisively, "this is what I'm to do with my money." Then she explained to the interested man before her that she had set apart a sum of money for a thank-offering for her only daughter's recovery from a severe illness, to be used in educating and clothing some deserving girl. "And," she concluded, "Mary O'Reilly is the girl to have it."

"And I, with the teachers in the building, have decided to help Maggie through the public schools with books and clothes."

"And sure'n Mamie, the dear Christ sint the help to you gyrls, whin me faith was most gone; for where the money was comin' from to let you go next term to school I didn't know. I don't ask for myself—I'm reapin' the fruits of my own willfulness; but for you and little Maggie I wanted some of the brightness of heaven." This was what Nora said when Miss Ryan had brought the good news to Mary.

"And it's meself that'll be prayin' night and morning for blessings on the dear lady's head, and the rest for helpin' us," Mary said to Maggie as they lay on their straw bed that night looking at the clear, starry sky.

"To think that we'll be dressed loike other folks at last," said the younger sister. "I'm sorry, Mamie, I got so mad," she added in a subdued voice, and in a few moments both little girls were fast asleep.

THE foolish virgins in the Scriptures came with no oil in their lamps. Now she comes with a four-gallon can of kerosene to pour on the kitchen fire, and her funeral expenses are added to the cost of the oil.—*Ex.*

GOOD HEALTH.

Use of Toilet-Soap.

The opinion that such a necessary article as soap for the toilet one cannot use too much, says Hester M. Poole in *Good Housekeeping*, is an opinion which late researches in science disprove. The attraction of the alkali in it for the oil of the skin, as well as its unclean accumulations, constitutes its cleansing property. Out of the 7,000,000 pores through which nearly two pounds of poisonous exhalation daily pass from the adult, come enough materials in a short time to produce fatal and filthy diseases. An eminent physician has declared that, "if the skin be moderately active, three or four days suffice to form a layer which may be compared to a thin coating of varnish or sizing." As this accumulation increases and decomposition follows, it is not necessary to describe the result. What agency but soap can remove it?

Many good authorities declare that water alone is sufficient, except at rare intervals. There are oil glands as well as excretory ducts, and for no idle purpose has nature produced these tiny human oil wells. Inunction, or the external use of oil, has a recognized place among the prescriptions of some famous modern physicians, who in this way seek to restore the necessary property of which the body has been deprived by the excessive use of soap or by disease. They claim that it enables the patient to resist cold, that its nutritive qualities convey heat to those organs which require it, that it gives a sense of exhilarating freshness, and that it is not only soothing in cases of nervousness and depression, but is capable of strengthening weak lungs. For this purpose almond oil, coconut, olive oil or vaseline are daily applied by the aid of vigorous rubbing. To all such treatment, and in most cases where inunction is not required, the daily application of soap is injurious.

"What uncleanly habits!" some one exclaims. Not so. Plenty of soft water, a coarse wash-rag, hand friction and a Turkish towel, with soap applied at rare intervals, and the skin should retain the delicate smoothness of an infant. Those milk baths indulged in by the ancient Roman emperors and empresses owed their emollient properties to the oil contained in the milk. Every old nurse knows, too, that weakly children are sometimes injured by too frequent ablutions. Dry rubbing is often the safest opiate for a nervous little one, answering many of the purposes of soap.

An eminent physician and scientist lately told me that he seldom used soap in his daily bath. "It makes the skin dry, hard and harsh, and renders me much more liable to take cold through any changes of the weather," said he. "At the same time, no rule can be given for the use of soap. Some persons secrete oil much more readily than others, and to such soap is more of a necessity," and he spoke much upon the desirability of using a pure soap or none at all.

Health in California.

Southern California is not the only part of the State which is noted for the health-producing influences of its climate. Dr. Tyrrell of the State Board of Health well observes in his August report, that "if reports of prevailing diseases are to be taken as fair evidence of the sanitary condition of a State, then California must be considered just now the freest from disease of any State in the Union. Nearly 100 different localities have been heard from, comprising towns and cities in every county, and not one announces that any serious disease is prevailing."

The total mortality for August in 70 localities outside of San Francisco, which are estimated to contain a population of 362,500, was 372, a trifle over one in the thousand. This was in what is usually one of the most unhealthy months of the year. Moreover, of the deaths reported nearly one-sixth were from consumption—a disease rarely contracted here. Nearly all these cases were of those who had come here with the disease firmly implanted in their systems, hoping to prolong their lives under the genial climate of California.

Next in fatality come diarrhea and dysentery—diseases almost always traceable to irregularities and for which the climate is in no way responsible.

The next in order is diphtheria, which, unlike this disease in the East, is never epidemic here. In this city last month there were 61 cases. The difficulty with diphtheria in a city like San Francisco is to isolate the cases so as to prevent the spread of the disease. It is now well established that diphtheria and membranous croup, which are substantially one and the same disease, is the most contagious of all disease, and is communicated by proximity and even by contact with the clothing of a patient. In families where it is impossible to isolate the patient, or where from ignorance of the laws of health he is surrounded by visitors or relatives, the odds are always in favor of the spread of the disease. Hence it is generally more destructive in crowded parts of cities than elsewhere, and hence, to some extent, the prevailing error with regard to its necessary connection with defective sewers.

DOMESTIC ECONOMY.

STEWED MACARONI.—Half a pound of "pipe" or "straw" macaroni, one cup of milk, one teaspoonful of minced onion, one tablespoonful of butter, half a cupful of cheese, pepper and salt to taste, bit of soda in the milk. Break the macaroni into short pieces, and cook about 20 minutes in boiling water, salted. Meanwhile heat the milk, dropping in a tiny pinch of soda with the onion, to the scalding point. Strain out the onion, drain the water from the macaroni, and put the milk into a saucepan. Stir in the butter, cheese, pepper and salt, and finally the macaroni. Cook three minutes and turn into a deep dish.

CUSTARD EGGS.—Put the washed eggs in a saucepan of cold water and let them just come to a boil; then take them up. Or, lay them in a hot tin pail, cover them with boiling water, put the top on the pail and leave them on the kitchen table for four minutes. Drain off the water, pour on more boiling water, and replace the top. Wrap a hot towel about the pail and leave it four minutes before dishing the eggs. They will be like a soft custard throughout, and more digestible than if cooked in any other way.

FRESH MACKEREL.—Clean the fish, scald a bunch of herbs and chop them fine, and put them with one ounce of butter and three tablespoonfuls of soup stock into a stew-pan. Lay in the mackerel and simmer gently for 10 minutes. Lift them out upon a hot dish; dredge a little flour and add salt, cayenne, a little lemon juice, and finally two tablespoonfuls of cream; let these just boil, and pour over the fish.

HOMINY CROQUETTES.—To one quart of boiling water add a teaspoonful of salt; stir in gradually a heaping half-pint of the finest hominy; boil three-quarters of an hour, and put it on the back of the range, where it will remain hot an hour longer; then put in a large bowl and add the beaten yolks of two eggs, mix it thoroughly, and when cold shape into cones; dip the cones in beaten egg, roll in crumbs, and fry in boiling fat.

POTATO FRITTERS.—Boil and peel six large potatoes or a dozen smaller ones; mash them well and add four well-beaten eggs, a little cream or milk, chopped parsley, chives, salt and pepper, and mix the whole together. Raise on the end of a knife about a teaspoonful of this paste, and drop it into a pan of boiling lard or butter, when the paste will swell and form a light, round fritter.

CORN BREAD.—Turn boiling water upon four quarts of meal and stir until it is all scalded, but not very moist. Then add one and a half quarts of sour milk or buttermilk, two teaspoonfuls of soda, two cupfuls of sugar, and flour to make it as stiff as can be stirred. Bake in a six-quart pan in a moderate oven for two hours and a half.

TONGUE CHEESE.—Take one beef tongue, two calves' livers, three pounds of salt pork, and boil until thoroughly cooked. Mince together very fine, season to taste with spices, press the mass into a pan and allow to get cold. Slice thin and serve upon a napkin in a lunch dish.

FRIED APPLES.—Make a batter of two eggs, a pinch of salt, a cup of milk, and six tablespoonfuls of flour. Slice, pare, and core tart apples as thin as Saratoga potatoes. Dip them in the batter and fry. Eat with powdered sugar.

FRIED SALT PORK.—Cut as many slices as will be required for breakfast, the evening before, and soak till morning in sweet milk and water. Then rinse till the water is clean, and fry. For a change it may be rolled in cornmeal and then fried.

JELLY CUSTARD PIE.—Four eggs, whites beaten separately, one cup of sugar, two tablespoonfuls of butter; beat well; add one cup nearly full of jelly; last thing add the whites of the eggs; bake on thin pastry.

GINGER CAKE.—One cup of molasses, one cup sugar, two tablespoonfuls black pepper, two tablespoonfuls ginger, two of cinnamon, one cup butter, one-third cup sour milk, five cups flour, one teaspoonful soda.

GRAHAM GEMS.—One quart of buttermilk, one teaspoonful of soda, one teaspoonful of salt, Graham flour enough to make a stiff batter. Bake in gem pans hot and well greased, in a hot oven. Try it.

WHITE CAKE.—Whites of six eggs, two cups sugar, three cups flour, one cup sweet milk, three-fourths cup butter, two teaspoonfuls cream tartar, one teaspoonful soda.

SUGAR COOKIES.—Two cups of sugar, one cup of butter, one-half cup of sweet milk, four eggs, three teaspoonfuls of baking powder; flavor with nutmeg.

CORNSTARCH CUSTARD.—Put a pint of milk in a frying-pan, let it come to the boiling point, then add a pinch of salt and two tablespoonfuls of cornstarch. Serve with sugar and cream.

SUGAR COOKIES.—One cup butter, two cups of sugar and three eggs. Flour enough to make a soft dough. Flavor with cinnamon or nutmeg and bake in a moderate oven.

DOUGHNUTS.—One cup sugar, one heaping tablespoonful butter, one egg, one cup sweet milk, half a nutmeg, two teaspoonfuls baking powder, one quart flour.

PICKLED EGGS.—Boil hard and put into cold water; when cool remove the shells; stick cloves into them and put in cold vinegar.



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See Advertising Columns.

The Week.

While the great displays of California's industries, agricultural, mechanical and ornamental, have been open and viewed by throngs of visitors at the capital and the metropolis, the district fairs have been taking their week's recess since our last issue.

The pilgrims from the Golden Gate to the G. A. R. Encampment at St. Louis are rolling eastward, accompanied by consignments of choice fruit and other products there to be displayed to excite still further interest in California, and aid, no doubt, in swelling the boom-tide yet higher.

The raisin-makers are now busy in various portions of the State; and the light showers, reported from Visalia as having fallen there about this Wednesday noon, and predicted by the Signal Office as likely to fall to-night in the southern counties, can hardly be too light to please the Muscat-curers.

At a special meeting of the Board of Trade at Los Angeles, resolutions were adopted favoring the project of a standard gauge railroad from Salt Lake City to Los Angeles, and pledging the support of the board in carrying out the plans proposed by the projectors at Salt Lake.

It is expected that the whole area burned over at Marysville will be speedily covered with new structures much better in most instances than those destroyed.

Forest Fires—Their Causes and Prevention.

As the season is upon us when the danger of forest fires is imminent, a caution to those most apt to cause such fires is in order. From this time on till the advent of the fall rains, the woods, the open land and the cultivated fields everywhere are dry as tinder. A spark now communicated to the stubble, the grass, the leaves, the bark, limbs, chips or other debris caused by the wood-chopper, the logger or the carbonaro, and a fire is started which it may be impossible to check until much valuable property is destroyed.

These conflagrations are generally caused by carelessness. To a partially burned match or the stump of a cigar thrown away by a smoker; the camp-fire of a traveling emigrant, a tramp, prospector or hunter left smoldering, or to some other heedless act, they are in most cases chargeable.

Property to the value of millions is thus destroyed every year, this property consisting mainly of growing timber, sawlogs, lumber, firewood, sawmills and fences; sometimes barns, houses and bridges are consumed. Occasionally, as happened last year in Shasta county, towns and costly reduction-works are threatened by the flames, from which they are saved only by the most strenuous exertions. In the mining districts of the State many quartz-mills, flumes and even dams have been burnt up. Frequently these fires, getting beyond control, sweep over vast areas before they are checked by running streams, deep, rocky canyons or other natural barriers to their further spread. Where this occurs, the whole country is devastated, everything in their track being destroyed save only the tall live timber, the dead trees being devoured and often creating so fierce a heat that the largest green trees standing near are killed. The saplings and trees of smaller growth, the chaparral, the wild grasses, are all licked up, the larger trees being killed and charred, but not always consumed, and thus converted into combustible material to help along the next forest cremation.

When these fires break out on the higher mountains, or in other unpeopled regions where most of the land still belongs to the U. S. Government, there being no one interested to stay their progress, they run till they exhaust their stock of material, or are stopped by the interposition of deep gorges, rocky heights, snow-fields, barren sage lands, or the like. The losses, here, however great, cause individuals but small concern. This being the case, it would seem that more effectual measures than any yet adopted should be taken, both by the local and the general Government, to prevent such frequent recurrence of these desolating disasters, an end that can, of course, be reached only through legislative enactments.

Among other remedial measures the Forestry Commission has suggested that the timber lands, which it is designed to preserve, be isolated into blocks of moderate area, separated by strips of waste land, wide enough to prevent the spread of the flames from one block to another. In selecting such preserves, topographical conditions would have to be consulted, such as the presence of rocky summits, deep ravines, and water-courses. Besides this, there ought to be appointed patrolmen or special guards to prevent fires being started, and to adopt prompt and effectual means for their suppression when started, the intentional or even careless starting of such fires being made a penal offense, punishable by both fine and imprisonment, the fine imposed to go wholly or in part to the informer.

THE MECHANICS' FAIR this year appears to be a great success financially. The receipts before it was half over amounted in round numbers to \$26,000, against \$32,000 for the entire run of last season. Now that the State Fair is over, we hope to pay more attention to the great and diversified show in this city.

NEARLY 10,000 sheep en route from the western end of the Manitoba track have passed Fort Benton, M. T., in five days. This is the first shipment by this line to St. Paul. The track is now only 25 miles of five days from the terminus.

PEACHES and prunes are a failure and the apple crop is light in the Yaquina valley, Or., this year.

The State Fair.

Notes of the Progress of a Grand Exposition.

[Editorial Correspondence.]

Since jotting down notes of the opening of the State Fair for the last issue of the RURAL, the work of setting of the exhibits has been completed, and the throngs of people who are now pouring into Sacramento from all directions find an exposition of industrial materials which is a credit to the resources, the productive power and the progress of the commonwealth. This remark is true both of the live-stock display at the park and the still-life exhibition in the pavilion. The racing interest is also active, and, as usual, claims much attention. All things are not smooth in this branch of the fair. We hear many mutterings of discontent with the way in which the rules are enforced, with the handling of the pool business, etc., but we are not able to judge of these matters and therefore refrain from comment. The people who believe things are not managed in the best way should act together and secure the enforcement of better methods. We know no other way in which it can be done.

The Live-Stock Parades.

We have given close attention to two stock parades thus far and have been much gratified at the quality of the animals shown. Probably there never was a better gathering of horses and horned stock in the State than that to be seen this year.

The display of horses reaches just around the track—a solid mile of animals, all of which can show good points, and many of them possessing singular merit and having most honorable blood in their veins. We have not room to specify many of the animals, for the collection is too great. Every owner can be proud of contributing to such a display.

Perhaps a group which attracts particular attention because of their airy grace and the striking manner in which they are ribboned for the display, is comprised of Joe Hooker and a lot of his get—yearlings of excellent growth and action, bright sorrel and wonderfully like one another.

An imported horse which has won many prizes on his native heath, but appears for the first time in the State track in California, is the Shire horse Exchange. He is a bright bay, six years old, standing over 17 hands high and weighing 2300 pounds. The lower half of his legs is covered with a long, heavy, wavy growth of hair, the hinder ones being snow white. He is owned by G. H. French of Santa Clara, and was imported last year.

Theodore Skillman of Petaluma makes a fine contribution to the display in a group of five stallions of his own importation from France, three being Norman Draft and two French Coach. They are grand animals and win much admiration. Mr. Skillman will take another start for France soon after the fair closes to secure another lot of Percherons and French Coach horses for importation to California.

Among the many others, we chanced to notice especially Mr. R. C. Sargent's four-year-old roadster stallion, a fine animal, Mr. Roberts' group of Clydesdales, Frank Cox's brace of draft stallions, one three and one four years old, and J. H. Glide's three-year-old roadster mare. Others perhaps on close attention are quite as worthy of mention. We must trust to the judges to give us a chance to name them in the premium list.

The Cattle.

There is a gathering of live-stock men from great distances to see the fair this year, and the value of exhibition to those who are breeding good stock will, no doubt, be apparent. The disposition to introduce thoroughbred sires was never greater than at present, and cattle-owners have made long journeys to inform themselves and to select animals which please them. These visitors were, no doubt, glad they came, for we heard some of them exclaiming, "Well, I never saw so many fine cattle in my life." And yet the exposition did not have exhibits from all our California herds. Quite a number were conspicuous by their absence this year. Perhaps the interest manifested this year will bring them all next year, and if so the State society will have to double its stall accommodations, which are none too great this year.

The two breeds which have the largest representation are the Shorthorns and the Holstein-

Friesians. The Shorthorns are shown by five California breeders and there is also a lot brought from Illinois to be auctioned. The California exhibitors are Robert Ashburner of San Mateo county; Wilfred Page of Sonoma county; R. J. Merkeley of Sacramento county; Peter Peterson of Colusa county, and Coleman Younger of Santa Clara county.

Mr. Peterson's herd is the largest, including 23 head, of which there are eight bulls. He has a young bull (two-year-old) at the head of his herd which weighs nearly a ton.

Wilfred Page shows 18 head, including twin heifer calves, dropped by Belle Sonoma on Sunday night. This herd has a way of recruiting itself at the fairs, as last year they took away animals not on the entry list. The herd is headed by Sonoma Second, a fine three-year-old, with Mugwump, a two-year-old, as first lieutenant.

Robert Ashburner has a good selection from his famous Baden Farm herd of milking shorthorns, which our readers know well by reputation. Mr. Ashburner has fine deep cows which win admiration from any experienced dairyman.

R. J. Merkeley's herd receives much attention. He sold during the fair a five-month bull calf, "Seymour," to M. D. Pullen of Port Townsend, W. T.

Col. Younger & Son have their usual collection of animals, with some young stock. The herd was well shown by Ed. Younger in the absence of the Colonel through illness. His commanding figure was greatly missed from the parade ground and the prize-ring.

Holstein-Friesians were shown in magnificent profusion, nearly 100 animals being on the ground. J. H. White of Lakeville, Sonoma county, came first in the stalls with his 18 head, finely formed, clean-cut color markings, and in such moderate flesh as one likes to see in dairy stock, because it shows that the food goes to the pail.

Leland Stanford's herd was next to Mr. White's. There was a fine string of over a dozen bulls of different ages, and a large collection of cows and heifers, including the famous deep milkers which were imported just before the last State Fair, and which we described at the time. Senator Stanford's herd shows liberal feeding and were in good show condition.

F. H. Burke showed 43 head, some of them brought up for the auction sale, which has already been noticed in the RURAL PRESS. Mr. Burke's stock attracts much attention, and we anticipate a good sale for his offering.

George Bement & Son have a clear field this year for their Ayrshire herd.

Henry Pierce shows a nice band of Guernseys. Mr. Pierce tells us that he has a steady demand for the Guernseys, and will import more. We are glad the value of the breed is being recognized. Mr. Pierce also has a representation from his Yerba Buena Jersey herd, beautiful animals carrying some of the very best blood of their kind.

Dr. Nichols of Sacramento shows a small band of Jerseys, including some excellent specimens.

There are two herds of Herefords, both recent arrivals to the State. The largest collection is by Vaughn & Williams, being the cattle bred by James Kay of England and brought to this country for sale. We have frequently alluded to this stock. Mr. Williams came to California about a year ago for the last State Fair. Mr. Vaughn, who is now associated with him, is a larger importer of cattle to the United States and Canada, having, it is said, imported about 1000 head per year for the last seven years.

A very nice band of Herefords is that brought from Wyoming by Geo. F. Morgan, manager of the Wyoming Hereford Association. This company won notable prizes with their Herefords over all beef breeds at the Chicago Fat Stock Show, last November. They have some of the best blood in existence, and they have brought some excellent animals to begin their trade in this State.

The County Exhibits.

Turning now from the park to the pavilion, it may be remarked that the county exhibits are now in excellent condition as to style and completeness. True, the perishable fruit begins to break down and the plates have to be replenished, but otherwise the displays are in permanent condition.

(Concluded on page 253.)

The California Sahara.

Having reference to its meteorology, that section of the United States lying west of the Rocky mountains may be characterized as humid, sub-humid, and arid. While Oregon and Washington Territory belong distinctly to the humid, the most of California is referable to the sub-humid district; Nevada, Utah, and the other Territories lying west of the great central Cordillera constituting the region of marked aridity, being that in which, save in a few spots, the cereal crops cannot be matured without irrigation. These exceptional spots, which are of limited extent, consist of narrow bottoms along the rivers and sloughs, or moist lands situate on the margins of the sinks and lakes. The arid portions of California consist of the large area of barren lands occupying the south-eastern part of the State and of the strip of country lying east of the Sierra Nevada, which includes the counties of Modoc, Lassen, Alpine, Mono and Inyo.

These barren lands, because of their lower altitude and their position in the isothermal belt, possess a climate wholly unlike that which obtains in other sections of the arid region, the temperature here being almost tropical throughout the summer and mild and equable the rest of the year; whereas, the summers elsewhere in these realms of drouth, though warm, are short, the winters that intervene being of great length and almost Arctic severity. The spring and the autumn here are very brief, the snow commencing to fall in November and sometimes earlier, and continuing till May with showers often in June and July. With such a climate the agricultural capabilities of the countries basined between the Sierra Nevada and the Rocky mountains are limited in extent as well as in the variety of their products. While the more hardy fruits and vegetables and the cereal crops can, with irrigation, be successfully cultivated, none of the semi-tropical fruits can be grown there.

But what may yet come of these warm, lowlying waste lands that occupy the south-eastern angle of California no one can tell. Looking out on this vast expanse, so desiccated and dead, the beholder might well ask, with the prophet of old, "Son of man, can these dry bones live?" Perhaps they cannot; yet this is more than we would dare affirm. We are not, in truth, bold enough to speculate on the future of these arid lands. With our past experience in this State, we will not presume to say or even guess what powers of production slumbering in the mold of these deserts, experimentation aided by science may yet quicken into life. Much of the soil here is good, having resulted, not so much from vegetable decomposition as from the disintegration of the surface rock. In some localities it is largely mixed with marine shells, for this region is supposed to have once been the bottom of an inland sea, sections of it being still depressed many feet below the present ocean level. At these points of depression occur valuable salines, some of which yield the borates of lime and soda, and others the carbonate of soda and the chloride of sodium, large quantities of these several salts being gathered here every year. In a few places the soil is impregnated to an injurious extent with alkaline constituents, but this soil, once these ingredients are eliminated by a free use of water, becomes exceptionally productive. It is likely

that gypsum, and possibly other fertilizers, might have the same effect upon it.

While there is, perhaps, as little surface water here as on any area of like extent elsewhere on the continent, an abundance of good water has been obtained at several places, and at no great depth by artesian boring. By the same method there is reason to believe water, in limited quantities at least, could be obtained almost anywhere on these deserts. Should this prove to be the case, it will go a good way toward helping on the work of their reclamation, since almost anything can be raised here with the aid of irrigation, the barrenness being due not so much to the infertility of the soil as to

perhaps, it may prove useful for making paper, which there is a chance of its doing. The mountains on these deserts do not occur in long ranges, but in detached and scattered groups of comparatively small elevation. As a consequence, they fail to catch and condense what little humidity the atmospheric currents passing over them may carry. But very little moisture ever reaches thus far inland, what comes in from the ocean being arrested by and precipitated on the Sierra Nevada, the San Bernardino and other high mountain ranges to the west. The yearly precipitation between these mountains and the Colorado river averages hardly more than four inches.

ness constitutes our agricultural elephant, the powers that be will have to look after help if they hope to ever get it off their hands.

Many years ago the general Government did give enough attention to these lands to have them surveyed or at least to order their survey; a movement necessitated by the political exigencies of the times, which, there not being enough offices to go round, required that employment should be found for the seekers after place who could not otherwise be accommodated. These applicants for public favor were of the kind that knew the master's crib, and, braying vehemently, being hungry, what better could the master do than feed them on these husks, there being no more corn in the crib. The men sent to do this work were selected with special reference to their fitness for service on these parched and arid plains, being those little addicted to the use of water as a beverage.

Burial of Gov. Bartlett.

Funeral honors to the late Washington Bartlett—the first of California's Governors to die in office—have been fittingly rendered. All day Thursday, the 15th, and up to 9:30 on the morning of Friday, the burial-day, his remains lay in state in this city, at Pioneer hall, amid elaborate and lavish floral tributes, with a guard of honor from the Third Regiment; and 20,000 people filed by to look upon the face of the dead magistrate.

Friday morning, Sept. 16th, the casket was removed to Trinity church, which was filled, and more than filled, by a packed congregation. Rev. Dr. Beers delivered an address, which was rather eulogy than sermon, and the venerable Bishop Kip read the last prayers for the dead.

Among the pall-bearers were eight ex-Governors of the State of California, namely: Burnett, Downey, Stanford, Low, Booth, Pacheco, Perkins and Stoneman.

The imposing procession included a large detachment of troops, numerous dignitaries and civic organizations. It was considerably over an hour passing a given point, and was viewed by dense assemblages along the line of march to Laurel Hill, where the body was laid to rest.

Mountain Pears.

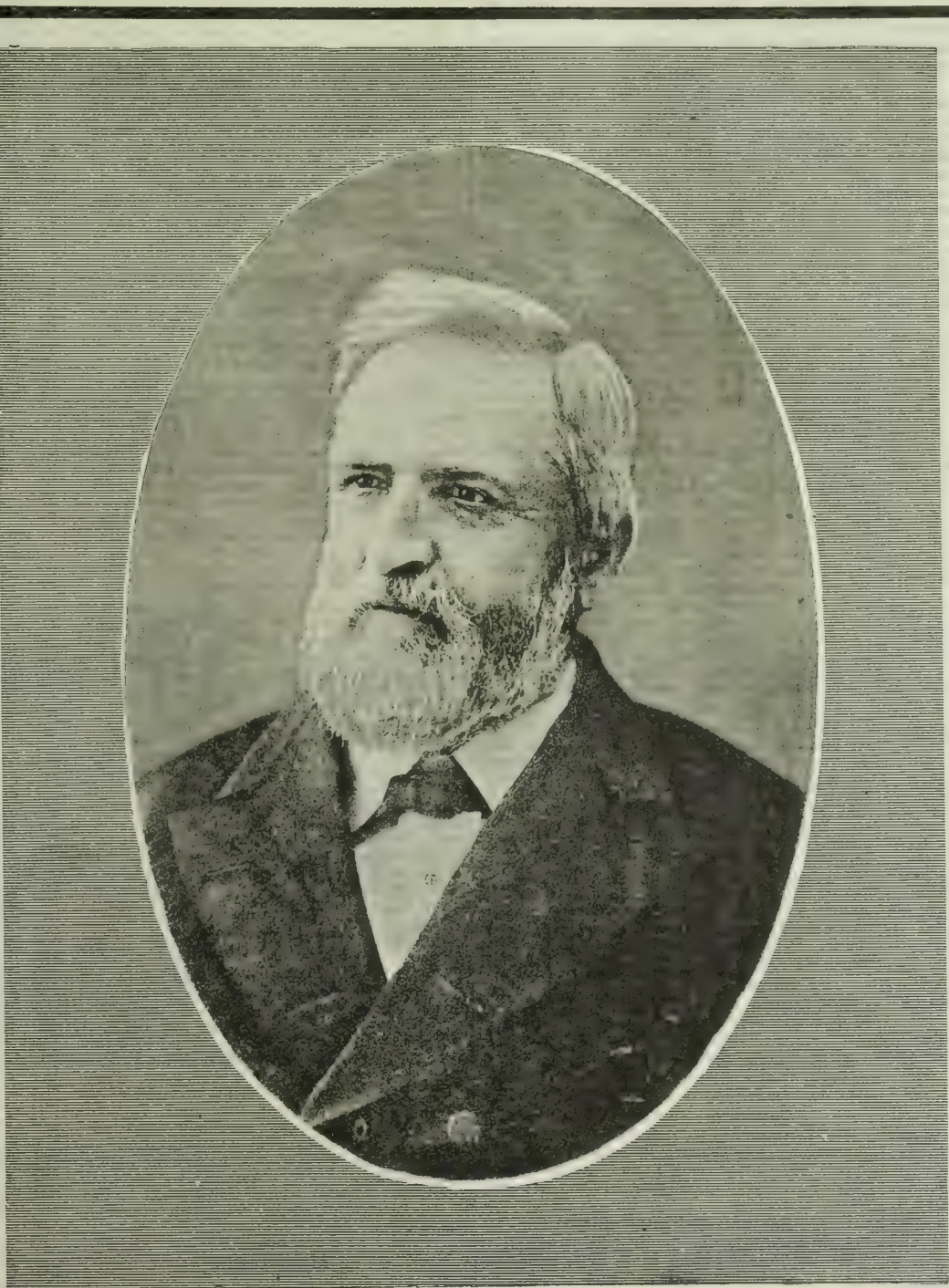
On the 9th inst. H. A. Frost of Dutch Flat wrote the RURAL PRESS:

I this day send per express a small sample box of our mountain Bartlett pears, raised on the 3400-foot level. Please set aside until mellow; then try them.

There is no boom here, but this is the home of the Bartlett pear and winter apple all the same.

We followed directions, keeping the case intact until the evening of the 15th, when we opened it and tried the contents. The box was a trifle short of 18x12x6 inches, inside measurement, and 40 pears filled it. The fruit was very handsome; several, around which we put the tape-line, showed a girth of from 10 to 10½ inches, and in the final test they proved high-flavored and meltingly delicious. The judges concur in the opinion that Placer pears are "away up" in more senses than one, and thank the donor for submitting the case for their decision.

IRON CARS.—Some hundreds of railway cars, almost wholly of steel and iron, are being built in England for Hindostan, in the expectation that they will prove less perishable in that climate than cars of wood. The time will soon come when steel and iron will be the only material aside from upholstery which will be employed in the manufacture of all first-class cars.



THE LATE GOVERNOR BARTLETT.

Photo, by Taber.

the lack of moisture. Bunch grass of several varieties grows on these "bad lands"; in some places sparsely, in others with the greatest luxuriance. They would, therefore, afford both summer and winter pasturage for an immense amount of stock, could only water enough for the support of the latter be had. The introduction of water from the Colorado on these deserts is a scheme that has long been talked of. But this water, even were the entire river brought in, would suffice to irrigate but a small portion of them; besides, doubts are entertained as to the feasibility of this scheme.

This California Sahara, while it possesses a better climate, labors under some disadvantages not common to the rest of the arid region. Elsewhere the country is traversed by long ranges of lofty mountains, which afford much water and timber. But here both are scanty, the only trees found being the mesquit and the yucca palm, growing only in a few places and there much scattered. The former makes a good fuel, but is of no account for lumber, the latter being utterly worthless, unless,

With so much good land elsewhere to be had and fit for immediate use, there is, of course, no urgent necessity for hurrying up the reclamation of this southeastern Edom. Certainly, it would be premature to attempt "booming" that section of the State just at present. But it is none too soon to begin thinking over the matter, and to be devising ways and means looking to the ultimate redemption of these barren lands. The general government, which still owns the most of these lands, ought to make provision for sinking artesian wells at eligible points upon them. It might also experiment to advantage in the direction of deep plowing, the application of fertilizers, tree-planting, etc. If only a tree or even a weed could, without much cost, be made to reach a rank and rapid growth here, the recovery of these lands would be insured, since this, besides enriching the soil, would tend to increase the amount of rainfall. What with their well-watered and timbered mountains, most other parts of the public domain are capable of taking care of themselves. But this California wilder-

THE FAIRS.

Golden Gate—First District.

The fair of the First District Agricultural Association, comprising the counties of Alameda, Contra Costa and San Francisco—otherwise called the Golden Gate Fair—has usually been held in Oakland, but this year it was decided to try the experiment of holding it at the Bay District track in San Francisco, where it came off Sept. 5th to 10th.

The early rain which fell on Sunday and Monday made the track so slippery that the opening of the races was deferred to Wednesday, but genuine agricultural interests, it is probable, suffered no loss on that account.

The show of fine cattle was considered very creditable. Of Holstein-Friesians there were J. H. White's, spoken of at some length in the RURAL of Sept. 10th, and F. H. Burke's 16 head from Menlo Park, a choice representative of whom was portrayed on our first page a month ago.

Seth Cook's Polled Angus herd, as well as his two splendid Cleveland Bay stallions, so much admired at recent fairs in Sonoma county, were here to be seen again. Small exhibits of Jerseys were made by P. C. Anderson and by Thos. Ward of Oakland. A band of Herefords was shown by Wm. Dunphy of Monterey county, and Ayrshires by Geo. Bement & Son of Redwood City. The favorite old Shorthorns were well represented from the herds of Wilfred Page of Sonoma, Seth Cook of Danville and Robert Ashburner of Baden, who divided the honors.

At the stock parade on the 8th L. Howlett, W. Behler of Petaluma, A. B. Spreckels, F. Lapham and B. E. Harris each drove a handsome team of large carriage horses. J. H. Newton headed the procession of roadsters with a pair of thoroughbred Hungarian ponies, somewhat resembling the Shetland pony in stature, but heavier limbed, dapple gray, with long white manes and tails. Robt. Ashburner took all the premiums for draft horses.

Beside their cattle, Bement & Son showed half a dozen prize Southdown sheep, and Andrew Smith of Redwood City had it all his own way with Shropshire sheep and Berkshire swine.

A large proportion of the animals on view at the Bay District track were transferred to the State Fair at Sacramento.

Petaluma—Fourth District.

Following are awards at the Fourth District (Petaluma) Fair, for products of agricultural and allied industries:

Horses.

THOROUGHBREDS.—P. Carroll took all premiums except one, viz.: J. McMillan, best 3-yr-old mare Alice T.

STANDARD TROTTERS.—Stallions—W. Page, 4-yr-old Polo, 3-yr-old Mortimer, 1-yr-old Eclectic; J. R. Rose, 2d 4-yr-old Gen. McClellan; F. W. Loeber, 2-yr-old Free Willie; J. R. Fritsch, 2d 2-yr-old McGregor. Mares—S. Sperry, 4-yr-old Debonair; A. Allen, 2d 4-yr-old Fannie Allen; I. M. Proctor, 2-yr-old Silky; W. Page, 1-yr-old Secreia.

ROADSTERS.—P. J. Shafter, stallion 3-yr-old Rustic Boy; W. Page, mares 4-yr-old Reka Patchen, 3-yr-old Patti Patchen; G. McDonald, mare 1-yr-old Alice M.

CLYDESDALES, ETC.—Stallions—Clydesdale Horse Co., 4-yr-old Morning Star, 2d 4-yr-old Sol. Gilmore; Sol. Gilmore, 2d 4-yr-old Pride of the West; W. Page, 3-yr-old Premier, F. Roberts, 2-yr-old Pointsman, Jr.; L. A. Hardin, 1-yr-old, no name; J. A. McNear, 1-yr-old Pointsman Second; Denman & McNear, colt under 12 mos. Pointsman, Jr.; R. H. Crane, 2d colt under 12 mos. Burnes. Mares—Denman & McNear, 4-yr-old Maid of the Mist, 2d 4-yr-old Blossom and 1-yr-old Belle; W. Page, 3-yr-old Dora and 2d 2-yr-old Freckle; R. H. Crane, 2-yr-old Annie; P. Hennelly, 1-yr-old Nellie Pointsman and mare colt under 12 mos., no name.

GENERAL PURPOSE.—Stallions—Seth Cook, 3-yr-old Royal Studley; John Poplin, 2d 3-yr-old Whippleton, Jr.; R. Crane, 2-yr-old Bob; G. McDonald, 1-yr-old Tom Paine; Jos. Purrington, colt under 12 mos. Grover Cleveland and 2d do. Star. Mares—L. A. Hardin, 3-yr-old Kate; Frank Roberts, 2d 3-yr-old; R. Crane, colt under 12 mos. Carrie D.; Jos. Purrington, 1-yr-old Mollie, 2d colt under 12 mos. Sallie Walker, also stallion showing best 5 colts, either sex, Alexander 2d and family.

CARRIAGE, SADDLE AND GENTLEMEN'S ROADSTERS.—Wm. Bihler, carriage team shown to carriage, Normans; J. Carter, 2d do.; F. Roberts, mare or gelding Bay Johnnie; F. Wickersham, 2d do.; Leonora; J. Yates, mares or geldings to pole, Katie & Mollie; J. R. Rose, 2d do.; Maud & Minnie, and single mare or gelding to buggy, Josephine; J. B. Hinkle, 2d do., Phoebe.

NORMANS AND OTHER FRENCH DRAFT BREEDS.—Stallions—Theo. Skillman, 4-yr-old Ernest Parroll; Sonoma Stock Breeders' Association, 2d do., Trumpette; T. Skillman, 3-yr-old Paradise; L. A. Devoto, 2-year-old Duke of Marin and 1-yr-old De Chartre; J. P. Rodheaver, stallion showing best 5 colts, either sex, Beaufort and family. Mares—P. Hennelly, 4-yr-old Queen of the Valley; Wm. Hill, 2d do., Annie, and 1-yr-old Bessie.

JACKS, JENNETS AND MULES.—J. A. Box, jack 3-yr-old Black Night; P. Mawler, jenny 3-yr-old Jenny.

Cattle.

SHORTHORNS.—W. Page took sweepstakes and all premiums except the following, viz.: I. R. Jewell, 2d bull 4 yrs. old. M. D. Hopkins, bull 2-yr-old Sharon Bell Duke; John Lynch, bull calf under 12 mos., Little Pet, Jr.

POLLED ANGUS.—Seth Cook took sweepstakes and all premiums.

HOLSTEIN.—J. H. White took sweepstakes and

all premiums except the following: E. Steiger, 2d bull 1 yr. old, Diamond Dick.

JERSEYS AND GUERNSEYS.—Bulls—Roy Bros., 4-yr-old Olimpo and 1-yr-old Romulus of Marin; Bliss Estate, 2d 4-yr-old Favorite and 3-yr-old Nantasket; Hall Bros., 2-yr-old Wildwood; P. Lawler, 2d do., Taurus of Situate; H. P. Brainerd, calf under 12 mos., Boom. Cows—Roy Bros., 4-yr-old Moorish Maid; Bliss Estate, 2-yr-old Juanita 2d; H. P. Brainerd, 1-yr-old Maggie.

AYRSHIRES.—Geo. Bement and son, all premiums and sweepstakes.

GRADED.—W. Page, cow 3 yrs. old, Ain't-She-a-Daisy; 2 yrs. old, Squeeze-me-bag; 1 yr. old, Belle of Tarweed Flat; Bliss Estate, heifer calf under 12 mos., Ustane.

Sheep and Fleeces.

SPANISH MERINO.—J. Lawler, all premiums.

SOUTH SHROPSHIRE, OXFORD AND HAMPSHIRE DOWNS.—R. H. Crane took all premiums except the following: Geo. Bement & Son, 2d ram 2 yrs. old and 2d 3 ewes 2 yrs. old.

GRADED FLEECES.—Pomona Grange, 5 fleeces combining wool.

Swine.

POLAND CHINA.—R. H. Crane, all premiums.

Poultry.

J. L. Winans, St. Brahma fowls and chicks; W. D. Freeman, 2d St. Brahma fowls, 2d Brown Leghorn fowls, Black Leghorn fowls and Houdan fowls; Mrs. Wm. Hill, 2d St. Brahma chicks, Buff Cochins fowls; P. A. Meadow, 2d Buff Cochins fowls, Buff Cochins chicks; S. H. Church, Plymouth Rock fowls, Blk Spanish fowls, Brown Leghorn fowls and chicks, Silver Spangled Hamburg fowls and 2d do. chicks; J. Blackburn, 2d Plymouth Rock fowls and 1st Wyandotte chicks. Mrs. Isabella Walker, 2d Plymouth Rock chicks, 2d Wyandotte chicks, 2d Dominique chicks, Black Spanish chicks, White Leghorn chicks, Silver Spangled Hamburg chicks and Bantam fowls; O. Elmore, Brown Red Game, Brown Red Game chicks, Duckwing Game fowls, Black-breasted Game fowls, chicks and 2 pr Toulouse geese; P. Mullally, 2d pr Black-breasted Game fowls and 2d pr Bantam fowls; R. H. Crane, 2d pr Toulouse geese.

Grain and Vegetables.

W. D. Freeman, sk Australian wheat, sk oats and shf oats; R. Crane, sk barley, shelled corn and corn on stalk; C. D. Grover, shf wheat; N. L. Wiswell, shf barley; Perival Milling Co., sk wht flour and sk buckwheat flour; P. Mullally, collection potatoes and single variety potatoes; Rollin Andrews, squashes and pie-plant; L. Vestal, onions; D. M. Winans, pumpkins; Jas. Bloom, beans and peas; C. S. Gibson, sugar beets and blood beets; T. C. Putnam, Mangel Wurtzels; Jas. Bloom, rutabagas and turnips; A. Weissand, cabbage and carrots; E. R. Charles, watermelons and muskmelons; C. S. Gibson, display of products raised by one person on one farm, and canteloupe melons.

Fruits, Nuts, Etc.

I. Parker, largest and best coll. fruits raised in one orchard, coll. pears, peaches; John Meritt, 2d coll. fruits raised in one orchard, apples, single variety apples and 6 varieties apples; Mrs. W. H. Pepper, single variety pears, coll. lemons, coll. oranges; R. Andrews, 6 varieties pears; F. F. Ennis, plums; Morris Bros., coll. grapes raised in one vineyard, foreign grapes. Calif. grapes, largest bunch grapes and coll. almonds; C. Wightman, collection English walnuts, kiln-dried fruit, sun-dried apples, 6 quinces, kiln-dried peaches, kiln-dried plums and raisins; A. H. Cassidy, sun-dried fruit, sun-dried plums, dried plums, seeded; F. F. Ennis, kiln-dried apples; DeLong, Ashby & Co., exhibit canned fruits; Mrs. J. C. Diamond, domestic canned fruits.

Butter, Cheese and Bacon.

D. S. Dickson, fresh butter; W. Page, 2d do.; E. P. Nisson, cheese; R. Crane, ham and bacon.

Wines, Etc.

G. F. Hooper, wines, red wine, white wine, brandy and olive oil; Mrs. A. H. Patty, blackberry wine, do. brandy, do. cordial.

Carriages, Saddlery, Etc.

Wm. Zartman & Co., exhibit carriages, buggies and wagons, top buggy and breaking cart; E. Hopes, two-wheeled vehicle and spring wagon; Ellsworth & Northrup, saddlery and harness; Gus. Walsh, 2d saddlery.

Agricultural Implements.

G. G. Wickson & Co., centrifugal milk separator; W. H. Worth, wine press; L. C. Byce, incubator; Bauer & Co., agricultural implements.

County Exhibits.

Pomona Grange, best display.

Plants, Bouquets, Etc.

W. A. T. Stratton, coll. trees, shrubs and flowering plants, and all other premiums except the following, viz.: Daisy Show miniature garden; Mrs. L. C. A. Hedges, cut flowers and pair vase bouquets.

Special Mention.

Stockton Agricultural Works, fanning mill; B. Carey, fruit grown on adobe land; Mrs. Dr. Burdell, citrons, oranges, etc. Healdsburg collection—M. Redding, hops; F. Cunningham, corn; J. W. Calhoun, oranges; W. P. Warren, corn.

Placerville—Eighth District.

Following are awards for products of agricultural and allied industries at the Placerville Fair:

Horses.

GRADED.—J. Knisley, stallion, 3 yrs. old; J. M. Bell, stallion and colt under 1 yr.; H. E. Barton, stallion, 2 yrs. old; G. L. Blakeley, filly under 1 yr.

HORSES OF ALL WORK.—J. M. Bell, mare; J. J. Miller, stallion.

Roadsters.

CARRIAGE HORSES.—J. I. Reed, buggy horse; W. A. Blakeley, saddle horse; J. Knisley, span buggy horse.

DRAFT HORSES.—James Askew, 1-yr-old stallion.

Cattle.

THOROUGHBRED.—Silas Brown, Durham bull; Jas. Askew, Jersey bull, 3-yr-old cow, 2-yr-old cow; Geo. Askew, bull calf, 1-yr-old cow, heifer under 1 yr.; D. H. Holdridge, Durham bull.

HERDS.—Jas. Askew.

GRADED.—W. Hendrix, 4-yr-old cow; Jas.

Askew, heifer calf; Geo. Askew, 2-yr-old cow, 1-yr-old cow.

Swine.

Jno. Fink, boar, 2 yrs. old; Jas. Gafney, boar, 1 yr. old; T. Gafney, boar, 6 mos. and Chinese sow.

Poultry.

Dr. R. W. Baum, carrier pigeons; Geo. Askew, black Leghorn, brown Leghorn, Pekin ducks, Toulouse geese and largest collection; Marco Varozza, game chickens.

Agricultural Implements.

Baker & Hamilton; Weatherwax & Culbertson.

Vehicles.

N. Wonderly, two-horse wagon and spring wagon.

Grains.

Chas. McCuen, 1/2 bu. wheat, 2d 1/2 bu. oats, 1/2 bu. sweet corn, 10 lbs. flax, do. hemp; Chas. Sibeck, flour; H. Tinney, oats; W. D. Carpenter, 2d shelled corn and rye; Geo. Blakeley, rye, barley and 2d wheat.

Vegetables.

H. L. Bryant, pepper, cucumber, purple egg plant, 2d sweet corn; J. C. Marsh, sweet corn, 2d tomatoes; Geo. Askew, bayo beans, coll. garden seeds, clover seed; I. S. Bamber, 2d Tuscarora corn; Jacob Lyon, squashes, table beets, stock beets, cabbage, 2d watermelon and muskmelon; Philip Kramp, onions, 2d cabbage, 3d potatoes; Stephen R. Tripp, potatoes and yellow muskmelon; P. Wilkinson, pumpkins.

Dairy and Farm Produce.

Jas. Askew, firkin butter; S. R. Tripp, roll butter; Geo. Askew, 2d roll and firkin butter; Mrs. P. Kramp, lard; Mrs. M. Hendrix, 2d lard.

Flowers, etc.

Jno. Waters, coll. flowers in bloom, ornamental plants and grass; Mrs. A. L. Tindall, 2d coll. flowering plants, coll. ornamental foliage, 2d cut flowers, ferns; Mrs. P. Vignaut, bouquet cut flowers; A. Vignaut, 3d coll. flowering plants.

Fruit, Nuts, etc.

GREEN.—J. Waters, blackberries and raspberries; S. Weymouth, 4th apples and 1st plums; I. S. Bamber, 2d figs, 3d appls, 1st pears, 2d peaches and 3d plums; A. S. Cook, 4th plums; J. C. Marsh, 2d nectarines, 2d plums and 1st peaches; Mrs. E. Knighton, figs; T. Fraser, 3d plums, 2d table grapes and 1st display grapes; W. B. Lower, apples; El Dorado Fruit Co., 4th peaches; J. Lyon, 4th pears and 1st nectarines; P. Kramp, 2d plums and 1st wine grapes; W. D. Carpenter, strawberries and display fruit; S. S. Tripp, 2d pears; Wm. Hendrix, 3d peaches; R. McKay, 2d apples, 2d pears, 1st plums, 1st table grapes and 2d wine grapes.

DRIED FRUIT, NUTS, ETC.—C. McCuen, sun-dried apples and plums, 2d dried berries and 1st peanuts; S. Weymouth, chestnuts; Mrs. I. S. Bamber, sun-dried pears, 2d apricots, 1st nectarines, plums, figs, blkbr's, 2d raisins and 1st s'd's raisins; P. J. Isbell, 2d kiln-dried pears, sun-dried peaches, 2d k-dr. nectarines, k-dr. pears and blackberries; A. S. Cook, k-dr. apples, pears, 2d plums, peaches, 2d prunes and figs; Mrs. E. Knighton, 2d sun-dr. plums; T. Hardie, display and quality raisins; H. Tinney, 2d sun-dr. nectarines and 2d sun-dr. plums; J. Lyon, 2d k-dr. peaches; W. D. Carpenter, k-dr. plums, apricots, 2d apples, sun-dr. nectarines, 2d sun-dr. figs, display dried fruit, sun-dr. apricots and soft shell almonds; Aug. Vignaut, 2d sun-dr. apples and pears; A. Eidinger, Eng. walnuts; Thos. Ward, 2d sun-dr. peaches; Mrs. M. Hendrix, 2d Italian chestnuts; Mrs. I. S. Bamber, fruit and prunes in glass and largest display; L. Carpenter, 2d fruit in glass.

WINES AND BRANDIES.—P. Kramp, all premiums.

J. AND J. BLAIR'S SPECIAL PREMIUMS for best display of fruit, R. McKay 1st, and J. C. Marsh 2d.

W. H. H. FELLOWS' SPECIAL PREMIUMS for best display of vegetables, J. Lyon 1st, and C. H. McCuen 2d.

SPECIAL MENTION.—Mrs. E. W. Witmer, 15 var. green beside bottled fruit; F. Veerkamp, display green fruit, oranges, watermelons, muskmelons, potatoes, etc.; C. W. Geoble, exh. fruit; T. Ward, small but excellent display green and dried fruits; J. W. Killough, exh. green and dried fruits and nuts; Mrs. M. Schluter, exh. bottled fruit, put up without heating; W. R. Strong & Co., Sac., exh. green fruit, coll. from different fruit-growers in county; H. Tinney, exh. grapes, Hungarian prunes and persimmons.

Marysville.

In addition to the premiums on live-stock, published in the RURAL PRESS last week, the following awards were made for products of agricultural and allied industries at the Marysville Fair. They are arranged alphabetically, according to the names of exhibitors:

A. F. Abboot, best apples, peaches, plums, prunes, nectarines.

C. R. Boyd, for Farmers' Union, exhibit of wheat; John Burns, cheese; J. J. Bradley, blue Japan game chickens; A. Bligh, brown Leghorns; Mrs. E. Brown, black, white crested Polish fowls.

A. J. Cumberston, sweet potatoes and watermelons; Jos. Chandon, 1st evergreen millets, Egyptian corn; Mrs. G. Crosette, pomegranates; N. D. Coombs, chestnuts on limb, 1st walnuts, Egyptian oats, 2d barley, wheat sheaf.

Mrs. Devolt, flowers and cactus, pair Brahmas.

Mrs. J. Evans, dried apples and blackberries, Japanese walnuts; G. B. Easton, 2d black Langshan fowls.

Miss Lelia Fisher, pomegranates; Mrs. C. Frye, exhibit apples, pears, peaches and prunes; Mrs. M. Farrell, China geese, bronze turkeys, black Spanish fowls, ducks.

Mrs. A. C. Gray, exhibit fruit, dried figs; A. C. Gray, gen. display, grapes; do. raisin and seedless, nuts.

G. W. Hutchins, pears, 1st apples, 1st plums, almonds, potatoes, 2d gen. exhibit; G. W. Hicks, special on peaches, plums and prunes, dried and fresh, 2d pears; T. B. Hull, gen. exhibit wheat, barley, pears, gen. display nuts, pop-corn, almonds, squashes, melons, potatoes, etc.; L. Hall, blackberries; Richard Hoskins, 1st almonds, 1st dried prunes, Hungarian prunes, Japan plums; J. Holister, best var. pears, 1st table grapes, 2d wine grapes.

W. M. Jeffers, green corn, plums, 1st 2 kinds

game fowls and blue Leghorns; Hugh Jones, 1st dried peaches, 2d dried apricots, best quinces, 2d peaches, special on peppers and canteloupe.

Mrs. R. Keck, best gen. exhibit fruits and melons, special on pears, apples, peaches and figs; R. C. Kells, gen. exhibit dried fruits, plums, peaches, nectarines, prunes and apricots; Mrs. H. A. Kells, gen. exhibit Langshan and Leghorn fowls and chicks; Mrs. Mary Karr, oranges, lemons.

J. Monger, table grapes, quinces and almonds; Mrs. Ellen Matthews, roll and crock butter, bronze turkeys; Fred Mahle, Bartlett pears, peaches; S. Marcuse, silk.

C. J. Newton, 5 samples wheat in sheaf.

J. P. Onstott, 2d apples, 1st figs, 2d grapes, 2d varieties, 1st dried figs, wine grapes.

J. H. Purkiss, prunes; Mrs. Frank Parks, 1st pomegranates; G. W. Peacock, peaches and squashes; Mrs. C. E. Putman, 2d butter.

T. Smith, 1st exhibit proper wheat; Sutter Canning and Packing Co., canned fruits; Wm. Stafford, 2d seedless grapes; Elisa Stevenson, tomato tree and pomegranates, 2d oranges; Mrs. R. Salas, pomegranates.

Geo. Thompson, table grapes, banana melons, best bunch grapes; F. Terstege, pomegranates; Mrs. Jas. Taylor, 1st carrots, 1st beets, 2d cheese, Houdan chickens; N. F. Todd, 1st Salt Lake club wheat.

B. F. Walton, Egyptian corn, wheat in ear; J. B. Wilkie, gen. exhibit almonds, walnuts and olives; Mrs. J. B. Wilkie, gen. exhibit fruit in glass, etc.; White, Cooley & Cuts, gopher trap, grain separator, hay and straw cutter.

Shasta County—Redding.

Live-Stock.

Stallions—Best 2-yr-old, S. Charles; 3-yr-old, Jas. D. Campbell; 5-yr-old, W. W. Asberry; 4-yr-old, E. R. Jones; roadsters, 1-yr-old colt, D. N. Honn; span carriage horses, J. S. P. Bass. Yearling Durham bull, C. H. Behrens; 2-yr-old Jersey bull, to months bull calf, cow, M. T. Kite; heifer calf, Geo. Groves. Poland China boar and sow, E. A. Reid. Display poultry, M. T. Kite.

Agricultural Products.

Best barrel flour, A. F. Smith; five lbs. butter, J. S. P. Bass; bushel wheat, bu. barley, six stacks corn, table beet, cabbage, pumpkins, tomatoes, potatoes, bacon, lard, Wm. Hawes; bu. beans, peas, stock beets, onions, F. W. Fish; table carrots, R. Baker; squash, W. W. Williams; watermelons, Jonathan Garner; muskmelons, M. T. Kite; cucumbers and potatoes, J. N. Logan. Special mention, best wheat (not entered for competition), W. C. Deakin; tomatoes, J. B. Campbell.

Fruits—Green.

Best display fruits of all kinds, best five named apples, disp. pears, grapes, F. W. Fish; quince, Dr. J. H. Miller; prunes, P. Seamans; plums, W. W. Morley; peaches, H. Stacker. Special mention—Gen. exhibit, J. N. Logan; apples, J. J. Wheelock; peaches, S. Armstrong; grapes and figs, Williams & Son.

Fruit—Canned, etc.

Peaches and pears, W. K. Reid; blackberries and plums, Wm. Hawes; apricots, Mrs. H. E. Parker; general display preserves, Mrs. J. N. Logan; gen. disp. canned fruits, W. K. Reid; gen. disp. dried fruit, Mrs. J. N. Logan.

Flowers.

Best display, Mrs. P. Glaszer; 2d, Mrs. J. M. Gleaves; 3d, Mrs. J. Culverhouse; bouquet, Mrs. Ed. Reid.

Special Premiums.

A variety of special premiums, which had been offered by different parties, were also awarded as follows:

Best display of farm produce, J. N. Logan; best exhibit of fruits, best display of grapes and best display raisins, F. W. Fish; best display of grain in sheaf, D. N. Honn; best display of dried fruits, J. N. Logan. Special mention, Mrs. B. Oliver, Mrs. D. N. Honn, Mrs. W. K. Reid. Best display of grain thrashed, Wm. Hawes; best display canned fruits, Mrs. W. K. Reid; best display of vegetables, J. N. Logan. Special mention, Wm. Hawes, F. W. Fish. Best display of nuts, F. W. Fish. Special mention, Mrs. E. G. Parker, Mrs. F. M. Swasey. Best display of butter, J. S. P. Bass; largest and fattest calf, Geo. Groves; largest and fattest hog, E. A. Reid; best display of wine, F. W. Fish.

PROVIDING FOR WORKMEN IN OLD AGE.—The plan of the German Government to provide for workmen in their old age will be applied at first only to industrial workmen, of which it is estimated the number is 7,251,000. The minimum pension to be allowed is 120 marks yearly, the State, employers and workmen each contributing one-third of the pension fund, which will be a tax on each individual of three marks yearly. It is estimated that a State credit of 22,000,000 marks will be required. All workmen over 50 years of age, when the bill is passed, will be excluded from its benefits.

FIFTH DISTRICT FAIR.—The San Mateo and Santa Clara County Agricultural Association for District No. 5 will hold its seventh annual exhibition at Horticultural hall in San Jose, October 10th to 15th, inclusive. The list and amount of premiums have been enlarged, great efforts are being put forth to induce people to exhibit, and a fine display is looked forward to. The person making the most meritorious exhibit is to receive a "boom medal" worth \$100.

N. Y. FIREMEN IN S. F.—Quite a large number of Veteran Firemen from N. Y. City, accompanied by Cappa's band, were visiting in this city last week. Their old-fashioned hand engine and unique uniforms awakened a good deal of interest, and considerable hospitality was extended to them.

A MORE NORTHERN CITRUS FAIR.—The Marysville folks are agitating the plan of holding a citrus fair in their pavilion next winter, wherein Shasta, Tehama, Butte, Colusa, Sutter and Yuba counties, and perhaps Nevada and Placer also, should be invited to co-operate.

CENTRAL ARIZONA.

[NO. 4—CONCLUDED.]

[Written for the RURAL PRESS by O. C. WHEELER, LL.D.]

Salubrity and Perpetuity.

The northern portion of Arizona, from about the 34th parallel of latitude to the Utah line, has a general elevation of 4000 to 6000 feet, with mountain peaks twice these heights; and parts of it are covered with pines that will furnish timber not only adapted to ordinary building purposes, but for operations in mines of which the vast mountain ranges are full. This topography generates climatic conditions peculiar to itself, and quite distinct from those found farther south. In Central Arizona, the elevation is from 3000 to 5000 feet less than in the northern portion, which affords the best of reasons for its greatly modified climatic phenomena.

The salubrity of any district will, other conditions being equal, be in proportion to the evenness of the temperature, the dryness of the atmosphere, the steadiness and regularity of the wind, the purity of the air and the amount of clear sunshine. In this view Central Arizona is probably peerless on the American continent, and perhaps in the world. The extensive plains of arid sands lying between the coast of the Pacific ocean and the western boundary of Arizona constitute an almost perfect desiccant to all the sea-breezes that reach these valleys, so that they are, when here, dry to the last possible degree. This, with other causes, produces an atmosphere so extremely void of all humidity that absolutely no dew ever falls in Salt River valley. And yet the breeze is regular nearly every day in the year, lowering the temperature and affording measurable relief from undesirable heat that may have obtained during the day. There are no swamps or quagmires exhaling malaria; no chemical compounds in action to fill the air with poisonous fumes; no sulphurous lava flows from burning mountains or gaseous exudations from pits, surcharging the air with asphyxiating ingredients. The air is as pure as the proper mixture of oxygen and hydrogen can produce—a perfect life-giving inhalation at every breath.

The temperature is wondrously even. No chills from banks of snow, no wet from sloppy breaking up of frozen ground, no taking colds to plant tubercles in the lungs, from sudden shifts of heat and cold. They never come. Men in the harvest-field make full hours and do heavy work with Fahrenheit at 110° in the shade, suffering less from heat than they would in any of the seaboard or Mississippi Valley States, with the thermometer at 90°. There is no record of a case of sunstroke since the whites began to occupy the Territory. And yet there are no statistics showing that any portion of the earth has a greater number of cloudless days with clear sun than Central Arizona. In other words, no section of the country enjoys more cloudless, clear sunshine in the year than this district. In short, the elements essential to the most perfect healthfulness are here so combined as to insure a state of salubrity equal to the most favored spot on earth.

Perpetuity.

Facts may indicate, and philosophy may show, and logic may prove beyond all doubt, that an enterprise, or undertaking, or a course to be intelligently entered upon and energetically and persistently pursued, will—must—be profitable; and yet the careful, the good business man will ask, "Will it last?" "How long will it continue to be thus profitable?" "Has it, inherently, the elements of certain perpetuity?" It may be a placer mine of gold of incomparable richness, and yet, if vigorously and persistently worked, it may be—it surely will be—long, "washed out." It may be a ledge of gold or silver-bearing rock, rich and extensive, and may rapidly produce fabulous wealth; yet its continual development will surely exhaust and destroy it. It may be a timber belt containing the elements of untold millions of lumber, still, constant depletion will cause constant exhaustion, and, in time, its utter destruction. Hence the pertinence of the careful man's question, "Will it last?"

To this query, the answer in general is, the longer land is properly cultivated and properly fertilized, the stronger and more productive it becomes. As applied to Salt River valley, the answer is, while the mountains surrounding the valley continue to disintegrate under the operation of the elements, and while the detritus thus eliminated continues, under the law of gravitation, to descend and work its way over the plains, so long will there be perennial additions to the amount of the producing element, in a state of refinement and assimilation. And so long as the water flowing from these mountains, holding in solution the debris which is always present, in some degree is spread upon the land in irrigation, so long will the fertilizing properties of the soil continue to receive additions, and its fecund power will continue to be increased. And so long as water containing more or less of salts and ammoniac compounds, as all water does, is used for irrigating purposes, and so long as the process of cultivation continues to throw up the soil, exposing it to the indispensable and ever-fructifying influences of the atmosphere, so long will the soil continue to be refreshed and invigorated, and prepared to give larger reward to the labor of the husbandman.

While the conditions just enumerated are in perpetual activity, can there be any failure in the great substratum of all agricultural prosperity, the producing power of the soil? Is not perpetuity in this department absolutely guaranteed? "How long will it (not) last?" But the inquirer (very naturally) asks, "Will prices continue, and hence profits not be reduced?" Suppose they

Ruler of all things has stamped the financial profits of tilling the soil in Central Arizona with the changeless benediction, "esto perpetua," "be thou perpetual," thus assuring to this enterprise absolute perpetuity.

Condensations and Conclusions.

Raisin-making in Salt River valley has these advantages over any other place where the industry has been prosecuted, almost an entire immunity from rain during the whole drying season; and no dew ever falls. This continues long enough for the second crop (which is often nearly equal to the first) to ripen and be entirely cured; thus making nearly double the amount of raisins that could be made from the same amount of grapes in Southern California, where rains are so early and dews so heavy that producers seldom attempt to dry the second crop.

Raisins made by the pure heat of the sun properly applied, cannot fail to be superior to those made by artificial heat, or those whose drying is interrupted by dews and rains.

There are few lands where soil and climate so combine as to make almond trees good bearers. But in Salt River valley they do, and the profits of the crop are quite equal to those realized from grapes, or any of the fruits above enumerated.

Alfalfa, green or in hay, makes sweeter, richer, better beef, pork and mutton than any other known feed. Animals turned to alfalfa after they have ceased to fatten on the mountain ranges, or upon the common grasses, or on the ordinary feeds used for the purposes of fattening, take on fat with great rapidity, until

It is not known that any body of land taining 350,000 acres in any part of the world has a more efficient combination of natural and artificial facilities for irrigation than the Salt River valley.

Railroads are centering in this valley that will, in a short time, place it on a par with the most favored spots in the country for communication with the whole world.

The minerals shown in 1885 at the World's International Fair, at New Orleans, from the mines of Arizona, held the first place among all exhibits, from every part of the world.

The alternate sections of land originally granted to the Texas & Pacific R. R. Co. on certain conditions, 40 miles on each side of its line, through the entire length of Central Arizona, having been adjudged forfeited by the company, have all been thrown open to settlement, aggregating 8,960,000 acres.

Agricultural lands in Salt River valley, taken up less than five years ago at \$1.25 per acre, and covered with water rights at \$7.50, are now worth \$30 per acre, exclusive of all other improvements. Town lots in the city of Phoenix are now selling more than 500 per cent higher than the same lots sold for five years ago.

Labor is demanded all the time, in all departments of manual and mental effort, and always commands good wages.

Conclusions.

1. People in poor health will not be likely to find a place more conducive to the restoration of human vigor (physical or mental), and the assurance of health and happiness during the future of life, than at Central Arizona.

2. Investors will find very few fields where returns will be so rapid, and profits so great, and accumulations so continuous.

3. Men of small capital and great will-power, in the use of good muscle and common sense, can nowhere apply their resources to better advantage than in Salt River valley.

4. A man with a little money can purchase more land, that will, in five years, be worth \$100 an acre, than in any other place we know.

5. A woman skilled in any of the arts, or in any kind of labor, will find, in the city of Phoenix and its vicinity, more opportunities for desirable employment, either in her own business or in the service of others, than elsewhere within our knowledge.

6. We know of no place where people in early life, with good habits and per-

severing industry, even with limited means, can so easily secure a good living, and so rapidly accumulate a competence.

7. A country abounding in such universal resources cannot long remain without a dense population, and that population will rapidly achieve wealth.

8. Such laws as here obtain, in the hands of an intelligent people, with such a system of free education, cannot fail to sustain order and promote the culture of high moral virtue.

A TOWN WITH EIGHT RAILROADS AND NO HOUSES.—It is not often that eight railroads are at the same time under construction to any one place, however important it may be. And yet our correspondent, writing from Estilville, Va., points out the fact that eight roads are now either actually being built, or soon will be, all to meet at a place where a town has not yet been laid off even. Big Stone Gap is the name of this remarkable place. It is a great gap in the range of mountains dividing Southwest Virginia and Eastern Kentucky, and of necessity the railroads building in that direction must cross the mountains at this place. It is one of nature's marvels. Just by the side of the river, which has broken its way through this great mountain range, there is said to be a most beautiful site of 1200 acres for a town. Here it is proposed to build an industrial town, and with the unlimited supplies of fine ore and the Elkhorn coking coal and limestone in abundance, this place ought to grow very rapidly under judicious management.

EGGS IN THE ARTS.—Eggs are used largely in the arts. Albumen is made from the white and egg oil from the yolks. The egg oil is used for oiling leather and wool in woolen-mills. Then there are egg pomades, desiccated eggs and preserved eggs (for farmers' use). Egg albumen sells in France at the rate of 75 cents per pound.



ALFALFA PASTURE ON BRILL'S RANCH, SALT RIVER VALLEY, ARIZONA.

are reduced 50 per cent, will they not still be large? Where else can equal profits be continuously depended upon? There are, however, abundant and reliable reasons why prices should not only continue, but should continue to increase, and constantly enhance all legitimate profits. Here is a territory, large as a first-class principality, a small empire of itself, a very large proportion of which will continue to interest and occupy a numerous population in pursuits other than the cultivation of the soil; indeed, where the soil cannot be cultivated. The extensive mountain ranges and elevated plateaus, while under conditions forbidding agricultural pursuits, will reward the lumberman, the miner and the herdsman, in all the future, and they must receive their green supplies from the comparatively few and circumscribed valleys. This will insure a continuous demand for fresh fruits and vegetables, quite equal to the most increased supplies. It is a fundamental fact, upon which assured hope of continued profits in the production of raisins, nuts and citrus fruits relies, that there are only comparatively few and limited districts on the face of the whole earth where they can be successfully and profitably produced, and that these districts can by no supposable circumstances be augmented in number or enlarged in area; that when these districts are occupied and developed, the maximum supply of these articles will have been reached, while the consumers will be continually multiplying, and hence the demand increasing throughout the world. Add to this the fact that as civilization advances and luxury supplants the use of bare necessities, the demand for these more delicate and desirable articles of food will be enlarged to such a degree that, instead of lower prices and diminished profits, there will surely be enhancement of both.

Now we submit that the above unquestionable facts and immutable principles, examined in the light of nature's invariable laws, give to an unprejudiced, intelligent mind all needed evidence that the decree of the

all desire on the part of the owner for more fat ceases. Salt River valley grows alfalfa without interruption 12 months in the year, and thus produces a perennial supply of meat, not surpassed in any market in the world.

Grapes come into essential bearing one year earlier than in any other country where they are extensively grown, and are ripe, fit for market or for raisin-making, from 14 to 24 days earlier in the season than anywhere in California.

There are now in the Salt River valley more than 500,000 grapevines and more than 250,000 fruit trees in successful rapid growth, and room for many millions more.

In Central Arizona extremes of cold are never known, and a very hot day is so seldom that laborers in any department of life can make full hours every day in the year without inconvenience.

Vegetables of every desirable variety attain the highest quality, and size enough, with least possible attention.

Citrus fruits, though not yet so extensively planted as in Southern California, have been sufficiently tested to dispel all doubt of their future abundant production and profit.

Indian troubles, which never affected more than one-tenth of the Territory, and that in the extreme northeast corner, a hundred miles away, are unquestionably disposed of forever.

The Arizona canal, at a point near its center, only a few miles from the city of Phoenix, is dropped about 15 feet, affording more than 1500-horse power, sufficient to run a score of large manufacturing establishments, supplying Phoenix and other towns with light and heat and everything dependent upon machinery and mills for reducing the ores of a multitude of mines within practical distance.

Sand and gravel, in immense quantities, are, by the floods of each year, washed down and deposited in the immediate vicinity of Phoenix sufficient in quantity and quality to meet all demands of construction for a large city.

POULTRY YARD.

American Langshan Club.

The following are the most important rules of the club:

1. That a poultry club be and is hereby established, to be called and known by the name of the American Langshan Club.
2. That the object and purpose of this club is the honorable protection and extended cultivation of the Langshan fowl, as introduced from Langshan, China, into England in 1872, and from thence into the United States in 1878, as well as to protect by co-operation the interests of the breeders of this most useful fowl.
3. That to promote the above objects as many and as liberal prizes as the funds will permit be offered for the competition of the members of the club at such leading shows as the executive committee may determine, and that a notification of such shows be sent to each member.
5. That the power of admitting members shall be vested in the executive committee, and shall be by ballot—two adverse votes to exclude.
7. Any person may become a life member, subject to rule 5, upon the payment of \$5 at the time of joining the club, or at any time after becoming a member, but such sum shall not include any previous amounts paid.
8. That any member, who in the opinion of the executive committee behaves dishonorably, may be expelled by a two-thirds vote of said committee, but not until said member has had an opportunity to defend himself.
9. That any member who shall be accused or convicted of breeding cross-bred birds as Langshans shall be dealt with as provided in Section 8 of these rules.
15. That a register of all imported and prize-winning birds belonging to the members shall be kept by the secretary, with a list of prizes won, and when sold notice shall be given the secretary, with the name of purchaser, and should said purchaser desire a list of prizes and record of same, he can obtain it by the payment of \$1 to the secretary, to be placed in the funds of the club.
16. That all members shall make a report to the secretary of all importations and prizes won, and also the score, date of show and by whom judged.

Following are the officers: President, F. A. Mortimer, Pottsville, Pa. Vice-Presidents: Capt. R. W. Sargent, Kittery, Me.; W. O. Dakin, Toledo, O.; H. H. Forester, Denver, Col.; E. P. Kirby, East Chatham, N. Y.; W. H. Hamilton, Danielsonville, Conn. Secretary and Treasurer, A. A. Halladay, Bellows Falls, Vt. Executive Committee: J. Stewart Kennedy, Cowanville, P. Q. Ca.; P. H. Jacobs, Hammoniton, N. J.; H. H. Stoddard, Hartford, Conn.; R. A. Sargent, Kittery, Me.; G. W. Bowly, Winchester, Va.; W. L. R. Johnson, Buckley, Ill.

Preserving Eggs.

When farmers or poultry dealers only wish to keep eggs in a good condition for a few weeks, it is not necessary to use any particular mode of preservation. All that is requisite is to have a good cellar, larder, or even closet, fitted with perforated shelves. The eggs should be placed broad end downward on these shelves, but they may with advantage be turned about twice a week, keeping them, however, almost all of the time with the broad end downward. The reason for this is that when so kept the air space does not increase in size, and the eggs seem to keep better. It is a very good plan to arrange the eggs in uniform rows from front to back, so that those laid first can be used first. Another plan much advocated by some writers on the subject is to keep the outside air as far as possible from the egg. This is done by wrapping each egg in wadding or cotton wool, packing them in jars and sealing a waxed paper over top. But it is no less essential in this case that the eggs shall be stored in a cool place, for eggs are not in so much danger from the germs of decay in the air without as from those within the egg itself. And these will certainly grow and destroy the quality of the egg, however carefully it may be covered and sealed, if the necessary condition of a high temperature is furnished.

Gypsum is said to be a good preservative for eggs. It is stated that they have been kept, packed in finely powdered gypsum, for six months. But this was in a cool place, and perhaps the cool air had as much to do with keeping the eggs as the gypsum. In fact, whatever substance is used for packing the egg, the place of storage should be cool for the reason that we have given above, to protect the egg from the development of its own internal germs.

The most generally used mode of egg preservation is that of keeping them in lime-water. This is undeniably the best for practical purposes, whether for house use or for sale. It involves the least expense and the least trouble, and has the least objectionable effect upon the taste of the egg. Pack the eggs, with the small end down, in casks or jars, and then pour over them a solution of lime-water and salt. Take a bushel of lime to 50 gallons of water, and add six quarts of salt. First slake the lime with part of the water, then add the rest of the water and the salt. Stir at intervals, and when

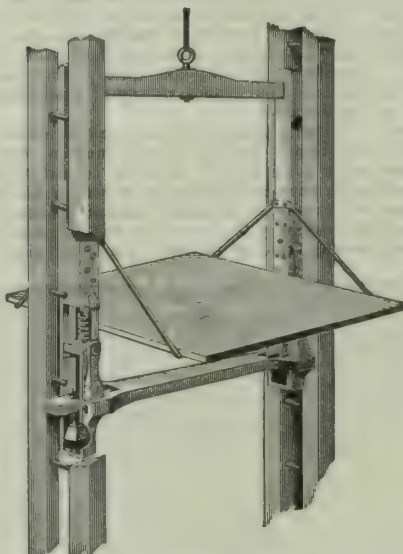
the solution is cold and the sediment has settled, dip out the liquid and pour it over the eggs.

The objection to packing eggs dry in sawdust, bran, oats, and the like is that the egg absorbs through its porous shell something of the musty taste that seems to belong to these substances. This may be prevented, however, by dipping the eggs first in a hot solution of alum. When cool they may be packed in any dry substance, the pores of the shell being now so entirely closed that no gases, taste, or smell can be absorbed.—*Inter-Ocean*.

Farmer's Steam Generator.

We give on this page an engraving of a patent steam generator and engine, made by E. H. Farmer of Gilroy. It is a compact machine, especially adapted for running printing presses, sewing machines, grinding feed, cutting hay,

FIG. 1.



ALBERT'S AUTOMATIC SAFETY ELEVATOR.

sawing wood, pumping water, etc. It is adapted for any purpose where small power is needed on farms, ranches, mines, etc. The boiler is a four-horse power and engine three, but other sizes than the one shown are to be made.

This machine occupies but little space and is easily accessible in all parts for cleaning, inside and out. The side plates rest on hooks at the bottom and fit in a recess at top, and can be lifted off, the soot brushed from tubes, and plate

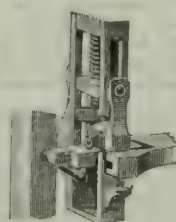
Albert's Automatic Safety Elevator.

Henry Albert of Crescent City, Del Norte county, in this State, has patented through the MINING AND SCIENTIFIC PRESS Patent Agency an automatic safety elevator which is on an entirely different plan from any heretofore constructed. Engravings of the device are shown on this page.

In the elevator well or shaft on each side are guides formed of double uprights between which are placed at regular intervals stout bars or pins. The vertical side portions of the elevator frame fits between these guides as shown in Fig. 1 of the cuts, but in such a manner that the cage slides up and down without striking the pins or bars.

Under the car on each side are the safety catches. They consist of stout bars pivoted on side timbers of the frame of the cage. Their outer ends project between the guides and into the vertical plane of the rack bars, so that they

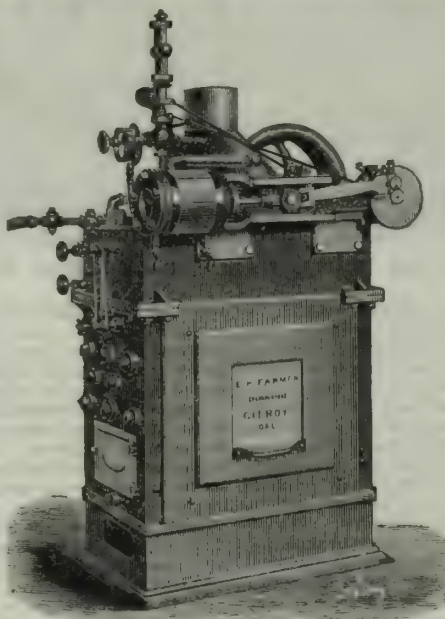
FIG. 2.



Safety-Catch Holding Cage.

come into contact successively with said bars, but being pivoted they slip by them and by vibration return to an equilibrium. Small pivoted weights, forming part of the catches, serve to return the catches to a horizontal position after they pass each bar.

When the cage is ascending or descending at a rapid rate of speed, the ends of the catches slip by the rack bars and present no obstruction. But in descending, when for any reason



FARMERS STEAM GENERATOR AND ENGINE.

replaced in a few seconds, without tools. The water tubes each have a plug opposite the end of tube, so the scale or sediment can be readily removed without disturbing the tube. The water spaces at the front and back also have plugs for cleaning the inside. Any one that can use a wrench can clean this boiler inside and out in a few minutes. This is a novel feature, but essential to the life of a boiler, as the heat boiler will soon burn out with bad water if there is no way to keep it clean.

The boilers are thoroughly tested before leaving the shop by cold-water pressure, and are warranted in every respect. The engine is a model of compactness and has no delicate parts to get out of order, but is a good, plain, everyday engine, capable of doing a great deal of hard work without repairs. The boilers are sold with or without engine and are fitted complete and ready for water and fire.

THE Nineteenth District Fair is to be held at Santa Barbara, Sept. 27th to 30th, inclusive. We gratefully acknowledge the receipt of complimentary tickets, and hope some representative of the RURAL PRESS may be able to attend.

weights with the catches, whereby the proper operation is rendered more effective and certain, and the speed of the cage regulated, the pivoted balanced-stops for checking the vibration of the catches when operating normally, the fixed stops for holding the catches when thrown to position to stop the cage, and other details of construction. A special feature is the sliding spring-controlled or cushioned cross-head or bar by which the reversible catches, the fixed stops and the balanced stops are carried, and by means of which the jar occasioned by the sudden arrest of the cage or car is wholly obviated and relieved. This device is quite simple and appears to be effective.

The Buena Vista Rancho.

Hiram Corey has sold the Buena Vista Rancho, consisting of 7725 acres, to Tyler Beach of San Jose and J. C. Hoag of San Francisco, who represent a syndicate, at \$30 per acre. It is situated on the south side of the Salinas river, about five miles from Salinas City. Mr. Corey has occupied this rancho as owner or under lease for 14 years, and during that time, by a system of mixed farming, has acquired an ample fortune. We have seen a map of the rancho, showing subdivisions that would be most practicable in parcels from 100 to 1500 acres for making homes. It is the intention of the managers of this enterprise to make 25 lots or subdivisions and sell the same on easy terms, say one-half cash and the balance in one and two years at 7 per cent interest. Our knowledge of this great Salinas valley warrants us in saying that there is no large tract of land more suitable for the purpose. Living springs and never-failing streams run through various portions of the rancho, and there is over 5000 acres that is the choicest tillable land. There is a fine bearing orchard of ten acres and a vineyard of six acres. Cuttings set out this year have now, in some places, large bunches of grapes. On the river-bottom there is a field of potatoes that will produce over 200 sacks, and sugar-beets that will yield over 30 tons to the acre. If our large land-owners would follow the policy marked out by Messrs. Hoag & Beach, we should be in a condition to retain some of the desirable Eastern emigration pouring into our State. We have been laboring for years to settle this magnificent valley in small holdings, and we regard this move as an earnest of what will be the best policy to pursue in order to bring about that desirable consummation.—*Salinas Index*.

All sufferers with such chronic ailments as liver disease, dyspepsia, blood diseases, crutch, consumption (scrofula of the lungs), and kindred diseases should know that Dr. Pierce's "Golden Medical Discovery" is their best friend in such deep affliction. It comes to soothe, alleviate and cure.

Don't You Know

That you cannot afford to neglect that catarrh? Don't you know that it may lead to consumption, to insanity, to death? Don't you know that it can be easily cured? Don't you know that while the thousands and one nostrums you have tried have utterly failed, that Dr. Sage's Catarrh Remedy is a certain cure? It has stood the test of years, and there are hundreds of thousands of grateful men and women in all parts of the country who can testify to its efficacy. All druggists.

They Will Not Do It.

Those who once take Dr. Pierce's "Pleasant Purgative Pellets" will never consent to use any other cathartic. They are pleasant to take and mild in their operation. Smaller than ordinary pills and inclosed in glass vials; virtues unimpaired. By druggists.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

JARRED C. HOAG—California.
G. W. INGALLS—Arizona.
GEO. McJOWELL—Santa Clara Co.
W. J. FERRMAN—Nevada.
J. L. DOYLE—Nevada Co.
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Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription rate, \$3 a year. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

Important to Tree Planters.

One hundred and twenty-five thousand Fruit Trees for sale at a bargain, consisting of Apple, Pear, Peach, Apricot, soft and hard-shell Walnuts; also 2000 Fan-Leaf Palms. Sales will be made in lots, or the Nursery and stock will be sold on the most liberal terms as to price and payments, or will be exchanged for real estate. Inquire of J. M. Hixson, Real Estate Agent, 75 N. Spring street, Los Angeles, or address the proprietor, Milton Thomas, P. O. Box 304, Los Angeles, Cal.

The Lubin Pulverizer.

Practical Tests and Demonstrations of Value.

The inventors of California have made many important contributions to the progress of improved agricultural implements and machines. A number of these inventions involve essentially new applications of mechanical principles and new methods of operation. The inventions have in many cases resulted from the peculiar conditions and needs of California agriculture, but will have great value as well in working the soil of other agricultural regions. Thus California makes a contribution not alone to her own advancement but to the advancement of agriculture everywhere. It is quite certain that in mechanics as applied to agriculture, California is doing important things for the

perfect mulch to prevent loss of moisture by evaporation and to keep the lower soil in proper condition for root penetration and nourishment. Directly opposed to this is the cloddy condition of the soil which is produced by imperfect cultivation. The clod is the rock upon which agricultural enterprise is wrecked. It is proper, then, to inquire into the nature of a clod and its evil work. Mr. E. C. Thorn, formerly farm superintendent of the Ohio State University, now associate editor of *Farm and Fireside*, says:

"Clods are just so much wasted land, and this is true whether the clods lie upon the surface or are buried in loose earth. This lesson has been learned slowly, and at enormous expense and cost in unprofitable crops."

This has been aptly illustrated by Prof. Hilgard of the State University, than whom there is no better authority on questions relating to the conditions

proved harrow, cultivators, clod-crushers and rollers, there has been great progress made in clod-crushing, but in certain particulars these implements have not reached perfection. What is required is something to crush and pulverize the clods and to thoroughly mingle and mix the soil, not only on the surface, but below, as deep as the ground has been plowed. With the ordinary harrows or other implements commonly used, clods at the bottom are left undisturbed, and the clods on the surface pass between the teeth or disks and are merely rolled from side to side. In certain naturally mellow soils, however, these implements do very satisfactory work. In refractory soils, rendered so from the tendency to cement the particles together, something essentially different in mechanical principles was required to pulverize the soil. This Mr. Lubin set himself to work to secure, and after a number of experiments

2d. A series of wheels with chisel steel teeth. These wheels revolve independently on a steel shaft. The teeth project from the wheel about six inches and are about four inches apart, and as the machine is drawn forward these chisel-shaped teeth revolve between the curved spring teeth or crushing bars in front.

The entire weight of the machine and that of the driver is placed on top of these revolving teeth, in which manner they are forced into the ground. The depth of cultivation is regulated by the depth to which the spring teeth are set.

The curved spring teeth raise the clods and earth from beneath the surface, and are then caught by the revolving teeth and cannot pass through without being mingled and crushed, so that not only the surface clods, but those from beneath, are thoroughly pulverized and mixed, thereby making a perfect seed-bed.



PULVERIZING THE SOIL WITH THE LUBIN PULVERIZER AND CLOD CRUSHER.

world's progress as she is ministering to other directions of human advancement.

A new illustration of this general truth may be formed in a new implement of tillage, invented by David Lubin of Weinstock & Lubin of Sacramento, and patented through Dewey & Co.'s agency. Mr. Lubin's experience in working his soil for orchard and vineyard was that a good condition of tilth was attained only at a cost of much time and the use of a number of implements, and he set himself to work to determine whether some different implement could not be devised, which would much more thoroughly pulverize the soil and do it quickly and cheaply. He worked earnestly upon this problem, and though his first attempts at constructing such a machine were not altogether successful, modifications readily suggested themselves, and now it is the verdict of scores of practical farmers, who have carefully studied the machine and its work, that the Lubin Pulverizer is a practical success and has many important advantages over old cultural implements.

Before alluding to the tests made during the State Fair, and the verdict of those who witnessed them, we desire to introduce a general description of the machine and the philosophy of its operation.

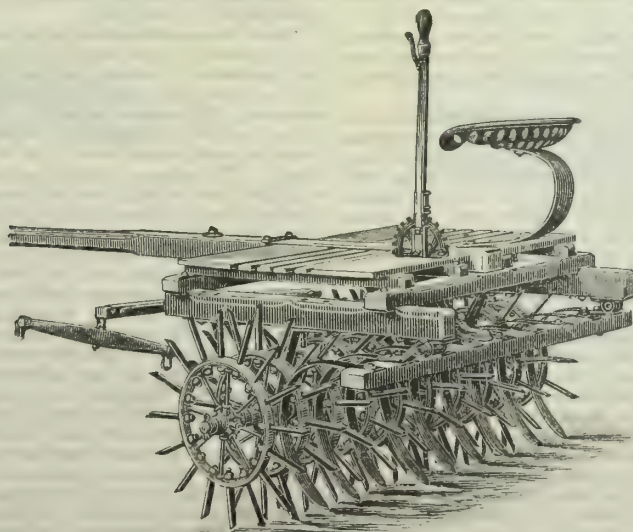
Philosophy of Tillage.

The production of a fine tilth is essential, first, in securing condition of soil which admits ready extension of the rootlets of the plants and thus making available all the resources of plant food in the land; second, in retaining moisture in the soil by preventing evaporation from the surface; third, in securing a condition of soil fitted for the continual absorption of moisture, vapor and fertilizing properties from the atmosphere. There may be other considerations, but these are the most important.

There are two extremes in soil conditions—one of perfect surface tillage, which may be called *dust*; the second, of defective tillage, which may be called the *clod*. These are the antithesis in soil-working. There are soils and seasons in which working the surface to dust is not desirable, but it is beyond question that in California, when the heavy rains are over, the production of a dust layer (as nearly as possible to attain it) at or near the surface is the most

and properties of the soil. He says: "Imagine a sponge, representing the loose soil, to be saturated with water; and a hard-burned brick representing the hard crust (or equally a hard clod). This hard brick placed upon the top of the wet sponge will

has reached great success, as will be seen farther on. At first we will give a description of the parts of Mr. Lubin's machine, which, in connection with the engravings on this page,



THE PULVERIZER REVERSED WITH SPRING TEETH IN REAR.

take all the water from the sponge; yet if the brick be soaked in water, and a sponge be pressed on the top of it, the sponge will not take up a particle of the moisture from the brick."

It is thus seen that a clod is not merely a mass of useless soil, interfering with the proper functions of the roots of plants, and preventing the passage of the water of the soil to them, but that it is a robber, ready at all times to take the moisture from the soil, but not willing to give it up again when needed.

Reducing Clods

From the earliest times the effort of the cultivator has been toward the reduction of clods to tilth. From the time of the first progenitor of the harrow, which was a branch of a tree drawn over the sod, down to the latest im-

will enable the reader to understand its mechanism and operation.

Lubin Pulverizer and Clod-Crusher.

The machine consists of two principal parts: 1st. A set of heavy spring teeth fastened to a pivoted cross-bar in front of the machine, as represented in the large engraving on this page. These spring teeth may be set to run any required depth by means of the lever shown.

These spring teeth serve the purpose of stirring up the ground, breaking the crust, raising the clods, and as crushing bars, being located so that the teeth of the revolving wheels pass between them.

When the land is broken and has no top crust, and only surface clods are to be crushed, or if in mellow lands the soil is to be stirred and mixed, the tongue or pole of the machine can be reversed, as shown in small engraving on this page, so that the spring teeth or crushing bars will be in the rear, with the back of the curved teeth forward, serving then as crushing bars for pulverizing surface clods and mixing the soil.

In this position it will be found lighter for the team, as the spring teeth are not in the ground. It can be used with wonderful effect as a cultivator in orchards, vineyards, and for corn.

This machine will reduce the clods and pulverize stubborn soil. Another advantage is that it makes no ridges or furrows, but levels down all such, leaving the ground smooth, soft, and mellow.

Practical Tests During the State Fair.

At different times the Lubin Pulverizer has been shown in operation at the Agricultural Park. A piece of hard, dry ground which has not been plowed for years was coarsely broken up and then worked with the pulverizer. The clods were drawn to the surface and broken up but not reduced to fine tilth. The machine in the form shown with spring teeth was not calculated to break clods from dry plowing. Mr. Lubin has a machine with *fixed* instead of spring teeth which will reduce such clods, and has, in fact, ground up clods from a traveled road which was plowed up as a test of its power. But the machine shown was planned to work in what might be called cultivated ground or land which had been plowed during the previous winter. It did, however, reduce the clods to egg or walnut size and bring them to the surface of the ground, while beneath them was a layer of well-pulverized soil, thus demonstrating the efficiency of the machine even on dry plowed land.

A number of leading agriculturists being favorably impressed by this test desired to see the machine at work in the vineyard and orchard and to examine the effect upon trees and vines upon soil which had been treated during the season with the pulverizer instead of the usual harrows, cultivators and clod-crushers. Mr. Lubin readily consented to arrange an op-

portunity for such test and examination, the results of which we will now briefly describe.

Weinstock & Lubin's Ranch

Is situated near Mayhew's station, on the Folsom branch of the Central Pacific, about nine miles from Sacramento. It is on the bench above the American river bottom, and is what is known as timber land. The soil, when properly treated, is well adapted to trees and vines, as their growth shows, but it is of a character to test well the powers of any pulverizing apparatus. The ranch has about 200 acres in trees and vines.

One day this week there gathered on the ranch about 20 persons, some of them well-known farmers, among whom were H. M. La Rue, Geo. W. Hancock and Chris Green, directors of the State Board of Agriculture, Daniel Flint, Senator Routier, Thos. McConnell, Jas. Rutter, and others of Sacramento county; Dr. Grattan of San Joaquin; E. W. Steele of San Luis Obispo, and others from different parts, including representatives of the press. A long time was spent in tramping around after the machines, watching their operation, stopping and starting them frequently, so that every point of action could be discussed, etc. Two machines were used, one with the spring teeth in front and one with the teeth behind, as shown in the two engravings on this page. It was found as claimed that operating with the spring teeth in front tore up the soil, brought the lumps to the top and ground them down by the leverage of the revolving teeth, using the spring tooth as a fulcrum. There was complete unanimity of opinion that for breaking up crust after rain, or otherwise securing thorough tearing up of the soil, lifting out and crushing of the clods, on land which has been previously plowed, the machine was successful beyond any known implement for this purpose. The same complete success was awarded to the machine with the spring teeth behind for thorough stirring and mixing of the soil and producing a fine layer upon the surface, such as is desired in summer cultivation. Thus arranged, the machine also exercises leverage upon the clods, and the revolving teeth also comminute the soil by throwing it against the spring teeth in the rear, breaking mellow lumps by pressure against these teeth. As the machine goes along the fine dirt falls in a shower behind it like the water from a stern-wheel river steamboat. The surface is thoroughly mellowed and disintegrated.

The effect of the use of this pulverizer in Weinstock & Lubin's vineyard and orchard was very apparent. Moisture was found by the hand or foot very near the mellow surface. Vines showed their abundant supply of moisture by the immense growth they had made even in this dry year and were still growing freshly even so late in the season. The orchard trees also looked fresh and vigorous, still holding their leaves well. This result is just what might be expected from thorough cultivation and good pulverization of the surface during the summer. The novelty lies in the apparatus by which such thorough culture was secured. The importance of the novelty is seen by the cost at which such a condition is secured. Weinstock & Lubin assure us that their cultivation, using the best old-style implements they could find, was much more per acre than with the new pulverizer, and much more complete work was done. But beyond the actual cost of work there is another matter which is often a more important factor, and that is time. With a single implement to use after the plow, the land can be very quickly worked, which is a very vital consideration when the soil is just right for working, and a few days' drying, sun or wind, hardens the crust and evaporates the moisture.

What They Think of It.

The expressions of opinion showed what a favorable impression had been produced by the investigation of the machine and its work. We have space for but a few of the remarks of which we have note:

H. M. LaRue—"There is no doubt of the value of the machine as a cultivator upon land properly plowed. In the orchard and vineyard it is a success. I believe it will also be found of use in wheat land, but it will have to be tested to determine that point. It evidently runs light and will be a durable machine."

Senator Routier—"If we had such a machine on every ranch, we could get along without irrigation. It works up clay land so that it looks like well-cultivated river-bottom. It does the work of at least two tools at one operation, and is, therefore, a great saver of time and teams."

Doctor Grattan—"I don't look at it as fit to break land, but for thorough pulverization of the soil to the depth plowed, it is a great institution. I am very favorably impressed with it in this direction."

Daniel Flint—"I am more than pleased with what I have seen of this machine. I can plainly see the benefit of its use on land which has been worked with it, as compared with that which has not. I believe it is a thoroughly good machine, and will be found of much value in the hopfield."

Thomas McConnell—"This machine is a new illustration of what can be accomplished by concentration of mind on one's work. I regard it as a great improvement in implements of tillage."

James Rutter—"I was inclined to disfavor the machine when Mr. Lubin showed me the model, but when I saw it in the field I experienced a complete change of mind. It is thoroughly new; I never saw anything like it nor

anything with which soil can be cultivated so well and so cheaply."

Mr. Hancock, Mr. Steele, Mr. Green and others also spoke favorably of the pulverizer and its work. The demonstration given was certainly a success.

The Pulverizer in the Grainfield.

Though the test described above was upon orchard and vineyard land, it is our opinion that the machine may prove of great value in the grainfield. Although it is not calculated to handle clods which have been baked all summer, it can be used after the spring plowing of summer-fallow, and if this is done, the soil can again be worked by it for dry-sowing; and it is intended to attach a seeder so that the soil can be stirred and the seed sown and covered all at one operation. This is a point upon which experiments will no doubt be made as soon as possible.

The machines are manufactured by P. P. Mast & Co. at Springfield, Ohio, and will be sold by the San Francisco branch of this firm at 31 Market St., S. F.

A Returned Colonist's Account.

[Our long-time friend and contributor, Mr. Rumford, who went down to Sinaloa last December with L. A. Gould and others, has but recently come back to San Francisco and sends us a brief review of the situation at Topolobampo. His version differs somewhat from others that have got into print, and we deem it of sufficient interest to lay before our readers.—EDS. PRESS.]

Back From Topolobampo.

EDITORS PRESS:—As we have finished the work for which we went to Topolobampo, Mexico, and returned home, you, with our many friends all over the State, will be pleased to hear of our safe arrival and that the statements made by unfriendly parties are essentially untrue. We found in Sinaloa a climate hard to excel—one in which we lived practically outdoors, without house or tent—simply a protection from the sun, made by covering a framework of poles with brush and soil, with thin curtains stretched around to shield us from the public eye. Much of the time the boy and I used not even this, but slept soundly on the damp sand of Los Copos island, so near the water that an extra high tide has often forced us to move higher up. Such is the perfection of the climate that, living so, we never took cold nor had any rheumatic nor other troubles, except disturbance of digestion or inflammation of the bowels, caused by the use of too much strong food, like corn and sugar, at a time when the supply of fruits and even vegetables failed us, because there were some 500 persons, largely women and children, where only 100 able-bodied men were needed.

The fine harbor, with its variety of fish, will ever find persons glad to remain and enjoy them, while the land only needs a supply of water to produce abundantly; but whether men can be found to work successfully in a co-operative way, as Mr. Owen proposes, is a question time alone will decide. The ease with which one can shirk, when there is no competition, has not yet found a remedy there; so little work is done in proportion to the laborers—still they may do much better when the number is reduced. About 73 left when I did, and 100 more could well be spared, after which 100 would be left—a plenty for the experiment.

After this Mr. Owen will select from those who apply, and thus send only such as are suitable to go there. Dr. Schellhouse and L. A. Gould, the company's agents in San Francisco, will send another supply of provisions on next trip of the Newburn, August 8th, also improved nets for fishing.

When you hear some returned colonist venting himself against Topolobampo's enterprise, remember what hundreds of hard men looking for soft places said of California between 1850 and 1860. We have yet to hear one person say as much against Sinaloa; still we advise people not to go there until those who are there have fully prepared the way, which may take a year or more.

As to the question about people starving to death there, my testimony is (and I closely watched the cases so reported) they died from too much food and medicine combined. Their first trouble came from excessive use of strong food, like corn and brown sugar, both inflammatory in their character if taken in excess, causing inflammation of the bowels and fevers which are continued and increased by soap, and other preparations continually fed to the sick ones with the idea of sustaining them until the medicine cures (?). I had charge of only three cases of the kind, and each of them was entirely cured by a complete fast of five days, followed by very temperate living. Those who died possibly might not have used so much corn and sugar had fruit been as plenty as it should, and probably will be in future. The most productive source of all trouble is panache—a dirty brown sugar made into cakes and eaten as maple-sugar by nearly all in excessive quantity. For such a climate all sugar is objectionable.

After all is said, the deaths, including small-pox, were but 16 out of 500 in eight months. The sickest people were the doctors and those who employed them. The difficulties were too many, especially women and children, want of suitable leaders, more competition and experience, too many looking for a soft place.

ISAAC B. RUMFORD.

Studies at Home.

Interesting Facts of the Way to Conduct Them.

We have given from time to time brief statements concerning the "Society to Encourage Studies at Home," and they seem to have been of practical value to our readers, because the secretary of the society assures us that they have received their "fullest assistance in the work in California through the columns of the PACIFIC RURAL PRESS." This is but natural, for we have a community of thoughtful, progressive readers, and many of them by the necessities of agricultural life are isolated, and not able to avail themselves of the opportunities for study at established institutions. Knowing this, we have welcomed the fullest statements of purposes and methods from all societies which aim to facilitate and promote home study.

We have just received from the "Society to Encourage Studies at Home" a copy of the Boston Herald, of recent date, which gives a review of the society and its work. We cannot give space to the full article, but we select the following paragraphs as of most interest and importance:

A society of this kind had been established in England, and by chance one of the reports fell into the hands of Miss Anna Ticknor, who became at once imbued with the spirit of the work. She showed the report to Dr. Samuel Eliot, a man whose enthusiasm in the educational work among the masses is too well known to need comment, and both were instantly inspired with a desire to work out the idea suggested by the title. A correspondence was at once begun with the secretary of the English society, and the details of the work were fully learned, the result being the formation of a society in Boston in 1873. The American society, however, differs in some respects from the English organization. The committee in the beginning consisted of ten persons, and six of its members undertook the entire correspondence with 45 persons, who entered as students during the first term.

The society has just held its 14th annual meeting in Boston. Nineteen of those who joined in the infancy are still active in the work. During the term just ended the society has been busy with 558 students. Of this number 284 are old students and 274 are new, the number of the old and the new being thus nearly equally divided; 191 correspondents have had these 558 students in charge, and thus 749 women have been held together by intellectual bonds of sympathy, though scattered from Maine to Texas, from Bangor to San Francisco. Several of the students represent clubs—28, in fact. Still others have husbands or sisters sharing their studies, and 92 are teachers, whose pupils, it is hoped, profit by the influence which the society exerts. The perseverance represents about 81 per cent of the whole—a very good showing when one considers the difficulties under which much of the work must of necessity be done. Such figures might be associated only with superficial methods and inefficient discipline; but the society claims that such is not the case. Among other proofs of this is the fact that the certificate—which by the way is rarely given—is sought not only at the South and West, but here at home, because the reputation for thorough work which the society enjoys gives it a real value. When a certificate is given it contains a statement of the exact nature and amount of work done, and how well it was done.

One of the questions most often asked by persons interested in the work of the society, and yet ignorant of its extent, is what area of country is covered, and which States give the most students. The answer is ready: Thirty-seven States and one Territory are covered; Massachusetts leads, while New York follows very closely. The group of middle seaboard States, with the District of Columbia, gives a similar number; that is, Massachusetts gives 126, New York, 104; the group referred to, 101. The five New England States come next with 85 students, and keeping still at the North, five States are found, namely, Ohio, Indiana, Illinois, Iowa, and Kansas, furnishing 38; and three others, Wisconsin, Minnesota and Michigan, 28; California, Oregon, Montana, Colorado, and Nebraska give 23, and all the South and Southwest, 48. This does not agree with the impression, which the secretary says some possess here, that the society and its workers are chiefly wanted in lonely western places where population is sparse and resources few. The South is pressing forward—in this as in almost every progressive movement—and comes nearer to the West and Northwest in its claims, but the crowded East still leads the way.

A new experiment this year, in the section of the science course, was the taking up of sanitary science. This was joined in by three persons, one living in Philadelphia, the others in small places in the interior, all of whom corresponded with one lady, a member of the Sanitary Science Club, by which the questions were prepared that formed the basis of the whole scheme.

The library of the society has been increased to 2070 volumes. During the year 1287 volumes have been circulated without the loss of a single one, 305 students have used the books, and 63 associates have used the library in the capacity of teachers. As a proof of the amount of work that has been done, take the following figures: Letters from students to their corre-

spondents count up to 4389; letters from correspondents to students, 4835; letters received by the secretary, 3208; letters sent from headquarters, 2071; printed matter of various kinds, 2628, besides 1080 copies of the Annual Report. The financial condition of the society is good, \$2639.58 having been received during the year, and only \$1834 expended, leaving a comfortable balance in the treasury to begin another year with. It may be as interesting to note

The Various Studies

And the proportion of students to taking them as it was to find the places from which the students came. During the past year the history department, which leads all the rest except that of English literature, had 192 students, of whom more than 70 per cent persevered, nearly one-third taking first rank, a full third second rank, and only a few the lowest rank or no rank at all. Only five were dropped, dropping being the sole form of ignoring which the society knows. The methods in history are very fine and produce good results. A written examination is undergone every month. Many students persistently get 90, 95 and 100 on such examinations—on a scale of 100—and one of these took 100 seven times during the year. Political economy has been added to the history department and is proving very interesting. In the department of science 64 students were entered, of whom five took two sections of the same department. Twenty were excused, and only one was dropped for negligence. Nineteen took botany, 10 took geology, 18 took physical geography, 19 entered the mathematical section, and three, as has been already stated, entered the section of sanitary science.

Fourteen names were entered for the art department, and three of these students took up two art studies; that is, entered two sections. Twenty-three ladies carried on the correspondence, and the industry was great. The mail of this department alone counted up 2000 letters. One hundred and forty-three works, all of recognized value, were read.

How Students are Received.

An inquirer, writing to the secretary, obtains the circular of the society, stating the rules and the subjects in which it offers help, of which there are 30 for selection, included in six departments, with section and subsection, and among these she is to select one only for the beginning. She then pays the required small fee. To the new student two papers are sent, a printed receipt for the money, with which are included these three general questions: How old she is, whether educated at public or private schools, and whether she is a teacher, and a copy of a short letter from the head of the department selected by her, asking other questions appropriate to the subject of the study and giving some directions. These answers to these questions guide the head of the department in her selection of the correspondent. No further direct communication takes place between the secretary and the student, but every month a formal report is received at headquarters from each correspondent, giving certain items for record about each of the students. Meantime the head of the department sends to the new student the name and address of the correspondent to whom she is assigned, with printed directions for the mode of work. The fourth book to be used is, if she desires it, sent from the Lending Library, and she begins to read with the practice of making memory notes, being expected thenceforward to write at the beginning of each month to her special adviser, inclosing a specimen of these memory notes. To this letter she is to receive a prompt reply, and from time to time she will be asked to write an abstract or to answer examination questions, on honor, without referring to books, all for the purpose simply of securing her grasp on the contents of the books she reads, and fixing in her memory the important facts.

The Work on this Coast.

In 1876 an agency of this society was established in San Francisco. Through it time may be saved to students on the Pacific Coast both in the preliminary steps necessary to joining the society and in later correspondence. Further information may be obtained by addressing the secretary for the Pacific Coast, Mrs. E. B. Barker, 14 Stanly place, S. F.

A Remarkable Growth.

The many friends of Messrs. Montgomery Ward & Co., formerly at 227 and 229 Wabash avenue, Chicago, will be glad to know that the rapid growth of their business has forced them to remove from Wabash avenue to 111, 112, 113 and 114 Michigan avenue, where they have purchased a magnificent building, the seven floors of which they will occupy exclusively. These seven floors are each 100x166 feet, aggregating nearly 120,000 square feet (about 3 acres) of floor surface. The new quarters will enable them to handle their large business to the better advantage of their thousands of customers. Fifteen years ago Messrs. Montgomery Ward & Co. occupied but one room, and that only 25x40 feet. The enormous growth of their business during these fifteen years can only be explained by the fact that they sell direct to consumers, supplying all their wants, and never misrepresent any article. The success of this house proves the old saying, that "Honesty is the best policy," and from this policy they never deviate. The Fall Catalogue issued by Messrs. Montgomery Ward & Co. ought to be in every family.

Money Loaned

On Country Real Estate in large and small amounts at lowest rates, by A. Schuller, 106 Leidesdorff St., room 3.

Washing Easily Done.

A girl 12 years old can do a family washing with the King of Soaps in two hours. Try it.

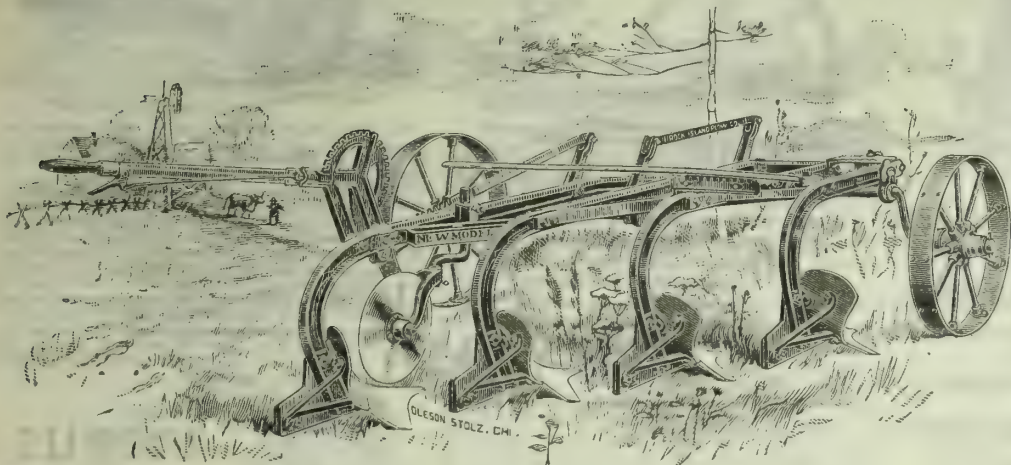
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GENERAL AGENTS FOR

THE NEW MODEL GANG,



A Plow fully up to the demands of the times, and SURPASSING ANYTHING in the Plow line EVER BROUGHT OUT, in simplicity and neatness of construction, ease of management, lightness of draft, and adaptability to all kinds and conditions of soil.

It is entirely NEW IN DESIGN, neatly and substantially put together, and operated with a single lever, which raises and lowers the Plow and levels it at all depths. The operator walks beside the Plow, on the unplowed land, or behind in the furrow, as preferred, in easy reach and control of both the Plow and the team.

ITS ADVANTAGES are very apparent to every practical farmer; more and better quality of work can be done, a more uniform depth and width of furrow made, with lightness of draft and ease of management under all conditions of soil. Especially when the ground is hard and dry does it show its superiority to the greatest advantage—sticking to its work and turning a sixteen-inch furrow as deep as may be desired, and with as light, or lighter, draft than any fourteen-inch hand plow. The harder the ground, the greater difference in its favor.

IT IS VERY NEAT and substantial in its construction. The beams and wheels are of steel, and all castings of malleable iron, giving at once lightness with great strength and durability.

The shares are so made that they will cut full width until completely worn out. The team is hitched directly to the beams, close to the work, and, having no tongue, it will plow as close to the fence at the end of the furrow as an ordinary Plow, and is turned as easily as a sulky; in fact, it is so easily operated and controlled that a boy can handle it readily.

Buggies, Buckboards, Harness, Etc., Etc. THE FLINT ROAD CART,

The Finest Finished and Best Proportioned Cart Manufactured.

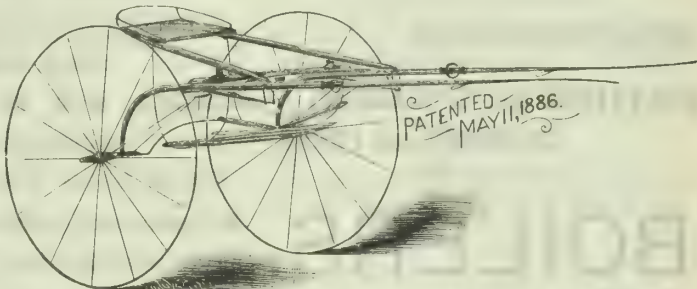
From the accompanying electrotpe it will be seen that the seat-arms of the Flint Cart rest upon each end of the cross bar and extending to the shafts, are connected by encircling shackles to springs placed beneath them, and working entirely independent of the shafts. This arrangement obviates all horse motion. It prevents galling and chafing the horse. It balances the cart regardless of the different weights of drivers; and the springs working independent of the shafts, relieves both seat-arms and shafts from the strain found in all carts that ATTACH the seat-arms direct to the shafts, and thus fastened, the weight of the driver causes no lateral or vertical motion of the shafts, which ride as easily as a buggy. By this principle, and by attaching the ends of the seat-arms to springs, the driver rides with much greater comfort—never experiencing jolting or violent motion on rough and uneven roads.

Another great improvement will be found in the foot rest, which allows the driver plenty of room and the most comfortable position; at the same time the horse is hitched much nearer the driver than in any other style of cart, which at once recommends itself.

The style of spring, and manner the different attachments are made, does away with all unnecessary material, reducing the weight to from 75 to 90 pounds, while retaining all the strength of a heavier cart.

The attachment of the shafts is perfect. By the use of a patent heel fastener, there can be no possibility of their slipping or loosening, and being clipped to the axle close to the hub, all weight is carried near the end of axle giving the greatest strength.

Shafts, Crossbars, Seat-arms, etc., are of the very best selected SECOND-GROWTH ASH AND HICKORY, and wheels are of the finest quality shell or compressed band. Springs best Swede steel and oil tempered. Leggett's or Sheldon's double collar interchangeable steel axles.



THE FLINT ROAD CART.

SEND FOR CATALOGUE.

SAN FRANCISCO:
Junction Market, Pine and
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BAKER & HAMILTON.

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Nos. 9, 11, 13, and 15
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EASTERN OFFICE: 88 Wall Street, New York.

IMPORTERS, MANUFACTURERS, AND DEALERS IN

HARDWARE AND AGRICULTURAL IMPLEMENTS.

Benicia Patent Angle Iron Harrows.



One Section, with 24 Teeth.....	\$12 00
Two Sections, with 48 Teeth and Draft Bar.....	24 00
Three Sections, with 72 Teeth and Draft Bar.....	36 00
Four Sections, with 96 Teeth and Draft Bar.....	48 00
Two Sections will harrow 9 feet wide; three Sections will harrow 12 feet wide; four Sections will harrow 15 feet wide.	

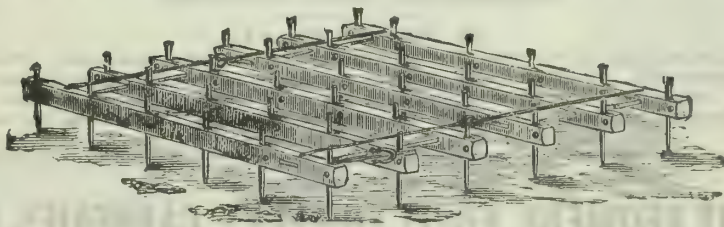
Possesses many advantages over other Iron Harrows now in the market. The frames made of angle or L-shaped iron of good quality, combining both strength and lightness. The teeth are made on our special order, of peculiar pattern to best secure durability, and, like the frame, made light to insure ease of draft. They are driven through the frames, and then securely fastened by a bolt. The operator is thus enabled to lower them as they wear off, so that they can be kept even at point and utilized nearly the whole length. The Harrow is usually made in three sections—of 24 teeth each—working independently of each other, and adapting themselves to uneven surfaces; pulverizing all the soil alike, though connected, as the cut will show, by hinges and a draft bar.

This Harrow meets the wants of our farmers for an implement that weather cannot affect, that sun and rain cannot injure, that does its work of pulverization of every inch of the soil in the best possible manner, and at the same time is of light draft for the team.

There is no thread cut on end of teeth—to weaken them, nor nuts to lose off, as is the case with other Iron Harrows, but as before stated, all the objections in other patterns have been obviated in the BENICIA PATENT ANGLE IRON HARROW, and it is now pronounced by practical farmers who have tried all kinds, to be the most successful that has been introduced on this Coast, and from its merits alone there has sprung up a large trade and active demand. It is an indispensable implement. It surpasses all other Iron Harrows in every particular, costs less for repairs, while the teeth can be replaced in a moment.

OUR CLAIMS have been, and are daily being substantiated by farmers all over the Coast. Don't make a mistake in ordering, but remember that the BENICIA PATENT ANGLE IRON HARROW with STEEL TEETH, is the BEST, CHEAPEST and LIGHTEST DRAFT MADE.

Wood Bar Harrows.



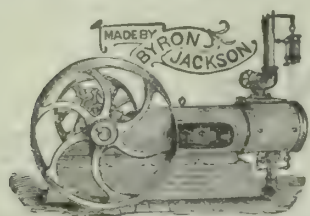
No. of Teeth.	Weight complete with 3x3 Steel Teeth.	Weight complete with 2x2 Steel Teeth.	Weight of Frame without Teeth.	Price of Frames only.	Price, complete with 3x3 Steel Teeth.	Price, complete with 2x2 Steel Teeth.	Price of Harrow Teeth per lb.
30 Teeth.	117 lbs.	121 lbs.	87 lbs.	\$ 6 75	\$10 00	\$10 75	Iron, 3 square...6 cts
36 "	146 "	152 "	100 "	7 35	11 00	11 75	Iron, 2 square...6 cts
42 "	167 "	173 "	125 "	8 10	12 25	13 25	Steel, 3x3...8 cts
48 "	196 "	202 "	144 "	9 00	13 75	14 75	Steel, 2 square...8 cts
56 "	210 "	217 "	164 "	10 10	15 75	17 00	Steel, 3 square...8 cts
64 "	248 "	256 "	184 "	11 75	18 00	19 50	Steel, 2 square...8 cts
72 "	298 "	307 "	226 "	14 25	21 75	23 50	Steel, 3x3...8 cts
90 "	350 "	351 "	280 "	17 25	26 50	28 00	Steel, 2 square...8 cts
100 "	400 "	431 "	330 "	19 00	29 00	31 00	Steel, 3 square...8 cts

We make superior Wood Bar Harrows, of all sizes, from thirty to one hundred teeth. The bars are ash or oak, about 2 1/2 x 3 or 3 1/2 inches, with corners and ends neatly rounded. The teeth are from half-inch or five-eighths square steel. A three-eighths carriage bolt is put through the bars close by EVERY tooth, thus preventing any possibility of splitting. The hinges are of what is known as the flexible pattern, and allow each section to have an independent vertical motion of a few inches. They also couple or connect without the use of pins, bolts, or anything of the kind. All of our Harrows are neatly varnished and made in a thorough and workmanlike manner.

COMPLETE
IRRIGATION AND DRAINAGE
OUTFITS.

BYRON JACKSON

STEAM ENGINES

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BOILERS.

"SPECIAL" ENGINES

—FOR—

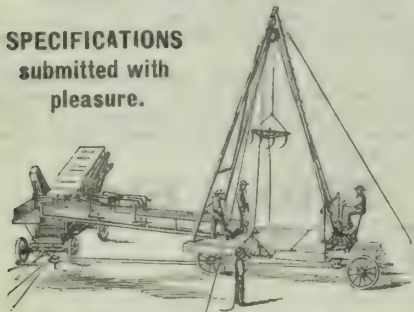
Electric Lighting

—AND—

PUMPING.

SUPERIOR ECONOMY GUARANTEED.

SPECIFICATIONS
submitted with
pleasure.

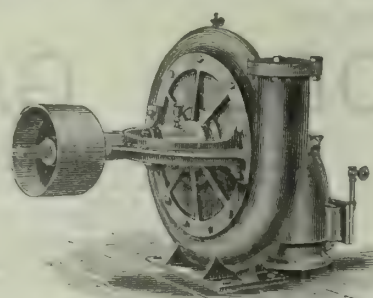


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SELF-FEEDERS

FOR THRASHING MACHINES.

ELEVATORS and SPREADERS,

DERRICKS and FORKS,
ETC., ETC., ETC.

CENTRIFUGAL PUMPS

—FOR—

Irrigation and Drainage.

Both Vertical and Horizontal, for pumping
from wells, rivers, etc.

DEEP WELL PUMPS A SPECIALTY.

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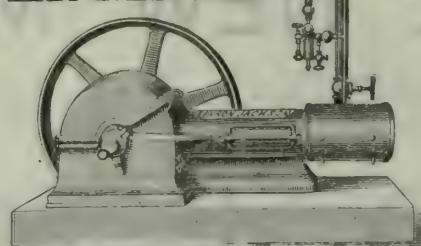


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BYRON JACKSON,
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Complete with all the Latest
Improvements.

Call and See Them.

Automatic Expansion
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I make these Engines in all sizes, carrying usual sizes
in stock for prompt delivery. All working parts are
inclosed, running in oil, insuring perfect lubrication and
requiring less skill and attention than any other.

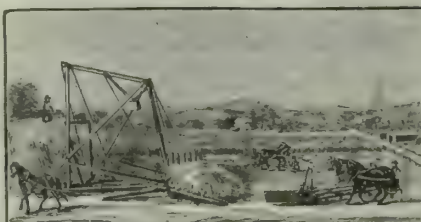
They are solid, substantial Engines—strictly first class
in every respect—developing very high economy, and
fully the equal of the best Eastern makes.

EST CORRESPONDENCE SOLICITED.

WRITE FOR
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BYRON JACKSON,
625 SIXTH ST.,
SAN FRANCISCO, CAL.HAS NO
SUPERIOR
for
Economy
and
Durability.

The above shows general design of my larger-sized
Stationary Engines. I have patterns for 10x20-inch,
12x20-inch, and 12x24-inch—others under way, and can
generally make prompt deliveries.

THE GOVERNOR is an automatic cut-off, controlling a single slide valve by a direct action on the eccentric, and is connected directly to the valve without any complication of rock shaft, tappets, springs, or dash-pots. A special point, covered by U. S. Patent, is the driving crank or link, connecting the actuating eccentric to the driving disc, so the governing eccentric may be moved about the shaft within the other eccentric (which drives the valve) by the centrifugal and centrifugal action of the weighted arms and springs. The governing force is thus relieved from the strain of moving the valve. I believe this single feature makes this governor superior to any other of its class.

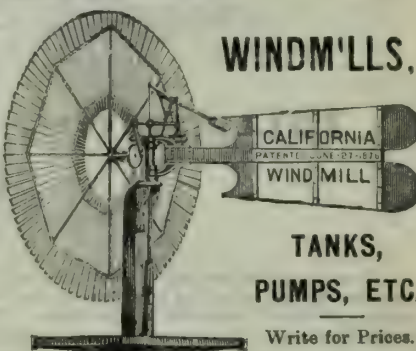


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"ECLIPSE" STACKERS,

And LOADERS.

LATEST IMPROVED RAKES.



WINDMILLS,

TANKS,
PUMPS, ETC.

Write for Prices.

Parties interested in these machines, and especially those who have land to irrigate or reclaim, are requested to write me, stating fully their probable wants. It costs nothing and may save you money, as I have given the subject careful study for many years, and have spent thousands of dollars developing and perfecting the complete and very economical steam power pumping outfits I am now offering for sale.

BOILERS.

All sizes and styles, either for setting in brick, or semi-portable, on
skids with fire-box. PRICES given on application. Address

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GRANGERS' CO-OPERATIVE STORE,

TENTH AND K STREETS, SACRAMENTO.



DEALERS IN

General Merchandise, Groceries, Agricultural Implements, Wagons,
CARRIAGES AND BUGGIES.

A New Deal.

We buy for cash and sell for cash. The old credit system has been abandoned. We will not be undersold. We guarantee all goods as represented. We will give good value for your money. Our motto is quick sales and small profits and speedy returns.

Farmers and consumers will find it to their interest to call and see us and be convinced.

T. A. LAUDER, Manager.

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FRUIT GROWERS, FRUIT SHIPPERS, CANNERIES, ETC.

The ALLEGRETTI GREEN FRUIT TREATMENT and STORAGE SYSTEM
COMPANY announce that they are now ready to store and treat all kinds of Green Fruit,
Vegetables, and other Perishable Articles, on Storage System, by the week, month, or for
shipment East.

This system is well known among fruit-growers, its power of preserving fruits, etc.,
in a fresh state, having been fully demonstrated with most satisfactory results.

For particulars, address

ALLEGRETTI STORAGE CO.,

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GEM ROLLER ORGAN.

WONDERFUL! PERFECTION AT LAST!

THE LATEST IMPROVED

Musical Instruments.

ALL ARE ENCHANTED WHO HEAR THEM.

Send for descriptive circular and make home happy. Price, \$5, \$7,
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They play the songs of every country, including those of France;
For lodge, church or social meetings; for concert or a dance.
No experience is needed, the tone is full and sweet,
For the music is all perfect and the parts are all complete.

ALL APPLICATIONS TO

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SAN FRANCISCO, CAL.

Band Instruments, Pianos and Organs, Sheet Music, Strings, Etc. P. S.—Send your orders by Mail or Express.
Write for CIRCULARS AND FULL INFORMATION—FREE.

The Pacific Mutual Life Insurance Co.

OF CALIFORNIA. ORGANIZED 1867.

Paid to Policyholders and their representatives, more than.....\$3,500,000
Assets Exceed.....1,600,000

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It is the only Life and Accident Insurance Company transacting business in the United States who its stockholders are
by law made liable for the debts of the corporation, and whose directors are made responsible for the acts of its officers
PAID IN BY THEM. The Company's investments earn the highest average rate of interest of any Company in the world, and
its location is a guarantee that this will be perpetuated, thus assuring the greater dividends to policyholders.

DEATH CLAIMS PAID DURING THE FIRST EIGHT MONTHS OF 1887.

Observe particularly the promptness with which payments follow proofs of deaths. On September 1, 1887, the Com-
pany had no unpaid claims on hand.

LIFE
INSURANCE
—ON—
APPROVED
PLANS.

POLICIES

—ARE—

LIBERAL,
EQUITABLE,
World-Wide,
Incontestible.

NAME.	Residence.	Amount.	Proofs Received.	Claim Paid.
Louis Lepetit	Oakland, Cal.	\$ 600	Jan. 24	Feb. 17
S. V. Wardrobe	Stockton, Cal.	7,308	Feb. 25	Feb. 25
W. H. Doyle	Shanghai, China	10,000	Feb. 25	Feb. 26
W. E. Hughes	Fresno, Cal.	5,000	Feb. 24	Feb. 23
F. Wiedmayer	Ft. Dodge, Iowa	125	Feb. 10	Mar. 2
Hasel Jewell	Fresno, Cal.	2,000	Mar. 2	Mar. 7
W. G. Shaffer	Yacoma, W. T.	1,000	Mar. 9	Mar. 9
J. W. Howell	Wheatland, Cal.	4,000	Mar. 21	Mar. 25
J. L. Jones	San Francisco, Cal.	10,000	Mar. 10	Mar. 25
D. E. Norton	El Dorado, Cal.	1,000	Mar. 17	Mar. 30
Eli T. Stone	Modesto, Cal.	405	April 11	April 18
C. F. J. Kitchener	Modesto, Cal.	2,000	April 11	April 18
C. M. Van Doren	Traver, Cal.	5,000	April 19	April 21
Margaret Brooks	White River, W. T.	3,000	Mar. 28	April 29
Mrs. F. A. Shepherd	San Francisco, Cal.	1,031	April 30	April 30
Elizabeth G. Toy	Georgetown, Cal.	5,001	April 29	May 3
Justus Lutz	Chicago, Cal.	2,220	May 5	May 14
J. J. Long	Colusa, Cal.	2,255	May 7	May 16
H. Van Huse	Missoula, M. T.	30	May 17	May 19
T. D. Day	Stockton, Cal.	800	May 29	May 21
B. J. Guthrie	Davisville, Cal.	5,000	May 11	May 24
Edw. D. Silby	San Francisco, Cal.	5,000	May 31	June 14
Lewi McMillan	White River, W. T.	2,000	June 30	June 30
Jesse A. Blauingame	Dry Creek, Cal.	970	July 7	July 7
George Obie	Empire City, Nev.	350	July 29	July 21
Andrew Jelby	Red Bluff, Cal.	1,100	Aug. 10	Aug. 16
Total		\$80,054	Aug. 15	Aug. 29

ACCIDENT
INSURANCE

—BY THE—

DAY,
MONTH,
YEAR.POLICIES ARE
DEFINITE,
Non-forfeitable

—AND—

Free From
Technicalities.

Principal Office, 418 California St., San Francisco, Cal.

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HELP

Of the very best kind, and of all occupations, at J. F. CROSETT & CO.'S EMPLOYMENT OFFICE, S. F. A1 domestic servants at Female Department, 202 Stockton St. First-class Farmers, Teamsters, Miners, Cooks, Waiters, Laborers and others at Male Department, 628 Sacramento St.

The State Fair.

(Continued from page 244.)

ment form. The success of the Allegratti system clearly appears from the experience at this fair. Early fruits, which were sent from Solano county and from the foothills to West Berkeley for storage a month before the fair opened, then taken out, shipped to Sacramento and exposed to the torrid weather of last week, have shown wonderful durability. Thus, some counties have been able to adorn their exhibits with fruit which is quite out of season and at the same time give a most valuable test to the system of storage.

Ten counties have entered for prizes under the county awards. It is interesting to enumerate them, beginning at the door of the north wing, or Horticultural hall, as it is properly called.

El Dorado county, with a horticultural and agricultural exhibit, supplemented with fine arts and photography showing county scenes.

Sacramento county, with a large space occupied with a most varied collection of products, grains and forage plants, field and garden vegetables in grand display, grape collections of James Rutter and the Natoma vineyard, supplemented by fruit exhibits from a score of growers, domestic triumphs in the shape of jams, jellies, etc., in profusion.

Placer county, filling both wall and table space with fruit in great variety and excellence, minerals of rare beauty and richness, grapes and wine and other articles beyond enumeration.

Nevada county has an exhibit, collected by J. R. Nickerson, a well-known fruit-grower. It is rich in fruit specimens, but hardly less so in mammoth vegetables and in other products of the field.

Humboldt county, as mentioned last week, with its peerless forest products, its instructive photographs and cabinets of minerals and gems—the whole supplemented by such generous field products as red clover, with stems over seven feet high, etc.

Tehama county, also mentioned last week, has now a spread of as grand apples as ever tempted Eve in Paradise; also vegetables and a variety of grain.

Solano county has a display especially rich in the splendid dried fruits of the Vacaville district. Here, too, a fine collection of photographs give the visitor a good general idea of the country.

Yolo county is represented by an exhibit from the Winters district, beautiful dried fruit in great variety.

Yuba and Sutter counties have a joint display, gathered by W. G. Murphy, including both delicious and citrus fruits and most excellent canned goods from the Sutter cannery. To Sutter county also might, perhaps, be credited the splendid individual exhibit of B. N. Bugbey, mentioned last week.

All these displays are in Horticultural hall. Two counties occupy the conservatories (one each) Colusa and San Joaquin, as mentioned last week. Colusa has added greatly to her material during the week, and the exhibit is now quite comprehensive, and excellently set forth.

San Joaquin has her conservatory filled to overflowing with a most excellent and comprehensive display. The place of prominence above the general collection of products is occupied by a triumph of decorative art in the shape of a Houser Combined Harvester, worked in different colored grain heads upon a wire-cloth backing. The form of the machine is faithfully wrought out, and the choice of shades is so art-like that sunshine and shadows are shown. It is the handsomest thing of the kind we ever saw. Such an ornament is well supported by the general tastefulness with which the San Joaquin exhibit is displayed. As for the material shown, it is the most varied in the fair.

The decision of the judges on the county exhibits is looked for with great interest. Governor Waterman has shown his bravery by accepting a place upon the judging committee.

We call it brave for no professional politician would dare to offend nine counties by a single act. But Gov. Waterman will decide honestly and fearlessly, and will, we doubt not, in the end win friends by his courage.

A Graceful Act.

It was a happy thought of the citizens of Sacramento, headed by Mayor Gregory, to tender to all those connected with the county displays a banquet in the name of the city. The affair came off on Monday night, and was a great feast of viands, followed by a great flow of speeches, representatives of each county responding to toasts. Such events tend to teach our people more about each other, and the end is a wider fellow feeling and sympathy.

Other Matters.

There are many other matters which cannot be reached in time for this week's RURAL. The display of agricultural implements and machines has many good points and will be taken up at another time. Other matters too will then receive attention.

Los Angeles Pomological Fair.

The fair in Hazard's pavilion, Los Angeles, under the auspices of the County Pomological Society, was opened Monday evening, Sept. 12th, by the president, Hiram Hamilton, who spoke as follows:

Fellow-Citizens, Ladies and Gentlemen of the Los Angeles County Pomological Society: Since the organization of this society, we have held ten quarterly meetings, in eight different cities and towns of this county, in each of which a handsome exhibit of fresh fruits and flowers has been made, showing the practicability of such an exhibit during each and every month of the year. The moon never waxes and wanes here without the ripening of some fruit. Oranges, lemons, and strawberries mature in the open field every month when skillfully managed. Vegetables grow and ripen continually. Alfalfa yields from six to eight crops per year. The same soil that grows a good crop of barley or wheat during the cooler months, also grows a good crop of corn during the warmer months of the same year, sometimes yielding 140 bushels per acre, often 100. Frosts in Los Angeles county are almost unknown, except in the higher altitudes. The sun never shines upon a land where the rewards of toil are more abundant or sure. The evidences of these facts are now before you, and the Hon. Henry T. Hazard, the proprietor of this pavilion, this magnificent temple of industry, will now welcome you.

Mr. Hazard responded. An address was also made by Gen. W. A. Pile of Monrovia; and Bartlett's 7th Infantry band discoursed fine music.

The building is admirably fitted for a horticultural display; generous table-room had been provided for all sections of the county; all space was taken, and although there was some tardiness about bringing in and placing the exhibits, the middle of the week beheld an output of fruits than which, it was averred, none more complete and attractive has ever been seen in the City of the Angels.

One of the most noticeable exhibits was that of Milton Thomas of Los Angeles. This occupied a table 50 by 12 feet, which was covered with plates to the number of 325 or 350, containing about 150 varieties of apples, pears and peaches.

Among the Alhambra exhibitors, Wm. Stevenson had 13 varieties of apples, two of oranges and two of peaches; G. B. Adams, three varieties of apples, five of oranges and one of pears; F. G. Story, four varieties of figs, two of apples, one of quince, 12 of grapes and two of oranges; W. L. Phillips, 18 varieties of pears, four of pomegranates, six of apples and two of quinces; and Frank Williams, five varieties of peaches, five of grapes, two of pears and two of apples.

S. Rems of Downey showed three varieties of quinces, 25 of pears, two of plums and 36 of apples; and James Stewart, six varieties of grapes, two of figs and eight of apples.

Prominent in Santa Ana's exhibit were the dried figs, prunes and pears of D. Edson Smith, which had been subjected to a fumigating process, after which they were dried in the sun, being turned regularly at 5 o'clock P. M. The rich red color of the French prunes renders them specially attractive. Eastern people could but marvel to see fine specimens of oranges and quinces growing side by side, the branches of the trees intermingling. T. O. Wightman showed samples of eucalyptus 22 inches in circumference, which had attained a height of 43 feet in 24 years, from the seed.

Leonard Parker of Anaheim had on exhibition a watermelon weighing 90 pounds, which took first premium, and he, as well as H. Hamilton of Orange and Wm. Halesworth of Santa Ana, showed cornstalks 17 feet high, bearing ears over a foot in length, which weighed from 5 to 7 pounds each.

The Westminster settlement sent a large and varied collection of products, among which S. Lyman presented six red beets that weighed over 60 pounds each, but five months from the seed; J. T. Anderson, a bundle of small yellow corn that yielded 100 bushels per acre, and a bundle of early amber cane, yielding 300 to 400 gallons of syrup per acre; S. W. Hadley, 17 varieties of apples and two of pears; E. S. House, silver-skin onions, 600 bushels to the acre; Mr. Jefferson, 20 red-eyed potatoes, weighing 32 pounds; Mr. Teel, sample corn, 18½ feet, 4 ears to the stalk, and popcorn with 37 ears to the hill; Josiah McCoy, 16 varieties apples, lemons, quinces, Japanese persimmons and a pumpkin weighing 186 pounds; and J. B. Monlin, scalloped pumpkin, 147 pounds.

Very choice samples of clean, heavy white wheat and of white oats were shown by Herman Johansen and G. D. Reed of Antelope valley.

Gen. J. H. Shields' quaint nests of wild clematis and other vines, filled with delicious peaches from Crescenta Canyada, attracted great attention.

A novelty in the Pasadena exhibit was the fruit of the jujube, shown by E. A. Bonine.

An interesting display of articles made from native woods, found abundantly in the foothills and mountains of the State and claimed to be equally serviceable with lignumvite, was made by J. A. Sanders.

For giving anything like a fair notion of the variety of products shown, we must refer to the list of awards, which we hope to publish in this or a subsequent issue.

The attendance and receipts were rather disappointing, though they increased in the course

of the week; but the society was several hundred dollars out by the exhibition. It would seem that the good people of Los Angeles have become so used to fine fruit that they do not care to pay out money to see even the choicest.

But Friday, when the baby-show came off, there was a grand gathering. Forty-one candidates for premiums were entered, 17 being over one year old and under two years old, and 24 under one year. The prizes ran as high as \$20 in gold coin for single babies, and \$25 for twins. The competition was lively, and the duties of the awarding committee quite arduous, though fascinating.

At the close of the fair all the fruit that was fit for shipment, amounting to a carload, was carefully packed and started for St. Louis, where it is to be displayed during the G. A. R. encampment.

Henry George and the Land.

EDITORS PRESS:—Capitalists and middlemen already absorb a full share of the farmer's earnings. There is, then, no special need that the farmer should pay their taxes in addition to his own.

Some correspondent lately brought to your readers the utterances of many weighty names to indorse George's premises and promises. Authority in political economy seems so evenly balanced that it is not easy to tell how the scale hangs. Moreover, Mr. George founds his doctrines (if I read aright) on the overthrow of all past theories, such respect has he for authority. I profess like respect. To me American and Freethinker are (or should be) terms synonymous.

Put Mr. George's doctrines in their most seductive aspect, and this hard residuum of fact still remains, that the land is to bear the entire burden of taxation. The produce of the land must eventually pay that taxation. Call that cinching the landlord if you will, experience tells me it will be the farmer who will feel the pinch.

I entertain no repugnance to "nationalizing land" so you nationalize brains, nationalize brawn, nationalize capital of all kinds. My own pet creed is all that a man has is for the benefit of his fellows; that, instead of priding himself on the possession of superior powers or possibilities, and using those powers and possibilities for his own exaltation and the further abasement of his inferiors, it should be his pleasure to devote his all to the advancement of the race. "He that is greatest among you let him be your minister."

If Mr. George thinks that happiness and virtue consist in the possession of a half acre of land, with a right to pay taxes thereon to a free and enlightened Government, how does he account for the pinching poverty and sordid misery of the French peasant?

Whatever new-fangled legislation may regulate land tenures, it can never prevent supply and demand ultimately fixing rental or sale values. It is about as clean, simple, and cheap in the long run to pay a big rent to a grasping landlord as to pay a heavy bribe to some tax-eating corruptible. The effects of official meddling with land values in Ireland have not been so happy as to make desirable similar interference in America. EDWARD BERWICK. Carmel Garden, August, 1887.

A Good Old Friend Passed On.

John Taylor of Mount Pleasant, Tuolumne county, whose contributions to the RURAL, both prose and verse, have made him seem like a familiar friend to our readers these many years, has passed from earthly scenes. On the 7th instant a load of wood tipped over upon him and caused his death, but he was alone when the accident befell, and was not found until 10 o'clock that night.

Mr. Taylor was born in Scotland in 1816, and consequently was 71 years of age. He came to California among the pioneers of '49 and located himself about a mile from Chinese Camp, under a tree beside the old Sonora road, on the spot where his hotel was built after ward. Thither came his wife, direct from Scotland, the ensuing year; and there they made their home, kept a house of entertainment for travelers and raised a family of intelligent children. Loved and respected by all who knew them, their amiable manners and just dealings drew around them a large circle of cordial friends.

About two years ago Mrs. Taylor departed this life, and now her venerable husband has followed her, leaving a son and three daughters, to whom, in their bereavement, goes forth a wide and tender sympathy.

"For My Boys."

The widow of a subscriber, who died suddenly in August last leaving her and their eldest son to maintain the family, says, toward the close of a business letter:

Please send the RURAL PRESS right along. We need it more than ever since Mr. J.'s death. It is just the pure, practical reading I wish for my boys. . . . The RURAL is such a good friend that it seems you must be too.

We are very thankful to know that those left in so trying circumstances feel they have in the RURAL and its publishers friends who may be trusted. Hoping and meaning still to deserve such confidence, we extend to the tried ones our cordial sympathy in their brave endeavor. May they be comforted, sustained and victorious.

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To favor subscribers to this paper, and to induce new patrons to try our publication, we will furnish, to those who pay fully one year in advance of date, if requested the following articles (while this notice continues), at the very greatly reduced figures named at the right:

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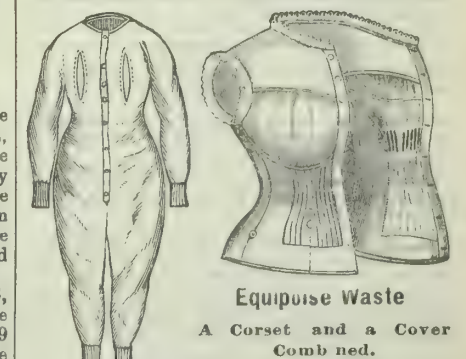
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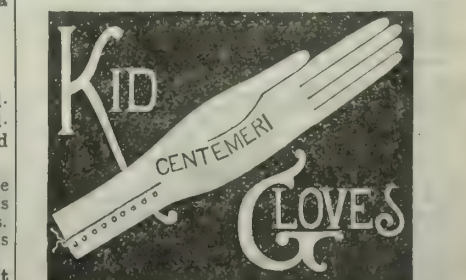
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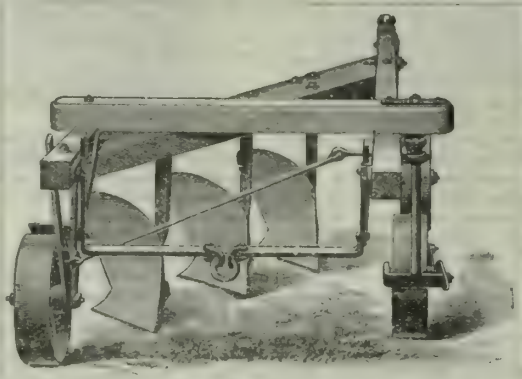
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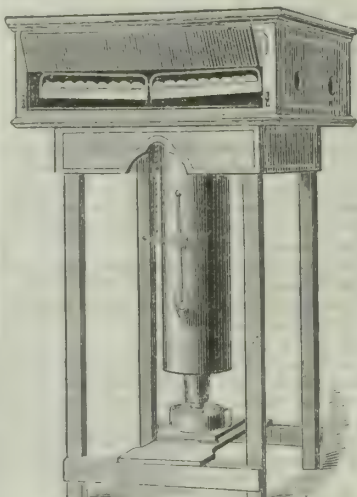
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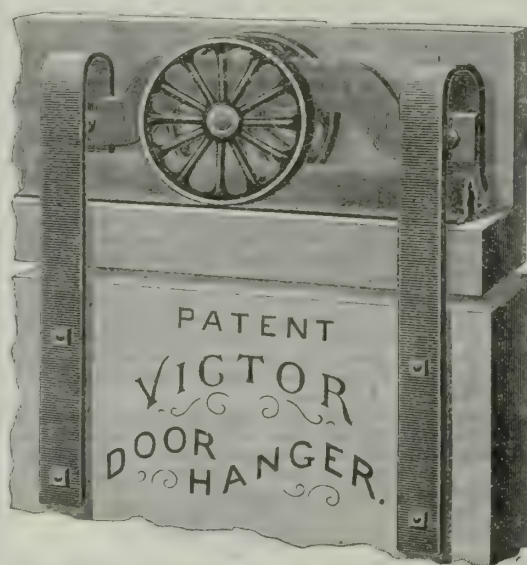
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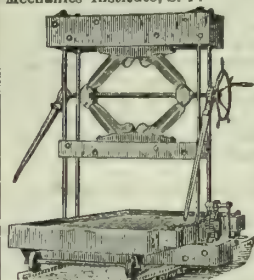
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Has two baskets, by which you can fill the second basket while the first one is under the press, thereby doing double the amount of work that can be done on any screw or lever press in the market that use only one basket, for this reason: While my press is working continuously the other kinds are doing nothing during the time they are emptying and filling their basket.

Printed Testimonials can be had on application of the following parties, who have bought my press: J. B. J. Portal, San Jose; Wm. Pfeiffer, Guberville; Joseph Walker, Windsor; Kate F. Warfield, Glen Ellen; Joseph Drummond, Glen Ellen; Isaac De Turk, Santa Rosa; John Hinkelman, Fulton; J. & F. Muller, Windsor; R. C. Stiller, Guberville; Lay Clark & Co., Santa Rosa; Vache Freres, Old San Bernardino; J. F. Crank, San Gabriel; James Finlayson, Healdsburg; P. & J. J. Gobbi, Healdsburg; Wm. Allen, San Gabriel; Wm. Metzger, Santa Rosa; J. Lawrence Watson, Glen Ellen; Walter Phillips, Santa Rosa; Geo. West, Stockton; Eli T. Shepard, Glen Ellen; Rancheto Wine Co., Rancheto, Los Angeles Co.; Downing Fruit & Wine Co., Downey; J. L. Beard, Centerville; Wm. Palmatier, Hollister; A. Burnham & Son, Santa Rosa; Paul O. Burns Wine Co., San Jose; E. Emil Meyer, Santa Cruz Mountains, Wright P. O.; Marshall & Hill, Laguna Station; R. J. Northam, Anaheim.

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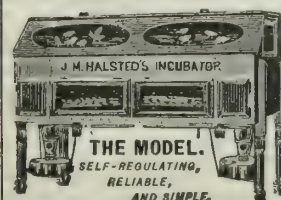
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Pirkin, new.	22	@	25	Broilers.	3 00 @ 7
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OBSOLETE				Do. blarad.	@
Cheese, Cal.	11	@	14	Do. sprig.	@
Eastern style.	13	@	14	Geese, pair.	1 50 @ 2 00
EGGS				Do. Goslings.	@
Cal., ranch, dos.	37	@	40	Wild Gray, dos.	@
do. store.	30	@	35	Turkeys, b.	17 @ 21
Ducks.		@		do. dressed.	@
Oregon.		@		Turkey feathers,	@
Eastern.	19	@	21	tail and wing.	@
FED.				Snipe, Eng. dos.	@
Brass, ton.	17	@	18 00	do. Common.	@

Cornmeal.....	23 00 @	Doves.....	— @	—
Gr'd Barley ton.....	23 00 @	Quail.....	— @	—
Hay.....	10 00 @	Rabbite.....	1 00 @	—
Middlings.....	28 00 @	Hare.....	1 25 @	—
Oil Cake Meal.....	26 50 @	Venison.....	— @	—
Straw, bale.....	35 @			
FLOUR.				
Extra, City Mills.....	4 50 @	5 00 @		
do Country Mills.....	4 25 @	4 75 @		
Superfine.....	3 75 @	4 00 @		
GRAIN, ETC.				
Barley, feed, cbl.....	90 @	96 @		
do Brewing.....	1 10 @	1 85 @		
Chevalier.....	1 50 @	1 55 @		
do Coast.....	— @	— @		
Buckwheat.....	1 00 @	1 20 @		
Corn, White.....	1 15 @	1 25 @		
Yellow.....	1 15 @	1 25 @		
Small Round.....	1 20 @	1 39 @		
Nebraska.....	1 07 1/2 @	1 15 @		
Oats, milling.....	1 50 @	— @		
Choice feed.....	1 40 @	1 45 @		
do good.....	1 37 1/2 @	1 40 @		
do fair.....	1 20 @	1 30 @		
do black.....	— @	— @		
do Oregon.....	— @	— @		
Rye.....	1 25 @	1 50 @		
Wheat milling.....				
Gilt edged.....	1 42 1/2 @	1 45 @		
do Choice.....	1 40 @	— @		
do fair to good.....	1 35 @	— @		
Shipping choice.....	1 27 1/2 @	— @		
do good.....	1 25 @	— @		
do fair.....	1 20 @	— @		
HIDES.				
Dry.....	14 @	16 @		
Wet salted.....	7 1/2 @	8 1/2 @		
HONEY, ETC.				
Bee wax, D.....	20 @	22 @		
Honey in comb.....	11 1/2 @	14 @		
Honey in comb.....				
do fancy.....	14 @	16 @		
Extracted, light.....	5 @	6 @		
do dark.....	4 @	5 @		
HOPS.				
Oregon.....	17 1/2 @	22 1/2 @		
California.....	15 @	20 @		
ONIONS.				
Pickling.....	50 @	50 @		
Red.....	25 @	50 @		
Silverskins.....	40 @	65 @		
NUTS—JOBBER.				
Walnuts, Cal., D.....	12 1/2 @	13 @		
do Chile.....	8 @	10 @		
Almonds, hd shl.....	5 @	7 @		
Soft shell.....	14 @	15 @		
PROVISIONS.				
Cal. Bacon.				
Heavy, B.....	104 @	11 1/2 @		
Medium.....	11 @	12 1/2 @		
Light.....	12 @	13 @		
Extra Light.....	13 @	14 1/2 @		
Ham.....	7 1/2 @	11 @		
Cal. Smoked Beef.....	1 1/4 @	12 1/2 @		
Hams, Cal.....	12 1/2 @	14 1/2 @		
do Eastern.....	14 @	15 1/2 @		
BEEDS.				
Alfalfa.....	8 @	9 @		
Canary.....	34 @	4 @		
Oats.....	11 @	12 @		
White.....	20 @	22 @		
Cotton.....	20 @	— @		
Flaxseed.....	2 @	3 @		
Hemp.....	4 @	4 1/2 @		
Italian Eye Grass.....	10 @	11 @		
Perennial.....	7 @	8 @		
Miller, German.....	5 @	6 @		
do Common.....	5 @	6 @		
Mustard, white.....	3 @	3 1/2 @		
Brown.....	3 @	3 1/2 @		
Rape.....	14 @	2 @		
Key Blue Grass.....	15 @	17 @		
2d quality.....	13 @	15 @		
Sweet V. Grass.....	7 @	8 @		
Orchard.....	17 @	18 @		
Red Top.....	9 @	10 @		
Hungarian.....	8 @	40 @		
Lawn.....	8 @	40 @		
Mesquit.....	8 @	9 @		
Timothy.....	7 @	7 1/2 @		
TALLOW.				
Crude, D.....	2 @	— @		
Refined.....	6 @	— @		
WOOL, ETC.				
FALL—1887				
Humboldt and				
Mendocino.....	18 @	20 @		
Sacramento valley.....	14 @	18 @		
Free Mountain.....	18 @	20 @		
N'hern defective.....	— @	— @		
3 Joaquin valley.....	11 @	16 @		
do mountain.....	12 @	17 @		
Cava's & F. Hill.....	12 @	17 @		
Oregon Eastern.....	14 @	20 @		
do valley.....	16 @	21 @		
Southern Coast.....	9 1/2 @	15 @		

Fairs to Come.

Mechanics' Institute, San Francisco, Sept. 1 to Oct. 8.
 California State, Sacramento, Sept. 12 to 24.
 Oregon State, Salem, Sept. 12 to 17.
 Los Angeles Co. Pomological, Los Angeles, Sept. 12 to 17.
 Nevada State, Reno, Sept. 21 to Oct. 1.
 Second Dist.—San Joaquin, Stanislaus, Merced and Tuolumne—Stockton, Sept. 26 to Oct. 1.
 Ninth Dist.—Humboldt and Del Norte—Rohnerville, Sept. 27 to 30.
 Eighteen Dist.—Alpine, Inyo and Mono—Independence, Sept. 27 to Oct. 1.
 Nineteenth Dist.—Santa Barbara, Sept. 27 to 30.
 Tenth Dist.—Siskiyou, Trinity and Shasta—Yreka, Sept. 28 to Oct. 1.
 Contra Costa Co. Agricultural, Oct. 3 to 8.
 Sixth Dist.—Los Angeles, San Bernardino and Ventura—Los Angeles, Oct. 3 to 8.
 Eleventh Dist.—Plumas, Lassen, Modoc and Sierra—Susanville, Oct. 3 to 8.
 Eastern Slope, Bishop Creek, Oct. 3 to 8.
 Seventh Dist.—Monterey and San Benito—Salinas, Oct. 4 to 8.
 Twenty-First Dist.—Fresno, Mariposa and Merced—Fresno, Oct. 4 to 8.
 Twenty-Fifth Dist.—Napa and Solano—Vallejo, Oct. 4 to 7.
 Twenty-Sixth Dist.—Amador and Calaveras—Yreka, Oct. 5 to 7.
 Portland Mechanics' Fair, Oct. 6 to 22.
 North Pacific Domestic and Fat-Stock Assoc., Portland, Or., Oct. 9 to 17.
 Fifth Dist.—Santa Clara and San Mateo—San Jose, Oct. 10 to 15.
 Fifteenth Dist.—Tulare and Kern—Visalia, Oct. 10 to 15.
 Third Dist.—Butte, Colusa and Tehama—Chico, Oct. 11 to 15.
 Twelfth Dist.—Lake and Mendocino—Ukiah, Oct. 11 to 15.
 Sixteenth Dist., San Luis Obispo, Oct. 12 to 15.
 Pajaro Valley, Watsonville, Oct. 20 to 22.
 San Diego Co. Horticultural and Agricultural, Oct. 28 to 30.

List of U. S. Patents for Pacific Coast Inventors.

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From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING SEPTEMBER 13, 1887.
 369,976.—DREDGER—H. B. Angell, S. F.
 369,682.—INCUBATOR—F. Biven, Stockton, Cal.
 369,846.—PITMAN—F. L. Emerson, Brentwood, Cal.
 369,715.—OAR-LOCK—H. M. Hoyt, Seattle, W. T.
 369,859.—SEED DRILL—J. H. Johnson, Traver, Cal.
 369,730.—BAG-LOCK—W. T. Milliken, Cheney, W. T.
 369,805.—ATMOSPHERIC BRAKE—A. B. Murray, San Rafael, Cal.
 369,809.—FLOW CLEVIS—M. Palen, Trego, Cal.
 369,883.—CONNECTING ROD—J. Richards, S. F.
 369,891.—WATER-HEATER—H. Stutsman, East Portland, Or.
 369,824.—EARTH-SCRAPER—J. Tretheway, Jr., Stockton, Cal.
 369,755.—RAILWAY CROSSTIE—W. L. Van Harlingen, Sr., S. F.
 369,756.—RAILWAY CROSSTIE—W. L. Van Harlingen, Jr., S. F.
 14,756.—TRADEMARK—Downie, B. I. P. Co., S. F.
 14,766.—TRADEMARK—L. D. Stone & Co., S. F.

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PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.]

DATE.	Portland.				Red Bluff.				Sacramento.				S. Francisco.				Los Angeles.				San Diego.			
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.
Sept. 15-21.																								
Thursday.....	.00	68	Nw	Cl.	.00	90	SE	Cl.	.00	88	Nw	Cl.	.00	82	W	Cl.	.00	80	W	Cl.	.00	68	W	Cl.
Friday.....	.00	60	Nw	Cl.	.00	90	S	Cl.	.00	92	S	Cl.	.00	61	W	Cl.	.00	82	W	Cl.	.00	68	Nw	Cl.
Saturday.....	.00	64	N	Cl.	.00	84	SE	Cy.	.00	76	S	Cl.	.00	61	SW	Cl.	.00	82	W	Cl.	.00	68	N	Cl.
Sunday.....	.26	50	S	Cy.	.00	70	SE	Cl.	.00	74	S	Cl.	.00	63	W	Cl.	.00	86	SW	Cy.	.00	70	Nw	Fr.
Monday.....	.94	58	S	Cy.	.00	78	N	Cl.	.00	72	Nw	Cl.	.00	66	NE	Cl.	.00	84	W	Cl.	.00	70	Nw	Cy.
Tuesday.....	.00	64	Nw	Cy.	.00	82	Om	Cl.	.00	78	Nw	Cl.	.00	64	W	Cl.	.00	82	W	Cy.	.00	72	Nw	Cl.
Wednesday.....	.00	60	Nw	Cl.	.00	86	N	Cl.	.00	78	Nw	Fr.	.00	68	W	Cy.	.14	72	E	Cy.	.00	74	Nw	Fr.
Total.....	1.26				.00				.00				.03				.14				.00			

EXPLANATION.—Cl. for clear; Cy. cloudy; Fr. fair; Fy. foggy; — indicates too small to measure. Temperature. Wind and weather at 12:30 m. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

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 "Oak View Ranch, Contra Costa Co., Aug. 17, 1887."
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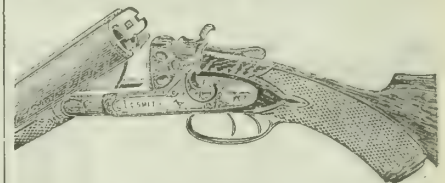
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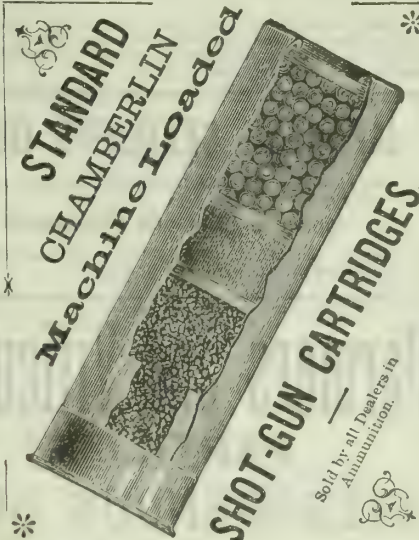
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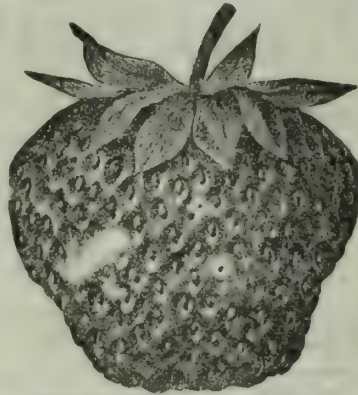
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Soluble Phosphoric Acid	12.90 per cent
Reverted Phosphoric Acid	.95 "
Insoluble Phosphoric Acid	2.83 "
Potash	2.43 "
Ammonia	1.87 "
Nitric Acid	2.95 "

The above amount of Nitric Acid is equal to 0.85 per cent Ammonia, therefore, total of Nitrogen calculated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vineyards, orchards, gardens, farms, and I recommend its use by the cultivators of the soil generally, in California. Yours truly,

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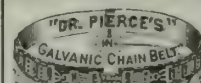
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I have found the Machine (No. 3) very simple, and it does the work to perfection. Parties who have larger Driers of different makes say they cannot turn out superior fruit (apricots and peaches) to mine.
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Laguna, July 15, 1887. W. H. J. AITKEN.

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(Rev. Dr.) W. ALEXANDER.
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C. C. MARTIN.
Glenwood, August 5, 1887.

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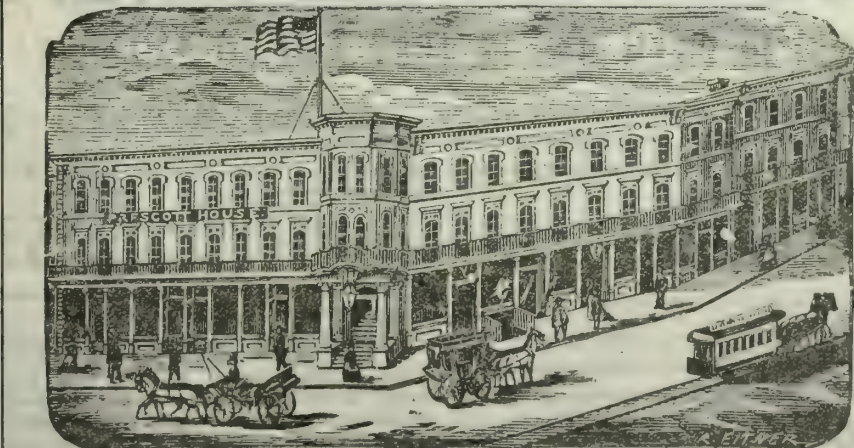
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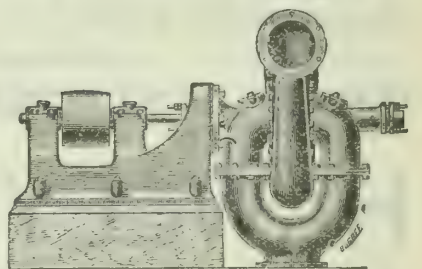
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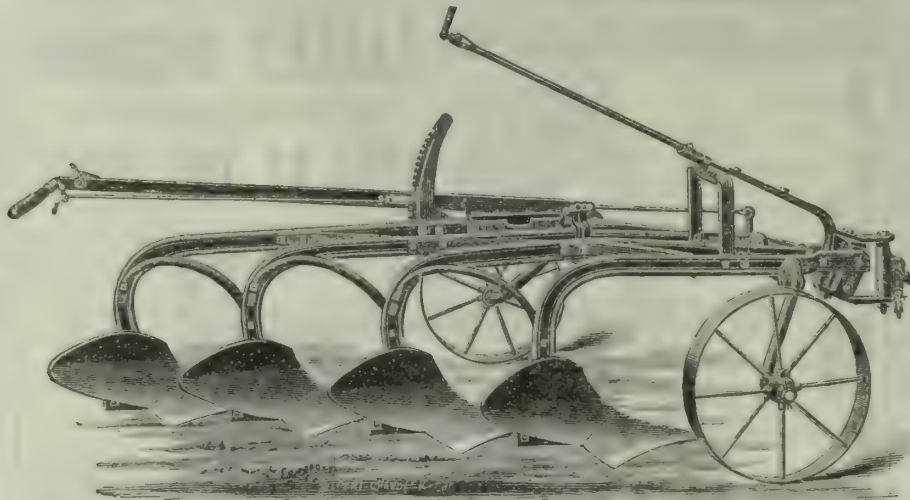
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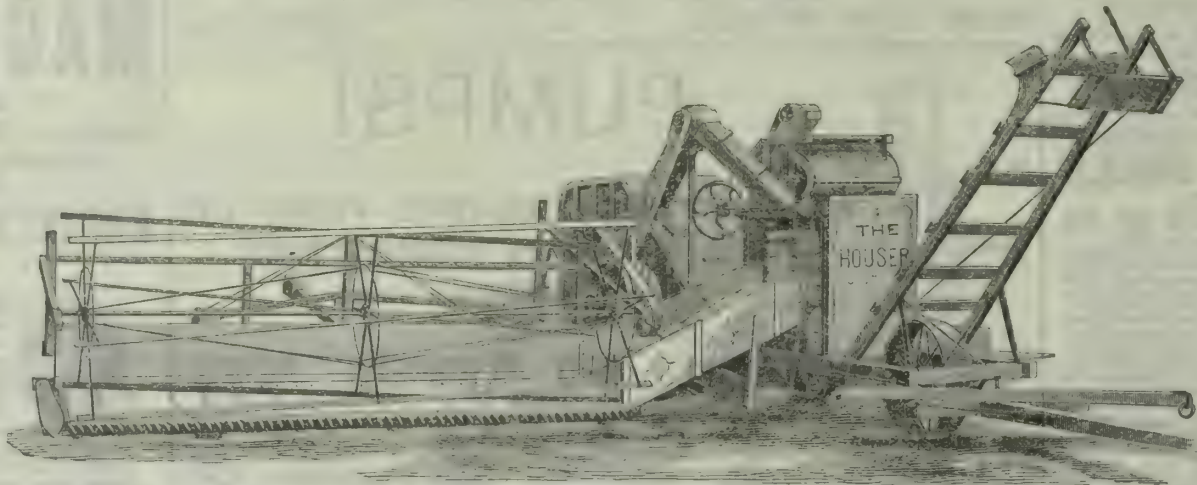
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The past harvest season again demonstrated the fact that for all conditions of grain, light or heavy, standing or down, clean or weedy, the Houser was equal to every emergency and retained its supremacy, which it has held for 10 years past. There is no grain too heavy, weedy, or badly lodged for the Houser to handle.

THE EXTRA CLEANER

As Improved for the season of 1888 and thoroughly tested in 1887, did better work than any other cleaner in use. It excels all others used on Combined Harvesters. The Houser has 30-inch Cylinder, 42x46-inch Separator, Steel, Shafting and Gearing and Double-Strap Brake; wide Header Draper, high, wide drive-wheels, and tire from 12 to 24 inches wide as ordered; has harvested grain which yielded 70 bushels per acre, and cut, thrashed, cleaned and sacked ready for market, from 200 to 500 sacks per day, in a good and satisfactory manner. It is so constructed that an Elevator to run the straw into Header Wagons can be attached, or a Dump, leaving the straw in small piles, or Dump Cart with Elevator, leaving it in large piles.

BOTH THE LARGE AND SMALL HOUSER WILL BE ON EXHIBITION AT THE STATE FAIR, SACRAMENTO, AND DISTRICT FAIR AT STOCKTON.

Send for Circulars. Correspondence solicited. For further information, prices, etc., address S. C. H. & A. W., Box M, Stockton, Cal., or

Stockton Combined Harvester & Agricultural Works, Stockton, San Joaquin Co., Cal.

SMALL HOUSER.

To meet the demand for a Smaller, Lighter Harvester with narrower cut, adapted for Small Farms and Rolling Foothill land, and which can be run with three men and from 12 to 14 animals, we constructed a

LIGHT 10-FOOT CUT HOUSER HARVESTER.

IN WEIGHT $\frac{1}{2}$ OF THE LARGE HOUSER.

A Pull and Belt Machine, strong and easily handled. The Header part is rigid, but can be readily detached.

HAS OUR IMPROVED 36-INCH DOUBLE SHOE CLEANER,

12-inch Cylinder Pulley; 33x8-inch front Lead Wheel Separator 37 inches and Cylinder 27 inches. It was given a thorough test in different conditions of soil and grain; cutting from 18 to 25 acres per day with 12 animals on hard lands, and gave satisfactory results in every respect.

Will Build Them to Order From 10 to 12 Feet Cut.

It is the machine for thousands of Farmers in this State.

As the Large Houser is the Leading Harvester for large grain fields, so will the Small Houser prove for small fields.

PACIFIC RURAL PRESS

Vol. XXXIV.—No. 14.]

SAN FRANCISCO, SATURDAY, OCTOBER 1, 1887.

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SINGLE COPIES, 10 CTS.

Reminiscences of the Spanish Merinos.

[Written for the RURAL PRESS by SOLOMON W. JEWETT.]

I esteem it not only a privilege but a real pleasure to call to memory experiences of the past, and to introduce to you the portrait of a venerable, worthy and honored citizen of France, and present a brief outline to the reader of the PRESS of Mons. Gilbert, the successful propagator of the Spanish variety of sheep in France, and the pioneer in the improvement on the "Paular" variety which are being bred to-day with great profit and success on the Atlantic and Pacific Coasts of America and in Australia.

Firstly, let us go back 100 years to the shepherds of Spain, noted for their perfected culture of merinos quite free from defect, producing an abundance of fine, oily, soft, curly, crimped wool, subject to felt and full, which none of the mutton or hairy breeds ever did possess. It was there in Spain that this variety was brought to a state of great perfection from very unwilling circumstances. We have never learned of more than five families in Spain where special attention was paid to breeding. It was at the haciendas of these noblemen that these superior flocks were bred. They numbered several thousand, and each grower's animals differed in some respects.

Consul Jarvis, in 1816, purchased and imported into North America a considerable number drawn from these fine flocks on the Spanish peninsula, and he gave preference, on trial, to the "Paulars," which were distinctly marked by heavy dewlaps and loose folds and flat tails at the setting on at the body, because they were hardy, a size larger than the others and produced more wool of good quality and more oil, which is essential in producing a most soft and elastic feeling in the broadcloths manufactured therefrom. Wool is of a horny substance, and the oil mellows down the more harsh feeling of the fiber, which is so prevalent and perceptible in the more coarse and hairy wools that are quite free from this unctuous substance.

The *Cultivator*, by Luther Tucker & Son, had an elaborate letter in print from Consul Jarvis of Vermont as early as 1845, and another account may be found in the same journal about 1854, giving a long detailed history of the merinos in France. It was presented to me in print by the successor to Jean Baptiste, the son of Victor Gilbert, with whom I became acquainted in April, 1851. I secured all he had on sale of ewes that season, and by a continued contract, all he could spare the three following years suitable for breeding purposes among the ewes, at 200 francs each.

The only two other private flocks of note in France also contracted all their surplus of breeding ewes on the same conditions, and the stock thus secured was sent in 23 shipments, mostly sheep, and cost to import into Vermont over \$65,000.

Under Daniel Webster, Secretary of State, I went out as bearer of dispatches from this Government to the Court of St. James and Paris, France. I was provided with a free traveling passport, and thereby secured advantages that the private citizen, without friendly acquaintance, could not expect on the continent of Europe. Besides this I had the appointment from the Governor of Vermont as commissioner to the World's Exposition and Fair at Crystal Palace, Hyde Park, London.

And now I will speak of the subject of this sketch, which is fairly represented in the portraits of man and animal on this page. They were engraved from Victor's picture that ornamented the walls of his parlor at Seine-et-Oise. Jean Baptiste Frances left the farm and his personal property to his son Victor Gilbert to continue on after his death, which occurred in 1849, at the age of 91 years.

It was 101 years ago that the Government of Spain allowed a selection of merinos to cross their boundary lines into France—generously presenting these fine animals to the King of

shipper the sum of \$8500. Three other more extensive shipments were made overland of the best improved merino selections in Addison county, Vermont, to Kern county, where my sons reside, and where they have been successful in conducting their sheep interest. They have reared and sold many thousands for breeding, and are still known and rank high among the fine-stock growers of this State as breeders of sheep, cattle and horses, as many of the leading stock-growers in the States and Territories this side of the Rocky mountains can testify.

From close observation and travel in the Old



JEAN B. F. GILBERT, PIONEER PROPAGATOR OF FRENCH MERINOS.

France. The flock on its arrival was divided—one-half settled at Rambouillet, which is, and always has been, under the French Government's attention and control; the other half were bred and kept by a private farmer (a friend to the King) until his death, when all or most of the flock went into the hands of M. Gilbert at his high walled-in farm of 300 acres near Gregnot, three miles out from Versailles. The Gilberts have been awarded the distinction, to which they are entitled, of being the original founders of the improvements on the Spanish stock originally presented, and especially the continuation of the well-defined marks of the Paular variety, which are so much sought after and bred in our country all over.

It was my good fortune to introduce into California many pure descendants of the stock from France, and 17 rams from the "Atwood" race of merinos. The first came in three shipments over the Vanderbilt line of steamers into San Francisco, commencing in 1859 and up to 1862. The bill of importations cost the

World as well as the new, I find a decided improvement has been secured upon the French, the Spanish and American merinos within the last generation in size and form. The production of wool has also materially increased over the amounts formerly secured in Spain.

QUEER OREGON PRODUCTS.—It is telegraphed from Portland that rather a queer export trade to San Francisco is likely to reach considerable proportions. One dealer was packing 200 dozen crawfish for shipment by steamer. They were caught in the Willamette river, and a dozen good-sized ones weighed three pounds. It was intended that they should reach San Francisco alive. A Frenchman brought into Portland 500 head of fine snails. He sold them at once at a high figure and took orders for several thousand more. He found them on the mountain, some distance from Portland. Frogs are captured in large numbers in the sloughs along the river, and considerable numbers are shipped to San Francisco.

Firing the Forests and Its Penalty.

In addition to what was said in our last issue on the subject of forest fires, it may be well to state that we have in California a law making the starting of such fires under certain conditions a penal offense. By the provisions of this law any person willfully setting fire to any wooded country or forest belonging to the State or to the Federal Government, or to any place where fire would communicate to such forest, is subject to a fine of not more than \$1000, or to a term of imprisonment for not more than one year, at the option of the court. From the foregoing it will be seen that a person starting a fire on his own premises, if he suffer it through remissness to extend to forests on the public domain, is liable under the provisions of this Act.

In many other States of the Union similar laws have been enacted, though in none perhaps is the necessity for them so great as in California, the dry season here being longer and suffering less interruption than is the case in any other part of the country.

Since our last issue we observe that a number of field and forest fires have occurred in different parts of the State, some unavoidable, but more, no doubt, the result of carelessness or design. If in any such cases the starters of these fires have made themselves amenable to the provisions of our State law, they ought to be enforced against them. That they will be more rigorously enforced hereafter may be expected, as the public mind has been much stirred up of late to the enormity of these offenses.

Where it can be shown that a fire of this kind has originated from a campfire left burning or from a lighted match, cigar stump or the like thrown into the dry leaves or grass, the offender would be liable to arrest, as the courts would no doubt hold that such carelessness amounted to a willful violation of the law.

No Compromise With Slickens.

A dispatch from Marysville to the Cal. Associated Press states that at a regular meeting of the Advisory Committee of the Anti-Debris Association last Monday, a hearing was given to Senator Stewart of Nevada on behalf of his clients, the Sierra, Union and Pioneer hydraulic mining companies, in Sierra county, whose mines are and have been for a long time under an injunction in the anti-debris suits. After considerable discussion, a resolution was passed denying the request of Senator Stewart that his clients be permitted to continue hydraulic mining upon condition of their building debris dams.

It may be accepted as a fact that public sentiment is opposed to anything of a nature to compromise the anti-debris fight, and the people of Marysville and the surrounding country feel that no restraining dams that could be constructed would protect the rivers from filling with slickens, since enough light material would be carried in suspension over the dams to cause injury.

AGRICULTURAL DIRECTORS.—Gov. Waterman has appointed M. J. Donahue, W. H. McKenzie, W. Helm, W. H. Hughes of Fresno, J. T. McSwain, S. C. Bates, L. Leach of Merced, J. M. Corcoran of Mariposa, directors of Agricultural District No. 21.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Green Valley Notes.

EDITORS PRESS:—The boom long-looked-for come at last! We all knew the millennium was coming, yet there was also a rumor in the air that the boom was on the way; and it seems the boom was the most interesting visitor, at least for the last six months or so; the first question always was, "How is the boom; has it got here yet?"

At last we clubbed together and placed an advertisement in the leading papers to the effect that we had lost an empty sack with a boom in it, black-and-tan, with a bobtail, and answered to the name of "Boom." And here it is. We will never forget that Sonoma county's boom began with the sale of a Green valley hop and fruit farm, for the price of \$38,000. And then the news that the railroad from Santa Rosa, Carquinez, and all the way overland to Chicago and New York would surely be built, has fairly let the boom loose in the county. The best sale we have heard of in this valley as yet is of a place that was sold at the rate of \$300 an acre.

But there is a boom here which we think more of and which we believe will have a better and more lasting effect than any profit, no matter how great, a few speculators may make on the purchase and sale of a few city lots, and it is that people here are satisfied with their circumstances and are not anxious to leave. The truth of the matter is, that to begin with, we have raised a good crop of good, clean hay, and, notwithstanding the large amount of hay carried over from last year's crop, hay sold at a fair price; then we have had a large crop of fruit, and it was good fruit, and it sold for a good price. The Santa Rosa Packing Co. paid \$30 per ton for peaches, and nearly all the peaches put up came from this valley; but it soon became evident that one canner could not use up the smallest half of our peaches, and people began to blame themselves for not having been more previous in engaging their fruit, but they had to do the next best thing, and so they built themselves evaporators, and others bought lumber and shakes so as to let old Sol take care of their peaches. When the Crawfords were ripe we had some 35 or 40 evaporators at work, employing from 2 or 3 to 15 or 20 hands each.

We remember one of our farmers who had his crop of about 40 tons engaged to the cannery, and he complained that the hired help had been so careless in picking that in going over the trees at different times, they would only pick the ripe ones within easy reach and leave the others to get overripe, so that he had to dry them, and now he can get more for his dried peaches than he got for the ones he took to the cannery.

There is not a farm in this neighborhood, with no matter how dilapidated a little family orchard, where the owner has not sold \$50 or \$100 worth of fruit, and many will run their accounts up into the thousands. Just now the last clings are going to the cannery, and it is a poor peach indeed that does not bring two cents per pound. The driers are paying from \$8 to \$14 per ton for apples, and apples are a good crop this year.

Potatoes are a fairly good crop and prices no worse than other years. Thrashing was only just commenced when the price of wheat came down, so that producers will have to take \$1.25 for their wheat, which makes them feel rather sad. There is rather more wheat here than ever before, and, what is better still, it was raised on less ground. Most of the wheat sown here of late years is put in on soil that was planted to corn or potatoes the year before, and the result is a better crop of better wheat.

At present everybody is picking hops, and so are their sisters and their cousins and their Chinese. Hops are plenty and help scarce, and that brings us back to the boom again.

Boom Philosophy.

Nothing helps the good feeling in a place so much as does the workingman's happiness. There can be no boom—at least no genuine progress—when the wageworker is grumbling and complaining of hard times, but give him plenty of work at good wages and he is a brick; that is to say, like the last brick in a row of bricks, set up a few inches apart and up on end. Give him a push and he pushes his neighbor, and so on till they are all down. And so with us human bricks. We have had hard times here a year or two ago, and people tried to live within their means, and the first move was to discharge the hired man if he did not work at something which brought back the money invested. Then slowly, wages being low, men with brains and capital saw a chance to make some money producing or manufacturing one thing or another; they succeeded, others followed suit, wages went up, and now it is boom!

Boom for the workingman, boom for the saloon-keeper who sells him whisky. Boom for the dry goods merchant who sells him and the whiskyman clothes. Boom for the shoeman, and the furnitureman, and the doctorman, and the lawyerman, and even a little boom for the farmer who keeps them all in grub.

And the farmer buys some machinery and a

wagon and some fruit trees on tick because it is boom, and the lawyer and the doctor get a new house on the installment plan, and the merchant gets a large stock of goods on the 90-day plan, and the workingman spends the money on Monday which he will not earn before next Saturday, and it is boom all around, and capitalists loan money on real estate, and nobody pays interest or principal, for is it not boom now? And we have not borrowed half as much on our ranches or factories or stores as we can get, but in a year or two or three somebody will want what is due him, and everybody can show value for what he owes except the workingman, and he is only a week or so behind, and consequently don't buy any whisky for a week or two, and that tips over the first brick, and there they go, and the farmer's brick is the last one in the row.

There is a general opinion that the farmer's brick does not drop as flat as the other bricks. This is a mistake, as all the other bricks are on top of it; the farmer's brick is the last one to get up and is only up on its side when the row comes down again. But never mind, in the year of our Lord 1892 it will be boom again.

IRREGULAR CORRESPONDENT.

Green Valley, Sonoma Co.

"Poor Florida!"

EDITORS PRESS:—For many years I have read the RURAL PRESS with great interest and high appreciation of its many meritorious and sterling qualities that make it emphatically the paper of the people, especially of those who reside or those interested in the welfare and progress of your magnificent golden and fruit-growing State. There are few, I wot, of the citizens of our great and glorious Union who do not feel great interest and pride in California's magnificent resources and wonderfully rapid, and, I trust, substantial development.

In the RURAL PRESS I have ever found the articles fair and candid, full, it is true, of fervid descriptions of California's varied scenery, climate and productions, sometimes apparently drawn almost to the border land of exaggeration by the strong enthusiasm of the writers, but nevertheless free from disparaging allusions to other sections and making few invidious distinctions.

In the issue of August 20th, the anniversary of my natal day, however, I find an article entitled "Poor Florida," that shows an animus entirely foreign to anything I have heretofore seen in the PRESS. It is clothed in the garb of pretentious, aye, of vindictive sympathy, freely strewn with the crocodile tears of jealousy exultant in the hoped-for downfall of a very formidable and attractive rival.

The evident animus of the article referred to is unworthy the RURAL PRESS and its magnificent record. Though very mild in its bitterness, as compared with articles by far too frequent in some other California papers, who do not hesitate to spread broadcast the most baseless, reckless, venomous and atrocious fabrications regarding this peninsular State, the "Land of Flowers," the home of the orange and a great variety of other semi-tropical fruits, and most things that can be grown in the temperate zones, it nevertheless makes apparent how exceedingly bitter must be the feeling of California as regards Florida when even the RURAL PRESS, a paper so eminently noted for its spirit of fairness and justice, permits itself to indulge in such a bitter and deleterious expression of sympathy.

Unjust and depreciative rivalry of sections is to be deplored, as it is injurious both to the defamer and the defamed. No good can come of it; no permanent benefit is ever secured by unjust, indiscriminate and reckless depreciation even of a rival, of an adversary. But California and Florida have no occasion to be either. Until the recent past there has been in Florida no feeling of antagonism toward the "Golden State." Our people have rejoiced in your prosperity; in your grand and glorious development. They were glad to know of it, and most sincerely hoped it might continue. They felt proud of your magnificent achievements and were not disposed to put a single obstacle in your way. The recent course of a portion of the press of your State has been so very, so bitterly unfair and unjust, that a different feeling is materializing here.

California and Florida are not naturally antagonistic and there is no sound or creditable reason why jealous or designing people should make them so. Each has its own magnificent destiny to work out, and their progress will not be accelerated by unjust accusations or defamation of each other. "Let us have peace," friendly emulation if you please, but be forever done with this jealous, bitter, unjust, self-destructive crimination and recrimination. Each State possesses some advantages, some attractions, not possessed by the other. Each has its excellencies; each has its drawbacks and defects. No one section or country possesses all the good and desirable things.

The "bereavements and afflictions" of Florida have not been as great as those common to most other States. True, the loss of a considerable portion of the orange crop by the freeze of January, 1886, was sorely felt by many of the inhabitants, but the losses were nowhere as serious as the frequent losses of other States by droughts, floods or insect ravages that occur every few years. Besides, it was the first destructive freeze for 50 years. California, I be-

lieve, has had fully as many bad freezes as Florida, if not more.

Besides growing oranges, Florida has a number of other great industries that return large incomes. It is a great corn-growing State. It raises immense quantities of long staple cotton. The growth of tobacco is found to be very profitable. It has immense herds of cattle that have proved very remunerative. Its fisheries employ many men and yield large revenues. Large quantities of sugar and syrup are made in Florida. The growing of early vegetables and of a great variety of small fruits are very extensive and rapidly-developing industries. The soil and climate are found to be peculiarly well adapted to the profitable growth of grapes and vineyards are being established. There are numerous other industries that annually yield large revenues and all are prosperously developing from year to year. The question is not what can be profitably produced in Florida? but what, if any, of the articles common to the temperate or semi-tropic zones cannot be produced here successfully?

As regards the winter-boarder business said to be lost, it is increasing from year to year; but the facilities of transportation have been so greatly enlarged by the building of new lines of railroad, while the number and quality of the hotels has so greatly increased all over the State, that they are no longer confined to a few localities after their arrival here, as was the case a few years since.

The answer to the report of the agricultural spy of the Italian Government, with regard to the fitness of Florida soil for the growth of oranges, is sufficiently discredited by the vigorous growth of the orange trees, the superior quality of the fruit itself and its rapidly increasing quantity, year by year. These facts prove the utter absurdity of the report.

As regards the quoted statement of the N. Y. Sun, that it knows none who have invested money in Florida orange groves and become rich, it is only one of the accumulating evidences that the N. Y. Sun knows very little. It claims a light that "shines for all," but it is a very dim and uncertain light—a deceptive light. Its prejudices make it cross-eyed. It knows very little about Florida, and it prefers a lie to the truth. I know, and thousands know, many men who have acquired and are acquiring wealth from Florida orange groves.

Your closing paragraph, "Again we are disposed to exclaim: Poor Florida. Pine on your barrens. Lock your doors and sink your keys in the gulf," is certainly an eye-opener as to the quality of the sympathy expressed at the beginning of the article. But Florida desires no sympathy, asks for no sympathy, needs no sympathy. Florida is prosperous and happy. Florida is not disposed to pine or repine, and has few or no barrens. She has no wish for a speculative boom, a craze in prices. She seeks substantial development, and it is increasing year by year. Her soil on the average throughout the State will produce more cash value per acre than any other State in the Union, without exception. Florida has "the keys" to a magnificent development, and she is using them to unlock new treasures from year to year. She is destined to become the grandest, the most populous and the most wealthy State, acre for acre, of any State in America.

"Lock the doors and sink the keys!" Oh, no! Florida is opening wide her doors to the industrious and to the intelligent, to the rich and to the poor who desire to become wealthy, to all who desire healthful, happy homes surrounded by a semi-tropical luxuriance of all desirable productions, in a climate delightful in both summer and winter, a land where every season is joyous and productive of the choicest delights this world affords. No other State was ever able to secure a class of people like those who are pouring into Florida by thousands. They are intelligent, energetic, industrious, orderly, God-fearing people, the very *creme de la creme* of the best classes at the North and West, the Middle and Central States, and the South, as well as many from beyond the seas. With a steady and rapid infusion of such blood poured into Florida by many streams, and in augmenting quantities, is it any wonder that her fast-increasing population begin to feel within their veins the pulsations of the grand and sublime destiny that awaits Florida in the near future, and that will place upon her imperial brow not only the victor's crowns of laurel, of oak and of bay, but also the brightest, the most sparkling, the richest diadem that the genius of the age can produce? Nature and art, wealth and culture will here unitedly labor to create the grandest achievements possible to the human race.

Please publish the foregoing as a matter of justice to Florida. SHEERMAN ADAMS.

Gabriella, Orange Co., Fla., Sept. 2, 1887.

[Our correspondent is an old acquaintance for whose statements we have much respect. We have always intended to do the fair thing by Florida. The paragraph to which he takes exception was not intended as a slur at the State. It seems to us that the very style of expression adopted in writing it would show that the reflection was against the parties circulating such reports and not against the State.

The style was mock sympathy, of course—mock sympathy because real sympathy was not called for. If we had understood that the criticisms were true and that sympathy was needed,

we should have written about it seriously. As it was, the paragraph was intended to be a piece of good-natured railery. So far as we know, Florida is doing well, and certainly there should be the fullest cordiality and mutual well-wishing between the two summer-lands of our country, as our correspondent so well depicts.—EDS. PRESS.]

THE VETERINARIAN.

Equine Cerebro-Spinal Meningitis.

EDITORS PRESS:—In a late issue of the New York Weekly Herald there is a long account of a disease affecting horses in New Jersey. Reviewing the evidence of the expert witnesses, there is no doubt whatever that the trouble is due to an inflammation of the brain and meninges of the spinal cord—cerebro-spinal meningitis. This interesting ailment exists as an epidemic. (A few years ago the horses of the railway stables of London were the subjects of it.) Dr. Liantard, a well-known veterinary surgeon in New York, being called to attend some of the sick horses in Jersey City, he pronounced them suffering from cerebro-spinal meningitis. The subsequent post-mortems showed that he was perfectly right. "They all died very rapidly, and when an autopsy was made it was found that the coverings of the spinal column were inflamed, and that the spinal column itself was softening. The brain, too, was considerably inflamed."

The symptoms are loss of appetite, unnatural movements of the head, partial or complete paralysis, the main parts affected being the hind quarters and the throat, a rapid rise in temperature, and in a short time, a complete loss of power. Some horses—those of a nervous temperament—become very violent when attacked, but others remain very quiet. Some, again, die within 24 hours, while others linger for a few days. As to the origin of the disease, like all other ailments due to specific germs, like produces like, and wherever the germs or seeds of cerebro-spinal meningitis exist there will be this disease produced.

At last accounts there seemed to be no cases in Long Island City, as "the reporter went to Mayor Gleason's office and asked him if a gift-enterprise sheet of this city was correct in saying that there were reported to be two cases of cerebro-spinal meningitis in his stables. The mayor laughed heartily and said that not one of his horses was sick and that the veterinary surgeon who has charge of them had examined them that very day."

Although the account and evidence of the veterinarians in the above-mentioned paper may seem to those not acquainted with professional matters to differ materially, yet such is not really the case; their opinions and statements are essentially alike. And perhaps I may be excused if I digress from the subject for one moment, to say that the proverb "Doctors differ" is, like many other popular sayings, not always correct.

Treatment. At the risk of being thought wearisome, by so often stating that sanitary and preventive measures should be adopted, I must repeat that all we can do in this disease is to separate the healthy from the afflicted animals, remedy any defective health-arrangements, and of course do what we can to alleviate the sufferings of the diseased, but not with the hope of rendering them again serviceable animals. I allude to the worst cases, as there are a few horses which may be successfully treated. But when the brain and spinal cord are affected, as were some of those cases of Dr. Liantard's, it must be plain to any one that treatment would be useless. The nervous system being the part affected, all noise and excitement should be avoided. And where medicine is necessary it should be administered in such a way as not to frighten the patient. Hypodermic injections and powders placed upon the tongue are preferable to the ordinary method of ball and drench giving. Above all things, do not allow meddlesome people to continually annoy the poor suffering horse by giving their "cure-alls." Let the food be soft and succulent—bran mash, oatmeal gruel, and such food as he can easily swallow. If the patient is so weak as to be unable to turn himself, you may much relieve his suffering by moving him to the other side, as if he lies too long upon one side of the body, bed-sores give much trouble; and these occur very soon, in the case of horses, because they toss themselves to and fro. Light seems to trouble them; consequently it is good policy to darken the stable.

ROBERT J. DAWSON,
Veterinary Surgeon.

225 Geary street, S. F., Sept. 17, 1887.

GLASS COACHES, or coaches with panels instead of curtains at the sides, do not appear to have been introduced in England until the middle of the 17th century. Plate glass for the purpose was of Venetian origin.

COAL IN THE NORTHWEST.—A member of the Geological Survey, engaged in investigating the coal deposit in the Saskatchewan region, states that the coal supply in the Northwest is absolutely inexhaustible.

THE ORNITHOLOGIST.

Dr. Gally as to the Road-Runner, Etc.

EDITORS PRESS:—I have called that bird the road-runner some hard names, but I do not remember that I ever called him a fool; yet I would have so called him if I believed he would employ for his defense in court such an advocate as your correspondent, "A Prospector" from Cochise county, Arizona, as he appears in *RURAL PRESS* of Sept. 17, 1887. A writer who can talk so glibly about "condemnation," "acquittal," "judgment," and the like, and yet comes into court with nothing that he knows, but only what he has heard some one else say, is a person not worth much attention; for a writer who does not know that "hearsay" testimony is no evidence in any civilized court, is more to be pitied than blamed. If he was born that way it is bad, but if he once had the illumination of common sense and then the darkness of his present condition fell upon the federation of his faculties, it is very, very sad, indeed.

What I wrote about the runner some months ago for your columns was what I saw, when I saw it and where I saw it, and I named the man who saw what, when and where I did. That, unless the witnesses be successfully impeached, is proof, but "hearsay" is no proof; it is hardly good probability.

I gave the road-runner full credit for being a destroyer of reptiles. I had heard that story about the road-runner fencing a basking rattlesnake about with cactus sprouts. I think it is a fiction. It comes from Mexico, a land where fiction is kept on draught. But for your Arizona correspondent's peculiar mental condition, he might be informed that insects produced in swamps, ponds or marshes are not insects injurious to fruits or orchards; also that the tarantula, being the boss spider, is an insect-eater and the friend of horticulture and agriculture, and when the road-runner kills the tarantula he is not "doing the State some service." As to when and what a scorpion eats, I do not, of my own observation, know. I have watched that bug many a time in the deserts of Nevada, Utah and elsewhere for years, and never yet saw a scorpion devour anything. I guess it eats at night.

As to the rattlesnake, now, there is a reptile with which I am acquainted. I have slept with him and among his family—have, in fact, enjoyed his hospitality—and I find that he has faults. But there is one fault the rattler has not, *he doesn't drink*. I have known rattlesnakes, lizards, horned lizards and ants in a dewless desert to be born, raised, live and die 30 miles from water. That is what deceived Moses who was led to believe that the serpent ate dust; because when he was herding sheep for his father-in-law, Jethro, long before he wrote the book, he found the snakes so far from water. [Note.—Your Cochise correspondent is informed that this is not "religion"—only sacred history.] Rattlesnakes down in Cochise and Mexico may "bask" in the sun. I have read many times that basking is the principal rural industry of Arizona and Mexico, and it may well be, in such environment and under the influence of such association, that the serpent has become demoralized; but when and where I knew him the rattlesnake basked with one eye open, and upon the least disturbance of his snooze would gather himself instantly into a coil with his head and tail up and his rattle going like a crazy alarm clock; nor would he move from that attitude, even if it took hours, until he was satisfied all was safe. So, these things being thus, that Mexican story of your Cochise correspondent, that junk-dealer's second-hand revelation about a peck from a road-runner starting a basking rattlesnake off on his travels, through a cactus hedge built by the road-runner, is too thin—or else your Cochise correspondent does not know how to tell it.

Your Cochise correspondent in his effort to say something pert at me, over his cowardice of an assumed signature, accuses me of maintaining a 20-acre marsh to raise mosquitoes, etc. Please say to him two things. First, I bought the marsh to drain it, and it is now drained. Second, Pajaro valley does not raise mosquitoes, codlin moths nor bedbugs; as to the flea—the vivacious *pulex*—to him Pajaro pleads guilty. But there is this, among other things, to be said about the flea, that whereas the housewife must fight bedbugs for a whole family and the industrious orchard man must fight moths for his lazy neighbor, each and every individual must fight his own fleas or take the irritating consequences. If your Cochise correspondent wishes to restore his mind to a normal condition, he might enter upon a course of study or inquiry as to why certain animals—mammalia—certain reptiles, certain insects on the Pacific Coast (so-called), inhabit one mountain or one valley and not another. For instance, the grizzly bear stops at the summit of the Sierra Nevada, and then you go on to the Wasatch mountains and there you find two other bears, not grizzlies, and yet there is no large body of water between the Nevada and Wasatch. So, also the flea stops at the Sierra Nevada (or did some years ago). It may be said that a grizzly could get nothing to eat over in the State of Nevada, and that is the reason he remains satisfied with a bird's-eye view of that State, but that does not apply to the flea, for there

are men and birds and brutes in Nevada with blood in them.

If some savants would figure these things out, they would, for one, much oblige
J. W. GALLY.
Pajaro Valley, Santa Cruz Co., Cal.

SHEEP AND WOOL.

Angora Goat-Breeders' Meeting.

The third annual meeting of the Angora Goat-Breeders' Association of California opened on Thursday, Sept. 22, 1887, at 8 o'clock P. M., at Pioneer hall in Sacramento; President C. P. Bailey of San Jose in the chair, Julius Weyand, secretary.

The proceedings had were as follows:
1st. Calling of the roll of members.
2d. Minutes of last meeting were read and approved.

3d. C. W. Schleiffer of Latrobe, El Dorado county, paid entrance dues.

4th. Election of officers: The old board—C. P. Bailey, president; T. H. Harlan, vice-president; and Julius Weyand, secretary and treasurer, were re-elected.

5th. Report of officers and committees: Secretary and treasurer's report that, expenses deducted, there is a balance of \$9.25 in his hands, is received and approved.

Messrs. Harlan, Bailey and Weyand report that they succeeded in getting the premiums on goats raised by the State Board.

Letters from James Macnaughtan and from F. W. Kitching, New York, containing information of interest to goat-breeders, were read.

6th. Unfinished business: The establishment of an Angora-goat register, laid over from last meeting, was discussed, and

Resolved, That a system of registration of pure-blood Angora goats be established for the State of California; and that, for the guidance of examiners of goats, the shape and fleece of the Angora shall be recognized to be as follows: A perfect goat, when in full fleece, should appear like a right-angled square (parallelogram). The body should be full and long, and of straight build. It should be densely and evenly covered with fine, curly and lustrous silky hair, appearing from a distance as if it had been trimmed off below the body. The chest and shoulders, especially with the male animals, should be broad and strong, the legs straight and chunky, the head clear-cut and trim, not coarse like that of a common goat. The horns of the buck are long and strong, inclined toward the back, and of spiral-like shape, some almost perfect spirals; the horns of the does, short and thin and curved backward. Further

Resolved, That a committee be appointed by the president for the purpose of establishing a scale of points of excellence for examination of Angora goats offered for registration. Adopted.

The president appointed Messrs. Harlan, Schleiffer and Wimmer on that committee, to report at 2 o'clock P. M. to-morrow.

On motion, Prof. E. J. Wickson was by unanimous vote elected an honorary life member of this association.

On motion, adjourned to 2 o'clock P. M. to-morrow, Friday, Sept. 23d.

JULIUS WEYAND, Sec'y.

Friday's Session.

Meeting called to order at 2 o'clock P. M. on Sept. 23, 1887, by President Bailey.

The committee appointed yesterday present their report, as follows:

1st. The Angora goat register is established under the following rules:

2d. That no animal shall be admitted unless it be entirely covered with mohair, without mane or coarse hair.

3d. That no animal shall be admitted unless its fleece and undergrowth of hair be entirely white.

4th. That the applicant for admission shall make an affidavit before a notary public that, according to his best knowledge and belief, the animals in question are descendants of imported pure-bred stock, or shall prove, in any other way the association may hereafter decide upon, in open session, or by a committee, such purity of blood.

5th. Scale of points. Perfection to be 50 points.

Fleece 31 points, viz.: fineness up to.....	9 points.
Weight of fleeces.....	8 "
Evenness and covering.....	8 "
Shape of fleece.....	4 "
Luster.....	4 "
Body 16 points, viz.: constitution.....	6 "
Symmetry of shape.....	5 "
Weight of body.....	5 "
Fancy points, 3—Erblock.....	2 "
Lop ears.....	1 "

Summary.....50 points.

Eligible to Registry.

Animals having less than 40 points of excellence shall not be admitted to registry.

Rules for Fineness of Fleece.

Mohair of factory standard No. 18 (coarsest fiber) shall not count any points with doe fleeces. No. 24 (next fine fiber) counts three points. No. 30 (finer fiber) counts six points. No. 36 (the finest) counts 9 points.

With buck fleeces, No. 18 counts three points. No. 24 counts six points. No. 30 counts nine points.

Kids of both sexes shall not be rated in any way, or be admitted to registry.

Rules for Weight of Fleeces.

Bucks 4 years old and over, 5½ lbs.; of 3 years, 4½ lbs.; of 2 years old, 3½ lbs.; year-

lings, 2 lbs.—each counting 2 points; and for each additional 12 ounces or ¾ lb., 1 point more shall be added.

Does 4 years and over, 3 lbs.; of 3 years old, 3½ lbs.; 2 years old, 3 lbs.; yearlings 2 lbs.—each counting 2 points; and for each additional half-pound, 1 point more shall be added.

RULES FOR EVENNESS OF MOHAIR AND COVERING.

For length of staple, not differing more than 1 inch between shoulder, side and hip.....	3 points.
For exact even length of staple on shoulder, side and hip.....	4 "
For even length of staple on shoulder, side, hip and belly.....	6 "

RULES FOR SHAPE OF FLEECE.

For down hanging, curly fleece.....	1 point.
For down hanging, curly ringlets, close and compact.....	4 "

RULES FOR LUSTER.

For ordinary luster.....	1 point.
For most perfect bright luster.....	4 "

As to 16 points of excellence of body, six points on constitution and five points symmetry shall be left to the judgment of the Examining Committee; and for five points weight of body, a standard shall be submitted hereafter to the committee, by the association.

The report as appears was received, and upon motion was adopted.

On motion, the following was adopted:

Resolved, That the Angora Goat-Breeders' Association of California in convention assembled have adopted that they will use all honorable means to urge upon our next State Legislature to pass scalp laws for the destruction of wild animals in this State, and also that they will demand of, and urge upon, the National Congress to better protect our infant industry by tariff laws and regulations which are just and encouraging to those engaged in this business of mohair production; and that we will support no person whatever to an office in our Legislature or Congress who will not promise his full and vigorous assistance to carry out our demands.

On motion, adjourned to meet on the last Thursday of the State Fair at Sacramento, in 1888, unless called by the president.

C. P. BAILEY, President.

JULIUS WEYAND, Secretary.

THE FIELD.

Potatoes in the Silver State.

The *Virginia Enterprise*, of last week, remarks that if the State of Nevada is particularly noted for any production in the agricultural line, it is for raising good spuds, and lots of them to the acre.

A rancher at Lovelock planted this year exactly 100 acres to spuds. His crop will be fully up to the average, which is eight tons to the acre—an extraordinary yield for the best spud-countries in the world. He will get one cent per pound for them delivered at any shipping point on the Central Pacific, bringing him a return of \$16,000 for the 100 acres, or \$160 per acre. The entire cost of cultivating his broad acres is under \$40 per acre, including seed, water and all, except clearing the ground. Including the cost of clearing the ground, that is, cutting the brush, grubbing and leveling, it might cost him \$80 per acre—including all this, we say that the farmer gets \$80 per acre, which is a better return than can be had from the best acre of land in California, if it is not garden land. It is impossible to figure on the cost of bringing water to the land, but there are many places where it can be had advantageously.

On the Carson river, opposite Dayton, John Gallieri has an 80-acre ranch, which he is constantly enlarging. It is the levellest piece of ground on the coast. Every inch of the ranch can be irrigated by simply raising a few gates. If they were connected by electric wires he could sit in his parlor and irrigate the entire ranch, by simply touching the keys. He has about 50 acres planted in potatoes and the rest in garden truck and hay for his stock. He sells his potatoes, as do all other ranchers in that vicinity, to the Sacramento market, receiving one cent per pound delivered at the depot of the Carson & Colorado railroad at Dayton, scarcely a mile from his ranch. Mr. Gallieri's crop will average this year ten tons to the acre, and he has often raised an average of 12 tons per acre.

The Quilici brothers own the old Barrett & Fish ranch, situated about a mile south of Gallieri's, and raise about 30 acres of potatoes each year. In 1884 this ranch was flooded by the Carson river overflowing its banks, and they sued C. C. Stevenson for damages, alleging he had raised a dam in the river, and that it was the cause of the overflow. They had to prove the damage they sustained. Fish, a man of good education, the former part owner in the property, testified that he had made a bet with Quilici that they did not have 21 tons of potatoes on a given acre of ground, and he lost his money, for they dug up and weighed 21 tons and 200 pounds right before his eyes from an acre of ground that they measured. Where on earth can such a spud record be approached?

There are not many ranchers on the Carson river, and they don't all raise large quantities of potatoes, but this year they will ship at least 3000 tons of potatoes to Sacramento, besides supplying this local market. A ton of potatoes at this season of the year will scarcely weigh 1500 pounds next spring, owing to evap-

oration. That is the reason ranchers sell their potatoes in the fall, and why they are so dear in the spring, for there is no great cost attached to keeping them over winter, and the rate of interest on money is not high enough to justify such a raise yearly in the price of potatoes.

Of course the general fact that we raise such large potatoes in this State leads farmers to exaggerate about their size; but John Gallieri, for a valuable consideration, has undertaken to supply Charley Noce, the North C-street merchant, with a potato weighing seven pounds; another has promised to bring him one eight inches in diameter, and Mr. Noce has promised to bring them to the *Enterprise* office.

How Plants Feed.

A plant will feed upon itself for a time, or rather, will feed upon what its predecessor left as a sort of inheritance for this very purpose—that is, upon the accumulations of the plant living the preceding season. So it is that when a seed is planted, as it is called, the young plant within the seed is unable to forage for itself and must therefore depend upon this stored material to push it forward into visible life. The same is true of the bud of the tree awakening into life; it derives its first sustenance from the reserve accumulations of the parent stock during the autumn previous. In either case a certain degree of heat and a trifle of moisture are necessary to awaken the dormant energies, except in those cases where there is also moisture held in reserve, as is the case with tubers and roots. Heat alone, at the season appropriate, will be sufficient to cause young plants to commence to grow. Each kind of plant, each individual plant, and in fact every part of a plant, feeds and performs its life-work best at a certain temperature, and ceases to work when the temperature rises above or falls below that temperature. Practically no plant will feed when the temperature is reduced to the freezing point.

When a suitable temperature and sufficient water are necessary to the growth of plants, an excess or deficiency may be disastrous, either of which conditions is liable to occur in spite of the farmer, and yet to some extent, by choice of aspect, site, shelter, and other means, and by drainage, the farmer can, to some extent, regulate the temperature and water that his crops would be subjected to. Water is essential not only in the feeding process, but with every action of plant life. Generally there is no lack of water; the earth and the air contain their respective shares of this elementary compound in varying proportions and in varying modifications of liquid and gaseous. Besides this, the plant itself has constantly on hand a share which constitutes a large proportion of its entire weight. Now the rule is that when the seed, the bud, or the plant is at its deepest state that growth begins, and the demand for water becomes imperative. How is the demand supplied? How does it get into the plant? even if there is no lack of it. To answer the question brings us to the consideration of the raw material, and the fabric of the plant by which it gains entrance.

EFFECTS OF BEER.—In appearance, the beer-drinker may be the picture of health, but in reality he is most incapable of resisting disease. A slight injury, a severe cold or shock to the body or mind will commonly provoke acute disease, ending fatally. Compared with inebriates who use different kinds of alcohol, he is more miserable, more generally diseased. The constant use of beer every day gives to the system no recuperation, but steadily lowers the vital forces. It is our observation that beer-drinking in this country produces the very lowest form of inebriety, closely allied to criminal insanity. The most dangerous class of ruffians in our large cities are beer-drinkers. It is asserted by competent authority that the evils of heredity are more positive in this class than from other alcohols. Public sentiment and legislation should comprehend that all forms of alcohol are dangerous when used.—*Scientific American*.

HOME-MADE ICE.—Take a cylindrical earthen vessel and pour 3½ ounces of commercial sulphuric acid and 1½ ounces of water into it, and then add one ounce of powdered sulphate of soda. In the center of this mixture, place a smaller vessel containing the water to be frozen; then cover the vessel, and, if possible, revolve the whole with a gentle motion. In a few minutes the water in the small vessel will be converted into ice. The same mixture can be used a second or third time for making a block of ice. The operation should, if possible, be performed in a cool place, in a cellar, for example.

PROGRESSIVE AGRICULTURE.—Agriculture has become an acknowledged science. Prof. Sanborn of the Missouri Agricultural College, says: "The time has passed when a successful farmer can be a mere clodknocker. He must be a business man and an educated man. If farmers want to fit their sons to cope most successfully with the difficulties that are sure to beset them in the calling of a farmer, let them avail themselves of the opportunity afforded for a practical farm education in a good agricultural school."

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Grange Officers.

Officers of National Grange.

Master—Put Darden of Mississippi.
Overseer—Jas. Draper of Massachusetts.
Lecturer—Mortimer Whitehead of New Jersey.
Steward—J. E. Hall of West Virginia.
Asst. Steward—W. H. Stinson of New Hampshire.
Chaplain—A. J. Rose of Texas.
Treasurer—F. M. McDowell of New York.
Secretary—John Trimble, 514 F St., Washington, D. C.
Gatekeeper—H. Thompson of Delaware.
Ceres—Mrs. Kate Darden of Mississippi.
Pomona—Mrs. S. H. Neal of Kentucky.
Flora—Mrs. Jas. C. Draper of Massachusetts.
Lady Asst. Steward—Mrs. E. M. Lipscomb of South Carolina.

EXECUTIVE COMMITTEE.

J. M. Blanton of Virginia, Chairman.
J. J. Woodman of Michigan, Secretary.
J. H. Brigham of Ohio.
Put Darden of Mississippi, ex-officio.

Officers of the State Grange.

Master—Wm. Johnston, Richland, Sac'to Co.
Overseer—W. L. Overhiser, Stockton, San Joaquin Co.
Lecturer—Daniel Flint, Sacramento, Sac'to Co.
Steward—Don Mills, Santa Rosa, Sonoma Co.
Asst. Steward—E. W. Davis, Santa Rosa, Sonoma Co.
Chaplain—B. F. Frisbie, Yuba City, Sutter Co.
Treasurer—I. C. Steele, Pescadero, San Mateo Co.
Secretary—J. Chester, 40 California St., S. F.
Gatekeeper—J. E. Beach, Routiers, Sacramento Co.
Ceres—Mrs. S. J. Cross, Antelope, Sac'to Co.
Pomona—Mrs. A. P. Roach, Watsonville, Santa Cruz Co.
Flora—Miss Minnie M. Plummer, Brighton, Sacramento Co.
Lady Asst. Steward—Miss Mary J. Carter, Byron, Contra Costa Co.
Executive Committee—A. L. Chandler, Nicolaus; J. F. Deming, Vallejo; H. G. Keesling, San Jose.
District Lecturers Appointed by the Worthy Master.
Geo. P. Loucks, for Contra Costa Co.
Nicholas Mertes, for Placer Co.
B. F. Frisbie, for Sutter Co.
G. W. Hancock, for Sacramento Co.
J. D. Huffman, for San Joaquin Co.
Walter Renwick, for Alameda Co.
E. T. Blackmer, for San Diego Co.
J. C. Marsh, for El Dorado Co.
J. F. Gregg, for Amador Co.
J. R. Totman, for Colusa Co.
Geo. Steele and D. F. Stockdale, for San Luis Obispo Co.
A. Henderson, for Nevada Co.
A. B. Huntley, for Plumas Co.
T. C. Alexander, for Los Angeles Co.
H. W. Brouse, for Merced Co.
V. E. Bangs, for Stanislaus Co.

The Grange and Living Issues.

[Read by J. W. Mackie before Tulare Grange, Sept. 19, 1887.]

What is the Grange for? What good can I receive, what good can I do by becoming a Patron of Husbandry? are almost the invariable questions put when men and women are solicited to join our Order. They are pertinent questions, demanding clear, well-defined answers.

Of course there is something pleasing, something which our nature demands, in every kind of social gathering, whether in the lecture-room, the dancing party, the lodge or the church, when the social magnetic current unites all in one common feeling. But beyond this pleasing social intercourse, beyond the party feeling generated in these gatherings, and natural to us all, which delights in having whatever we are connected with ahead of everything of its kind in numbers and efficiency; beyond the pardonable pride of having the ritualistic work of our Order done as correctly and as impressively as possible; beyond all these good things and every good thing of a social character, what other good things have we a right to expect from our connection with the Patrons of Husbandry? In the broader fields of municipal, State or national affairs have we, as Grangers, a part to perform, benefits to receive, with commensurate duties and responsibilities incumbent upon us?

Not long ago the great political parties of the people seemed in danger of dying of inanition. Like the bears in winter, they were living on the fat they had accumulated during the glorious summer of their usefulness. They could present no great, well-defined, dividing, distinguishing issue. Consequently disintegration of party lines has been going on at a rapid rate, accelerated by the presence of living issues springing into being independently of party lines and party platforms.

The sovereigns of America are now called upon to vote for principles and not for a party, to meet these living issues. We are called upon to decide how far the Government can interfere, and whether it should interfere with the ownership of land, its taxation and general management; with labor and its rights and duties; with private and corporate enterprises; with the transportation facilities of the country; with the national finances and banking business; with the manufacture and sale of intoxicating liquors and many other questions relating to the Government and the welfare of the people. We are even called upon to define and determine what the Government itself really is, whether it is something distinct from and above the people, or simply the people themselves. And to come nearer home, nearer the interest of every farmer, we are called upon to discover by discussion, co-operation or any other means or avenue of escape from disgraceful and ruinous corners in wheat, such as has lately demoralized every legitimate transaction in grain, how we can avoid passing the products of the farm into the hands of speculators, who only pay the farmer what they are pleased to give.

How long are we to be the playthings and victims of the thimble-riggers of commerce, who, while possessing millions, stoop to tricks that would disgrace the lowest followers of an agricultural fair, which you know, like agriculture itself, has passed into the hands of speculators and gamblers?

Can the Grange do anything? Is it within its province to set in motion the machinery that will break the shackles which seem to bind the business of the country, as well as county, State, and National Government? We cannot elect a governor, a mayor, or even a justice of the peace, without bending our necks and accepting nominations from a class of men we would be ashamed to be seen talking to, and would forever after feel degraded thereby. When will we be able to take any political action without first consulting the proprietors of saloons and deadfalls? Can the Grange take any steps to liberate us from this fearful degradation and place us where we can have a decent control of our own affairs?

I put these questions expecting a reply from the officers of the State Grange who have honored us with their presence to-day, or from the State Grange itself to be convened next month. As an individual, I think I know what my duty in these matters is and what the duty of the individual Granger is; and in thus publicly declaring what I think of duty, I am doing it in the presence of those who can, and whose duty it is to, correct or indorse.

It is time that honest industry, [intelligent morality and spiritual intelligence were liberated from the domination of everything that is vile and false. It is time that a united effort, with simultaneous action, should be inaugurated in all the Granges, whereby this matter should be brought up for free and full discussion, and also to determine the best possible means whereby the products of the farm can reach the great centers with the least possible manipulation of middlemen.

These discussions should be reported as far as possible to the RURAL PRESS and the Patron, who would, from the whole, gather the more salient points and present them in a condensed and more acceptable form to the people.

Something must be done to save us from the fearful octopus which has us in its grasp, its every tentacle holding and squeezing us like a vise, and, through a subsidized, weak-kneed, prejudiced press, covering all its operations in inky darkness. I ask, I hope, the Order will demand from the State Grange, through its officers and delegates, a scheme—an efficient scheme—by which we can all work at once, intelligently and practically.

Co-operation is the seeming watchword of the Grange, and I find new members looking for immediate steps being taken by the Grange toward establishing co-operative stores and a magical process by which we can be lifted somehow out of the depths of pinching poverty and straitened circumstances; and I find old, retired members of the Grange afraid of reuniting for fear of being bitten by some Utopian scheme of co-operation. Is there no middle place, where good sense reigns and honesty prevails? For example, we can reduce our freights by uniting in carloads; we can reduce prices by buying at wholesale; we can co-operate in expensive machinery, if we are honest and true; we can do many things within our own immediate circle by a little tact, forethought and united effort without being incorporate bodies.

This action, I know, will be confronted by the statement that we should patronize the merchants of our own place, and so help to build up the town. All I have to say is that the merchant can, if he will, help us in this matter; at the same time I enter my protest against the illusive statement that we owe anything to the town. It is not the town which builds the country, but the country builds the town for its own convenience.

A prosperous farming community can get along, though there should not be a saloon or a grasping speculator within 50 miles of it. I for one feel like casting defiance in the teeth of the vampires and parasites of the town who feed on the farmer and believe themselves to be the community, and that all should obey them. These are some of the home points over which we have some control.

Let me add, I have not said one word against legitimate merchandizing. It is a mutual convenience—only we have the right to do the best we can. This theme might be carried on indefinitely, so I will close at this point, thanking you all for a patient hearing, hoping that I have been able to make sufficient suggestions to form the basis of an interesting and instructive discussion.

MERCED GRANGE has been auspiciously reorganized by Bro. Overhiser, assisted by Bro. Amos Adams, and they have high hopes of organizing a new Grange at Washington Colony, Fresno, some time next month.

DIRECTORY OF SUBORDINATE GRANGES IN CALIFORNIA.

NAME OF GRANGE.	PLACE AND DATE OF MEETING.	MASTER.	SEC'Y AND ADDRESS.
Alhambra.	Martinez, 1st and 3d Sat.	Dr. J. Strentzel.	Maria B. Lander, Martinez.
American River.	Routiers, 2d and 4th Sat.	D. W. Taylor.	Jas. C. Cornell, Routiers.
Antelope.	Antel. S. H., 1st and 3d Sat.	H. A. Logan.	P. Peterson, Maxwell.
Bennett Valley.	Bennett Valley, 1st and 3d Sat.	Don Mills.	J. B. Whitaker, Santa Rosa.
Buena Vista.	Delano, 2d and 4th Sat.	E. D. Wheatley.	J. I. Morgan, Delano.
Carpinteria.	Carpinteria, every other W.	H. D. Woods.	Mrs. J. M. Higgins, Carpinteria.
Ceres.	Modeato, 4th Friday.	V. E. Bangs.	R. K. Whitmore, Ceres.
Clarksville.	Clarksville, 1st Saturday.	C. M. Chapman.	Samuel Kyburg, Clarksville.
Danville.	Danville, 1st and 3d Sat.	R. O. Baldwin.	Millie S. Howard, Danville.
Eden.	Haywards, 2d and 4th Sat.	J. Chester.	Josie Shari, Haywards.
Elk Grove.	Elk Grove, 1st and 3d Sat.	Thos. McConnell.	Delos Gage, Elk Grove.
Elliott.	Elliott, 2d and 4th Sat.	E. Hart.	H. H. West, Elliott.
Elmira.	Elmira, 2d and 4th Sat.	G. W. Tillotson.	Mrs. J. McCrory, Elmira.
Enterprise.	Brighton, 1st and 3d Sat.	W. A. Birch.	Lettie Haulon, Brighton.
Eureka.	Columbia S. H. near Auburn.	C. L. Corwin.	Annette Putney.
Florin.	Florin, 2d and 4th Sat.	John Reese.	L. H. Fassett, Florin.
Franklin.	Franklin, 1st Saturday.	L. Freeman.	M. B. Johnston, Richland.
Galt.	Galt, 1st and 3d Saturday.	Hiram Chase.	A. B. Bryant, Galt.
Georgiana.	Isleton, 4th Saturday.		
Grand Island.	Sycamore, 2d and 4th Sat.	J. B. Totman.	E. G. Morten, Colusa.
Grass Valley.	Grass Valley, 2d and 4th Sat.	J. W. Stewart.	A. Henderson.
Lincoln.	Lincoln, 3d Saturday.	J. S. Philbrick.	A. J. Soule, Lincoln.
Lodi.	Lodi, 1st and 3d Wednesday.	C. W. Norton.	J. D. Huffman, Lodi.
Lompoc.	Lompoc, every other Sat.	L. F. Potter.	W. H. Schuyler, Lompoc.
Luerne.	Hanford.	W. M. Ogden.	C. S. Sellers, Lemoore.
Magnolia.	Imile N. of Bear River, 2d S.	V. W. Scull.	May F. Bilderback, Colfax.
March.	West Butte, 2d Sat.	M. C. C. Partridge.	Mrs. S. I. Noyes, West Butte.
Merced.	Merced, 1st Saturday.	R. S. Clay.	L. A. Ostrander, Merced.
Montezuma.	Bird's Landing, 1st & 3d Sat.	T. T. Hooper.	Ettie Daniels, Bird's Landing.
National Ranch.	National City, 1st & 3d W.	R. D. Perry.	Maria D. Grant, National City.
Newcastle.	Penryn, 2d Saturday.	Wm. Barter.	Wm. H. Scott.
North Butte.	Pennington, 2d and last Sat.	W. Hedger.	Jennie Hedger, Live Oak.
Ojai.	Nordhoff, every other W.	R. Robinson.	S. C. Gridley, Nordhoff.
Paso Robles.	Paso Robles, 1st and 3d Sat.	D. F. Stockdale.	A. N. Rude, Paso Robles.
Pescadero.	Pescadero, 1st Saturday.	I. C. Steele.	Mattie Thompson, Pescadero.
Pilot Hill.	Pilot Hill, S.	Mrs. A. Dobbis.	F. Wentworth, Georgetown.
Placerville.	Placerville, every other wk.	Albert Norris.	Annie E. Bliss.
Plumas.	Beckwith, 1st and 3d Sat.	R. G. Hamlin.	A. B. Huntly, Beckwith.
Plymouth.	Plymouth, 2d and 4th Sat.	W. M. McMillen.	J. F. Gregg, Plymouth.
Point of Timber.	Byron, 1st Saturday.	A. Plumley.	Eva Preston, Byron.
Potter Valley.	Potter Valley, every other wk.	W. A. Grover.	W. V. Kilbourne, Potter Valley.
Poway.	Poway Valley, 2d & 4th Sat.	S. Palmer.	J. Anderson, Poway Valley.
Roseville.	Roseville, 1st and 3d Sat.	Lee D. Thomas.	Mattie Leavell, Roseville.
Sacramento.	Sacramento, 2d and 4th Sat.	W. W. Greer.	Frankie M. Stevens.
San Jose.	San Jose, every Saturday.	H. G. Keesling.	E. T. Pettit, San Jose.
Santa Cruz.	Santa Cruz, semi-monthly.	G. O. Wardwell.	B. Pilkington.
Santa Rosa.	Santa Rosa, 2d and 4th Sat.	E. W. Davis.	Martha Lumsden, Santa Rosa.
Sebastopol.	Sebastopol, semi-monthly.	Jas. P. Gannon.	C. Wightman, Sebastopol.
Sierra Valley.	Sierra Valley, every other W.	G. P. Haines.	N. N. Strang, Sierra Valley.
Snelling.	Snelling, every other W.	Geo. P. Kealey.	S. K. Spears.
Social.	Mich. Bar, 2d and last Sat.	W. H. Atkinson.	Mrs. H. E. Putnam, Mich. Bar.
South Sutter.	Pleasant Grove, 4th Sat.	Jno. W. Jones.	Ella M. Jones, Pleasant Grove.
St. Helena.	St. Helena, 1st and 3d Sat.	J. G. Norton.	W. Peterson, Sr., St. Helena.
Stockton.	Stockton, every Saturday.	T. E. Ketchum.	N. T. Root, Stockton.
Sutter Mill.	Coloma, 1st and 3d Sat.	F. J. Veerkamp.	F. Veerkamp, Coloma.
Temescal.	Oakland, O. F. hall, 1st Sat.	A. T. Dewey.	Nellie G. Babcock, N. Temescal.
Tulare.	Tulare, 1st and 3d Sat.	A. P. Merritt.	Courtney Talbert, Tulare.
Turlock.	Turlock, 2d and 4th Sat.	P. R. McCabe.	E. B. Osborn, Turlock.
Two Rock.	Two Rock, 1st Sat.	H. Andrews.	J. C. Purvine, Petaluma.
Vallejo.	Vallejo, 2d and 4th Sat.		
Valley.	Pacheco, 2d and 4th Sat.	S. Ashley.	Ella E. Ashley, Pacheco.
Walnut Creek.	Walnut Creek, 2d & 4th Sat.	C. Sharp.	Mrs. Mary Baker, Walnut Creek.
Washington.	Comanche, 1st and 3d Sat.	Samuel C. Waters.	Chas. Bamert, Clements.
Watsonville.	Watsonville, 1st and 3d Sat.	N. A. Uren.	Mrs. S. J. Kidder, Watsonville.
W. San Joaquin.	Tracy, 1st Saturday.	A. P. Stocking.	Jas. C. Allen, Tracy.
Wheatland.	Wheatland, 1st and 3d Sat.	Hugh Morrison.	I. W. Huffaker, Wheatland.
Woodbridge.	Woodbridge, 1st and 3d Tu.	Victor Jahant.	Mrs. E. J. McIntosh, Woodbridge.
Yuba City.	Yuba City, 1st Saturday.	C. E. Williams.	Geo. Ohleyer, Jr., Yuba City.

*Oct. to March, ev'g; April to Sept. aft'n.
†1st Saturday, 7:30; 3d Saturday, 2 o'clock.
‡Sat. on or before full moon & 2 weeks after.

+2d Saturday, 7:30; 4th Saturday, 3 o'clock.
§Saturday on or before full moon.
¶Saturday after full moon.

State Grange Suggestions.

All who can come should attend the State Grange. There will be much said and done which cannot be reported through the open columns of news prints that Patrons will be most specially interested in.

We hope that most of the Past Masters of the State Grange will be present at the coming session, and even Brother Webster, before the session closes, although he will not promise to come. It is worth a pilgrimage to meet such grand old patriarchs at our annual Grange sessions, and receive their hearty greetings, and listen to their earnest words of wisdom and good cheer.

Come early to the State Grange session, as those who listen to the opening exercises have a better understanding and a more perfect enjoyment of the rest of the proceedings.

Everybody expects a good annual address, of course, from the Master, and reports from the Lecturer, Secretary and other officers. We suspect the address of welcome will be delivered by the able and eloquent Master of Santa Rosa Grange, and be responded to by one of Sacramento's talented sons. (W. W. Greer, W. M. of the Subordinate Grange.) We are confident that these exercises will be of more than usual interest, and are glad to see that indications are bright for a most exceedingly interesting session throughout for the welfare of the Order, and most rarely so for those who attend.

The Secretary of each Grange should furnish a certificate of election to their alternate representatives to be presented at the State Grange.

Members of the Fourth Degree are entitled to receive the Fifth Degree at the State Grange upon payment of the customary fee of two dollars each. They should have a certificate showing their good standing as Fourth Degree members in their own Grange, or otherwise be able to prove satisfactorily to the State Grange that they are members in such standing. Masters of Granges and their wives, of course, have no membership fee to pay to receive the Fifth

Degree. The Fifth Degree (Pomona) will likely be conferred on Friday night.

We hope such members as have usually contributed to the entertainment of the State Grange but who cannot be present at this session will write letters or articles to the Literary Committee to be presented as occasion occurs. Also that other able and earnest members will do likewise.

The Grange work in this State for the past few years has been going on rather quietly, for various reasons. It now behooves the Patrons at the coming session to make plans for a most active campaign. It is time for extra work. There are good, strong laborers in the field who will show their strength and build up the work in this State, if encouraging plans are devised and properly set before them. There is no good reason why work should not be taken up and carried forward in perfect harmony and with greater success and power than has been evinced during the past 10 years. Let all act with an eye single to such a glorious result.

We would suggest that Patrons from all sections of the State bring with them rare specimens of produce and all such articles as would be interesting to exhibit at the National Grange which meets at Lansing, Michigan, November 16th. Thus a starting point would be gained for a larger exhibit to be made for California by the Worthy Master of the State Grange. There is much that could be said in favor of such action. The benefit, however, is obvious to the minds of all Patrons who may have anything to contribute.

Co-operation is a subject which, we think, it would be well for the State Grange to consider, and if possible, set the ball in motion for organizing co-operative associations on the Rochdale plan in various sections of the State. Quite a number of pamphlets and periodicals, received from the Rochdale Co-operative associations in England will be on file for examination by Patrons who wish to become informed of the immense success and most astonishing benefits that co-operation has bestowed upon the great mediocre and working classes of England.

It would seem appropriate for our State

Grange to invite the National Grange to send the National Lecturer, Mortimer Whitehead, to California during the next year, a field which has never yet been visited by the National Lecturer, or officially visited by any officer of the National Grange since Brother N. W. Garretson, Organizing Deputy, organized so successfully a goodly number of subordinate Granges, and the State Grange in 1873. In fact, we think it would be a good plan to call upon the Patrons of Oregon, Nevada, Colorado, and other Western States, to unite in inviting the National Grange and National Lecturer to cross over to this side of the continent, and give the benefit of their good words and inspiring presence.

Some provision might well be made at this session of the State Grange for a Pacific States' picnic, whereby the Grangers from all parts of the coast could profitably come together for exchange of opinions, sociability and co-operation.

Going to State Grange.

As this is the last issue of the RURAL before the meeting of the State Grange at Santa Rosa, it may be well to say to all who expect to attend the session that they should take the Donahue Broad Gauge R. R. via ferryboat Tiburon, leaving San Francisco at 7:45 A. M. and 3:30 and 5 P. M. Ask for "Granger's round-trip ticket." Pay \$2 for it. Have it countersigned at Santa Rosa by E. W. Davis, otherwise the ticket will not be good for return trip.

There will be rooms in private families for those who attend the State Grange, provided they do not want to stop at any one of the hotels. Hotel rates have been reduced, and accommodations will be ample for the large number of guests who may be in attendance.

The Feast of Pomona will be held at the Rink on Fourth street, Santa Rosa. The room is on the ground floor, large, well-ventilated, and will be lighted with the electric light. John Adams and a host of able lieutenants are busily at work, engaging and collecting fruits for the Feast. Brother Adams says he will have enough and to spare of the finest products of orchard, vineyard, garden, kitchen and flower garden. See the Feast that will be spread for Pomona! It will pay for your trip to Santa Rosa. Then the literary, social and musical entertainments given at the session will be a treat worthy of the cause and the occasion.

Take your badge or sash with you when you go to Santa Rosa. Then you will be sure to have your insignia of office, and you will also be sure to have the proper regalia.

There is plenty of work at the sessions of the State Grange; yet, after all, it is one of the pleasantest weeks of the year. The greetings and meetings are truly delightful. Good vocal and instrumental music, choice readings, instructive essays, excellent extemporaneous speeches, and a jolly good time generally, go to break up the monotony of every-day life.

Santa Rosa is a thrifty city with genial climate, beautiful streets, commodious halls, good hotels, three trains a day from and to S. F., enthusiastic Grangers, hospitable people, successful farmers, excellent schools, churches of various denominations, and Lodges of all kinds. It is therefore a suitable and proper place for the State Grange to meet. Go to Santa Rosa, and you will say you never had a better time.

"Music hath charms." It is hoped that every Patron who expects to attend the State Grange will make up his or her mind to assist in the singing. There is nothing that causes time to pass more pleasantly than one of the good old Grange songs—the older the better—in which everybody takes a part. Remember, Patrons,

"Tis toil that over Nature gives man his proud control.
It purifies and hallows the bosom of his soul."

Or that other grand old song, "Work, for the Night is Coming." Let every one sing, both with the spirit and the understanding.

A Representative Matron.

Miss C. A. Hall, whose likeness appears upon this page is the niece of O. H. Kelley, the originator of the Patrons of Husbandry and first Secretary of the National Grange. He early imparted to her his idea of forming a secret society of agriculturists as an aid in promoting fellowship between the people North and South, and found her a sympathetic and valuable counselor. The principle of giving women full membership in the Order was adopted at her suggestion. On the permanent organization of the National Grange in 1873, she was chosen Lady Assistant Steward. She it was who rendered the grateful service of compiling the songs of the Grange.

We would call the attention of Patrons visiting Santa Rosa, and seeking first-class accommodations, to the advertisement of the Occidental, the principal hotel of that city, which appears in our columns to-day.

We are sorry to learn of the recent illness of Brother George Wilson of Enterprise Grange. His friends will be pleased to hear that he is now better and still improving.

Tulare Grange.

EDITORS PRESS:—Bros. Overhiser and Adams attended a special meeting of Tulare Grange, No. 198, for the purpose of conferring the third and fourth degrees of the Order, on Monday, Sept. 19th. A Harvest Feast for the occasion was gotten up by the brothers in the rooms of the Cosmopolitan restaurant, permitting the sisters the full enjoyment of a feast to which the slavery of neither cooking nor dish-washing was attached. Everybody looked happy.

After justice had been done to everything, including the ice-cream, we again marched in couples to our fine hall, when Bro. Overhiser gave the unwritten work to the newly-made brothers and sisters. Lack of time prevented our brother from illustrating this work as fully as he would have liked, and as fully as it deserved, but what was done helped very much to re-impress it on the minds of the older members; after which the Grange was given up to the Good of the Order.

A committee appointed on Saturday had selected for discussion, "The Duty of the Grange in Relation to the Living Issues of the Day," and the writer to deliver the introductory essay, which you will find inclosed, in accordance with a motion made by Bro. Overhiser and carried by the Grange.

In relation to the essay, Bro. Adams believed in a more conservative and conciliatory method than denunciation and epithets; that very much

are glorious meetings. The old soldiers renew former friendships, and live over again events of the days that are gone.

Hotel Rates for State Grange.

All the hotels at Santa Rosa are making special reduced rates for those attending State Grange next week, as follows:

Grand hotel	Per day.
and Single person	\$1 50
Occidental Two in one room, each	1 25
Magnolia house	1 25
Eagle hotel	1 00

Any Patron who may desire rooms, or any information pertaining to the session of the State Grange that is to be obtained at Santa Rosa, can get the same on application to E. W. Davis, W. M. of Santa Rosa Grange.

Pomona Granges of California.

SONOMA CO., No. 1.—Meets third Wednesday of January, April, July and October, at 10 A. M. M. G. N. Whitaker; Sec., Don Mills, Santa Rosa.

SACRAMENTO CO., No. 2.—Meets fifth Saturday of mos. having a fifth Saturday, at 1 P. M. M., A. A. Krull; Sec., W. W. Greer, Sacramento.

SAN JOAQUIN CO., No. 3.—M., W. L. Overhiser; Sec., J. D. Huffman.

GRANGE VS. RAILROAD.—The recent case in Vermont, where the State Grange scored



Fraternally,
C. A. Hall.

had been conceded by the railroad magnates, when met in a business and gentlemanly manner; that farmers had better let merchandizing alone, as merchants should let farming alone, each working in the line he understood the best.

Bros. Maples, Hawkins, Fowler, Wright and others followed in enthusiastic warmth; that they were not seeking favors, but rights, and spoke of the State Grange as having done very little for the special benefit of the farmer. Bro. Overhiser steered in between the parties, with his usual tact and good humor. Altogether it was a day of enjoyment which will live long in our memories. Bros. Maples, Wright and myself have been appointed a committee to draft resolutions embracing a remedy for all those crying evils which are the source of so much agitation, which our delegates will carry to the State Grange. When the mountain labors, I will let you know the result.

J. W. MACKIE.

Tulare, Sept. 21, 1887.

THE METEOROLOGICAL LECTURE.—The promised paper by Lieut. J. E. Maxfield, on "Rain and Frost in California," will probably be read before the State Grange on Wednesday. Coming from the Chief Officer of the Signal Service upon this coast, it bids fair to prove one of the most important addresses of the session; and should Lieut. Maxfield's engagements permit, an opportunity will be afforded the farmers to discuss points of interest with the lecturer and elicit valuable information.

DURING the State Grange session, the members of Ellsworth Post, G. A. R., located at Santa Rosa, will give a grand campfire. The occasion will be a joyous one, and those who are fortunate enough to be invited will have a good time. There will be a few short speeches, some fine music and pork and beans, with hard-tack and coffee as relishes. These campfires

feet of the buildings. The origin of the fire is supposed to have been a carelessly dropped cigarette.

Inyo.

DISTRICT FAIR POSTPONED.—Dispatch to Associated Press. Independence, Sept. 26: The first fair of the Eighteenth district, consisting of Alpine, Mono and Inyo, will be held at Independence, Oct. 10th to 14th. The buildings are new and the grounds will be used for this purpose the first time. The prospects for a splendid show are good.

Marin.

FIRE AND MESQUIT GRASS.—Petaluma Courier: A gentleman residing in Marin county had a portion of his brush land burned over last year, and to try an experiment sowed about 100 pounds of mesquit grass seed right on top of the ashes and debris left by the fire. The result was a good crop of feed this year on land that was formerly so thickly covered with chaparral that the cows could not get through it. We advise ranch-owners whose land was recently burned over to try the same experiment.

San Diego.

JULIAN DECIDUOUS FRUITS.—Julian, the banner district of San Diego county in the production of deciduous fruits, has placed before the visiting public a local pomological display. It includes apples, pears, peaches, plums, prunes and grapes, from the orchards of Balena, Mesa Grande, Banner and Spencer valley. The largest Bartlett and Winter Nelis pears measure over one foot in circumference, and there are luscious Crawford peaches measuring 9½ inches. The girth of one of the apples grown in that section is 14½ inches, and, in addition to their remarkable size, these fruits cannot be surpassed for fineness of flavor, grain or conformation.

San Joaquin.

SECOND-CROP BARLEY.—Stockton Independent, Sept. 21: The second crop of barley is now growing on Staten Island in the extreme northwestern part of this county, and now stands six inches high. The farmers expect to make a good hay crop if cold weather comes before the grain matures.

San Mateo.

MENDING A PIGEON.—Redwood Times and Gazette: One of Mrs. Percival Selby's children, at Menlo Park, performed a successful piece of ornithological surgery recently. A young pigeon had been bitten so badly by a dog that its crop was torn open. One of the children covered the wound with a piece of linen made to adhere by gum arabic.

Solano.

EDITORS PRESS:—The weather is quite sultry, with cool nights. A light shower fell last Wednesday night. Fruit-picking is about done, except grapes and some late peaches. Not many apples are raised here. Grapes are sent East every day. The dried-fruit trade has turned out far larger than any one expected. Mr. Blum has sent East from Vacaville 28 carloads of dried fruit. Several in the neighborhood have dried from 30 to 50 tons. W. Pleasant has dried 30 tons of peeled peaches, besides a large crop of apricots. Baled hay is worth from \$11 to \$13 per ton. Straw sells at \$1 per load loose in the field. The grain market is dull, and people that have not sold are not pleased with the prospect. Some land is selling here, but not a great deal, as those that have orchards and vineyards know that they are sure of good pay if they tend their places well. This season has convinced most of the people that there is a good profit in raising fruit to dry, even if the prices paid were one-third less than this year. In this valley, if a person has a good drying peach, he can raise and dry peaches, sell them at four cents a pound, and make money. The Muir is the best drying peach; after this the Salway, Susquehanna, Mixon Free, Crawford and Strawberry. In setting out an orchard, either for drying or sending to market green, about four kinds should be put out, so that there will be one kind ripe and gone before the others come in.—G., Vacaville, Sept. 25th.

Sonoma.

SANTA ROSA SPUDS.—J. L. Williamson, who owns a fine ranch about 1½ miles west of Santa Rosa, has placed on exhibition in the window of the Republican office a cluster of potatoes, Burbank seedlings, composed of 11 well-developed potatoes, the largest measuring seven inches in length and nine inches in circumference.

Tulare.

WILD SUNFLOWERS TOO THRIFTY.—Delta, Sept. 22: Now is a good time to out the wild sunflowers that have threatened to take a number of farms in this vicinity. John Harter has had them cut on the land south of town that he recently purchased from George Webb, and we would like to see others do the same. Before many days the seeds will fall and be scattered over the ground so thickly that next season's crop will choke any cereal or other crop that may be planted. They should be cut at once and burned.

Ventura.

BEAN CROP.—Saticoy Cor. Free Press, Sept. 23: Farmers are getting ready to thrash their beans. The crop will not yield so well as was anticipated. The acreage is much less than last year, and the canning establishments in Boston and all over the East are short of stock and have cleaned out this coast pretty well. If farmers will stand together they may realize \$3.50 and \$4 per hundred for Limas.

AGRICULTURAL NOTES.

CALIFORNIA.

Contra Costa.

NEW PAVILION.—Martinez Gazette, Sept. 24: A new pavilion is in course of construction at the fair grounds—34x60 feet and 20 feet to the eaves. The building is so planned that at some future time galleries can be built on two sides. It will have a handsome front with large windows and double doors at the main entrance. Jos. Beaudette of Concord, the builder, is working a large force of men to complete the structure in time for the fair which opens October 3d. It is a much-needed improvement.

Lassen.

IT BEGAN AS USUAL.—Susanville Mail, Sept. 21: One day last week, while the thrashers were engaged at the residence of Al. De Forest, they discovered a fire in the rye grass between the house and milk-house. Running to the place they succeeded by the use of wet grain sacks in putting out the fire when within a few



Country School.

(Written for the RURAL PRESS by S. C. B.)

Oh, dear, dear! Vacation's over.
I to school this morn discover
A motley crowd of merry faces,
Shouting, laughing, running races.
Listen to their merry voices!
As they see me nearer coming,
All their shouting's changed to humming,
Gathering in from every quarter
To their lines for lunch or water.
I ring the bell, resume my chair,
And, assuming serious air,
Tap, and frown the tumult dormant,
Only to commence the torment.
Thus engaged, time is not dull,
As you would think; indeed, 'tis full
Of odd variety. Attend me then!
"The class may write this specimen:
Now, James, be quick; what is this? Say.
Answer louder; yes, 'tis 'A.'
Mary is leaning on her book,
And John's forever on the look.
What does *this* spell? Why, can't you see
These little letters? R, a, b?
Don't know? Well, that will never do.
Pronounce it *Rab*; enough this time, and you
May take your seat. And Lizzie read,
Stand straight to line; now then, proceed.
Speak louder, slower, higher key."
"Say, teacher, Charlie's pinching me."
"Come here, sir; what's *this* you're into?"
"Boo, hoo! boo, hoo! I didn't mean to."
"Excuse you, sir? Go wash your face.
Next read. Aha! You've lost your place.
Oh, such a noise! Stand here, Ben;
Mary says she's lost her pen.
May I go out? (Ben's broke his slate.)
Jennie, dear, why are you late?"
A busier life, what can exceed it?
"Twas only wasting time to heed it;
But, in the noise and great emergency,
I cry out "Silence!" to these insurgents.
"Right face," with all contrariety,
"Hands up, and promise more sobriety,
Then I'll not undertake to tell
How many of you have failed to *spell*
And come far short of lessons, true,
You bring more care than e'er I knew."
Now, 'tis a fact, that which I hear,
And proverb old—the *truth*, I fear,
Namely, that "she who keeps a school
For twenty years becomes a fool."
A crank, old maid, if really be,
I wonder what'll become of me,
For "zo's" very near, I know,
In which I've had to undergo
Schoolma'am pleasures and vexations
Attaching to the teacher's station;
And if I chance to still continue
Strong in body, mind and sinew,
I'll reason—just by rules of logic—
That by some hopeful chance or project
My longed "ideal" comes this way;
Rich, romantic, young or gay,
(But not a teacher, poet, fool)
Then I'll resign my place in school,
No more to worry, scold or preach,
Lecture, theorize or teach;
But set my cap for him, you see,
And I'll love him—if he'll love me.

Joaquin Miller's Open Letters.

NUMBER 2.

To the Young Man Who Goes Into the Country With a Gun.

The hunting season is suddenly upon us, and the tawny and lion-like old hills of California are swarming with gay and handsome young men in striped clothes and hunting jackets. Each gay and handsome young man from the city has a gun on his shoulder and an empty bag at his side. Each gay and handsome young hunter from the pent-up city is full of life and in high spirits. True, he does not always know which end of his gun is loaded. True, he could not half the time hit the side of a red barn; but this does not necessarily make this gay and handsome young egotist from town a bad man at heart at all. Indeed, I am frank to concede that he is, as a rule, when clothed in his right mind and behind his counter at home, a very good fellow. But that he is a rank fool when in the country, and has a good many things to learn, I think I can very easily show.

In the first place, the air of superiority which the young Nimrod with the new and ever-empty bag, and gun that is guiltless of bloodshed assumes toward his elders and his betters out in the country, shows a mighty weak spot in the brain of this ambitious young hunter. Yet a full admission of his ignorance would at once go far to absolve him with the high priests of the hills and open the closed doors of many a Druid's temple of bird-peopled oaks. Confess his ignor-

ance? Not he! When a young man from the country goes to town for a day he does not assume at once to know all the mysteries and haunts of the place. And yet how much more mysterious are the paths and ways along the wooded hills with nature. That little dot on the map, the city, which you can cover with the head of a pin, and where the young man with the gun makes his home, is a very contemptible place, indeed, comparatively. Yet from his airs and his estimation of it, or rather of himself, you would think his pent-up little town was the entire universe.

And yet it is not quite his mistaken estimation of either himself or his place of abode that makes the young man with a gun so entirely despised by the world-builders out on the golden downs in the hunting season. But frankly, to come right to the point, it is his abominably bad manners when he has left off his Sunday clothes.

These gay young men usually hunt in couples or threes. They even go in herds or bands from three to ten, and their insolence and bad behavior on such occasions can be graded by their numbers, so that I am afraid we will have to argue from this that the gay young man with a gun is not only a booby when in the country but a downright bully and a coward.

For example, four of these young zebras with striped clothes and brand new guns and big, new game-bags, came up here to my steep and stony country place from San Francisco yesterday and took possession at once. They neither knew nor cared who owned the grounds and had inclosed pleasant woods and all the year through had cherished the pretty birds with casque and helmet. They were from the city and they cared not a fig for the country or the countryman.

These clumsy young animals soon began to blaze away at the birds as they stumbled up and down the steep and wooded hills, and seemed to be having a high old time right under my nose without ever saying as much as by your leave. I said nothing, however, to all that, for it soon became clear that the birds were safe. Only the young zebras themselves, and my big redwoods, seemed to stand the slightest chance of being hit. At last the long walk, the steep hills and the fervid September sun seemed to have quite overcome the gay young Nimrods, and after making noise enough to have insured the arrest of every one of them, if at home, they sat down by my spring a little distance above the house, and drew out their flasks. After exhausting two bottles of provisions one of them arose, laid his hat aside on a bench and deliberately washed his face in my flowing spring. The others then did the same. I said nothing all this time. But the vulgar and bad behavior of these wealthy and doubtless well educated young men set me to thinking hard things of them, and I was now entirely out of patience. Suddenly one of them sat down close up to the deep clear pool, took off his shoes and in a moment more had his feet dangling up to the knees in my spring.

"Look here, young man, that water flows down the hill into my house."

"Yes, yes, old man, water generally does flow down hill." The gay young gentleman from the city dangled his dirty feet in the pleasant pool as he said this, and nodded his head at his companions.

There was a shout of delight and much merry laughter from the four young sportsmen, and then the three others began to untie their shoes.

"Will you get out of my spring?"

"Will you bag your head?" answered one.

"Wipe off your chin," yelled another.

"Oh, pull down your vest," sneered a third.

I went in and brought out my little 22-caliber Winchester rifle. The four young men rose up hastily, gathered up their guns and started over the brow of the hill. One of them had his shoes in his hand. The stones are sharp and the hill is steep at that point, but the young man with his shoes in his hand and breeches rolled up to the knee made very good time all the same. As they were about to disappear over the hill I fired at a stone far below them and sent a flattened ball screaming through the air above their heads. That is all. I have two new game-bags and a pair of shoes but little worn hanging up in my woodshed, which any one of these four young men may have by calling at the house a little below the spring wherein they attempted to wash their big, clumsy feet.

I must beg pardon for giving all these dull details of this unpleasant event, but I wanted to set this down exactly as it happened, and I assert that it is only a fair example of the rudeness and audacity of the average young man with a gun who goes out from the city. To say that these young

hunters will steal would be also strictly within the truth. They sometimes camp out, and then they pillage henroosts in search of the game which their untrained conceit cannot bring down with a gun.

Briefly and frankly I assert that if I should go to any city and behave with half the rudeness of the average man coming out into the country, young or old, in the hunting season, or out of it, I should be in jail in half an hour.

Let me say once for all that a man contemplating a trip into the country, could not do better than take a supply of good manners with him. I fail to find any good reason for his leaving them behind him in the city. Decent behavior, indeed, is about as important as a game-bag in an excursion at this season of the year, or any season of the year. Lift your hat, my young friend, when you approach the country and the abodes of the country people. You are coming to the abiding-places, and the birth-places, too, of the kings of thought, for all men of history were born in the country. Why, you poor little pigmy from town, you are among giants when out from behind your counter and out in the country. Lift your hat, I say!

And now, my young hunter from the city, one word more. Suppose you go hunting without a gun. Let me advise you in all sincerity to do this. Let me implore you to do this. More than that, let me frankly confess that I owe all that I am or hope yet to be to the fortunate habit of hunting without a gun.

My home is, ever has been, and must to the end of life be, in the woods. But I don't want a gun on my shoulder all the time. There are no wild beasts, no wild men, if we except those from the city; nothing at all that I could not vanquish with a pebble. Let me tell you how I happily first came to hunt without a gun. Nearly 30 years ago, when among the Indians, I was once out hunting alone. I had grown very weary and sat on a log in the dense woods by a deer trail to rest. I must have been thinking of something far away, for suddenly I saw three deer, two large ones and a fawn, standing not 10 feet distant and looking me full in the face; and there was such a kindly, curious, human look, such an equal homelike look, as if to say that we all lived there together in that lofty world and must not quarrel, that I let my gun lie across my lap till they passed on, and so went back to my Indians empty-handed.

May I digress a bit and add that when I told the Indians, that night, what had happened, they were greatly pleased and said I had seen the spirits of good Indians, and that they would guard me well?

To get back to the text, I tell you frankly and truly that I never really saw anything at all for all my hunting so long as I hunted with a gun.

Yes, I know there is an old saying of mountaineers, that you see everything when you don't have a gun. But I mean more than that; vastly more. I mean that I never really saw the sky, the woods, the waters, nothing so long as I carried a gun and cared only to kill. Candidly, I never saw color, form, space, God, so long as I carried a gun or sought to kill my companions in "God's first temples."

My young friend with the gun, go forth into the tawny hills of gold that slope to our seas with peace in your heart. Truly this hunting in our hills with a gun is not a gentleman's pursuit. It is a pagan's employment. Leave this hunting of the few startled deer to the "hoodlum" who has murder in his heart. For 50 cents you can buy more meat and better meat in the nearest market than you can find in a hard week's hunt in the hills. Give it up. Look into the kindly eyes of the first deer you see from this date and strike a covenant of peace with this helpless and hunted creature. In short, be a gentleman, and a gentleman you cannot be and carry a gun from town to country, if I am to judge from what I have already seen this hunting season.

My young friend from town with a gun, have you ever seen a tree? You never have seen a tree, and you never will see a tree so long as you lay down your good manners and take up a gun when setting out to see the country.

Why, sir, the humblest tree that grows is a grander, nobler object of admiration than the tallest tower of your town. All the architects of this earth could not build a single tree. Look at it as it stands to the four winds of heaven, tossing its arms gratefully, trustfully, lovingly forth; its every bough a blessing, its every leaf a miracle. Leave your gun in the shop and go forth without it, and for the first time see a tree, nature, God.

Let us read the following lines from that gentlest and truest of all our living poets, John Vance Cheney, who makes his home with

us and who wrote them under the shadow of his own redwoods:

In Primeval Wood.

"This deep, primeval wood—how still!
Lo, Silence here makes all his own;
Vile shapes, with hands upon their lips,
Stand round about his darkened throne.

"The patient pleading of the trees—
How deep it shames the soul's despair!
In supplication moveless, mute,
They keep their attitude of prayer."

JOAQUIN MILLER.

Selfishness in Children and Selfishness in Mothers.

It has been truly said by Miss Sewell, author of an excellent work on education, that "unselfish mothers make selfish children." Commenting on this, another author adds: "This may seem startling, but the truth is, that the mother who is continually giving up her own time, money, strength and pleasure to the gratification of her children, teaches them to expect it always. They learn to be more importunate in their demands and to expect more and more. If the mother wears an old dress that the daughter may wear a new one, if she work that her daughter may play, she is helping to make her vain, selfish and ignorant, and very likely she will be ungrateful and disrespectful. And this is equally true of the husband and other members of the family. Unselfish wives make selfish husbands."

On the other hand, a few words may be said on the subject of selfishness of mothers in relation to their children, a form of selfishness very natural and pardonable when not carried to extremes, but which when carried to extremes is apt to be ludicrous and disagreeable. There is no picture on earth more lovely than a young mother and her first babe, and no solicitude so touching, sweet and natural as that which seeks to call your attention to every smile and expression, every movement, one might say, of the lovely innocent who rightfully claims her highest admiration and tenderest love. No one can help sharing in this admiration in degree, neither can one help sympathizing with the sweet solicitude that seeks to make baby the chief center of attraction in the house; but there comes a time and a place where the line must be drawn, and baby's reign become a limited monarchy, and that is when baby is old enough to begin to understand his power; just there he must be shorn of some of the privileges of royalty, if not of all, and later on of all becoming subject instead of king, otherwise there will reign in the house an absolute despot.

At this point, therefore, it behooves a mother to beware of selfishness in the matter of claiming from every person who comes near her child the same admiration and sympathy, also the same allowance that was freely given when baby was at a more tender age, and gave no evidence of the coming possible tyrant. A volume might be written on this subject, but at present there is space only to warn mothers against the fatal error of allowing baby, after a certain age, to maintain through her own agency a tyrannic reign over not only the whole household proper but the "stranger within its gates."—*Aunt Ruth in Prairie Farmer.*

Mother's Way.

The following hint to mothers, clipped from an exchange, we think will be appreciated by all who have once needed to know "mother's way" themselves.

Has it ever occurred to you that you may some day be suddenly prostrated by sickness, or called from home and leave a young and inexperienced daughter to do the family cooking alone? Might she not be sorely puzzled to prepare some of the simplest dishes without mother there to help her? In such emergencies a girl, even if she has time to look for a cooking recipe, can hardly ever find just what she wants, or if she does find it, the recipe is often too elaborate for a beginner's uses. What she needs to know is the easiest and simplest way of cooking plain, every-day food. She may have seen much cooking done, and possibly may have done some herself, but in her perplexity she is apt to forget just how to go to work. To meet such an emergency which is liable to come to the home where least expected, I have a good blank book with a title written across the first page "Mother's Way." In it I write from time to time my own methods of cooking the food commonly used in our family, giving minute directions as to the time required, amount of water used, if any, how much salt and when to put it in, how to prepare

seasoning for each dish, and when to add it; the heat of the oven required for biscuits, pies, bread, etc. I try to write down everything that I think a young, inexperienced girl would be likely to ask her mother about, were the mother unable to go into the kitchen. In as plain and practical way as possible, I add any needed suggestions that occur to me. In short, I try to write just as if I were talking to her. I shall not expect her to get all her instructions in cooking from this book, for when I am with her she naturally depends in a great measure upon me, and when left alone she would find she had forgotten much she needed to know. I feel sure she will appreciate her recipe book, and the mother's care and love that prompted it.

To Make a Happy Home.

1. Learn to govern yourselves and to be gentle and patient.
2. Guard your tempers, especially in seasons of ill-health, irritation and trouble, and soften them by prayers and a sense of your own shortcomings and errors.
3. Never speak or act in anger until you have prayed over your words or acts and concluded that Christ would have done so in your place.
4. Remember that, valuable as is the gift of speech, silence is often more valuable.
5. Do not expect too much from others, but remember that all have an evil nature whose development we must expect, and that we should forbear and forgive, as we often desire forbearance and forgiveness ourselves.
6. Never retort a sharp or angry word. It is the second word that makes the quarrel.
7. Beware of the first disagreement.
8. Learn to speak in a gentle tone of voice.
9. Learn to say kind and pleasant things whenever opportunity offers.
10. Study the characters of each, and sympathize with all in their troubles, however small.
11. Do not neglect little things if they can affect the comfort of others in the smallest degree.
12. Avoid moods and pets and fits of sulkiness.
13. Learn to deny yourself and prefer others.
14. Beware of meddlers and tale-bearers.
15. Never charge a bad motive if a good one is conceivable.
16. Be gentle and firm with children.
17. Do not allow your children to be away from home at night without knowing where they are.
18. Do not allow them to go where they please on the Sabbath.
19. Do not furnish them with much spending money.—*Intelligencer.*

REIGN OF THE WOMAN.—Man never appreciates his inferiority to woman so thoroughly as when he stands before the altar in the presence of an audience of friends and hears the clergyman make him husband. Nine out of ten men in such a position tremble as if they were about to be arrested for murder, while nine out of ten women go through the ceremony as gracefully as if it was an every-day occurrence. And it is this timorous creature in a dress suit that promises to protect the calm and placid angel whose orange-blossoms are her aureole. What delicious sarcasm there is in the thought! And in after life, when the husband gets torn up by care, and when a little trouble comes to steal away his peace of mind, how is it then? The woman whom he promises to protect becomes his protector. She smooths out the wrinkled brow of care. She props up his flagging spirits. She puts new life into his bosom, new hope into his soul, and he goes forth in the morning with new strength and new zeal to wrestle with life and its responsibilities. Woman may be the weaker vessel, but she isn't broken up and doesn't go to pieces as soon as man. *Baltimore American.*

BRIGGS—Tompkins has been talking about you.
"He has? The idiotic old liar! What did he say?"
"Why, he said you were the best looking man in the block."
"Wh—O, I see! Well, you know Mr. Tompkins was always conceded to have a great deal of taste."—*Judge.*

MCRIELLY—I can't make out your friend Bowser. Yesterday I read him an original poem of 30 stanzas, and at its conclusion he walked away without a word of comment. Bagley (enthusiastically)—That's just like Bowser. He's the most forgiving man I ever knew.—*Phila. Call.*

YOUNG FOLKS' COLUMN.

To Adele.

(Written for the RURAL PRESS by MARTHA T. TYLER.)

Little primrose in the spring
Lifted dainty golden head;
"How can you, a fragile thing,
Brave the stormy March?" I said,
Primrose answered: "Do you fear?
Let the naughty wind blow on!
Though the sullen sky is drear,
I've a message from the sun."

So with you, my flower of spring,
Bright and dainty little one;
Let the promise that you bring
Be of summer and the sun.
Fate is often cold and harsh
To the people that we meet;
But wherever you find March,
Be a primrose-blessing, sweet.

Teddy's Book.

Something about it struck Teddy very forcibly. I am not sure whether it was the text itself or the minister's reading it the second time in a very earnest manner. He was a new minister and was preaching to the children this morning.

His text was: "And another book was opened, which is the book of life," and, as I say, he read it over twice.

"The book of life; the book of each one of our lives; do you ever think of that book, children, and what you are writing in it? Every morning you start with a fresh page, and at night what do you find written there—temptations met and overcome, kind words spoken, little acts of helpfulness performed? Or is it a record of temptations yielded to, cross and fretful words, and no kind actions? Think of it, children, when you are tempted to do what is wrong, that it will be written in your book of life, and at that last great day it will be opened and read."

Teddy sat at the end of the seat that Sunday, and was just wondering if he could possibly snap an appleseed—he had some in his pocket—at Joe Peters without Sadie's seeing it, when, as I said, something, either in the text itself, or the reading of it, caught his attention. It was such a thoroughly new idea, he writing a book—one that would be opened and read on that awful day. On the whole, he did not like the idea—certainly not if everything was put in, was his decision, as he recalled some of the many things he had done "just for fun." Then he tried to think of something he had done during the past week that he should like to see in his book; but he failed to recall anything, unless it was that he carried poor Mrs. Kent a basket of apples. "Wouldn't 'a done it, though, only mamma made me," he was obliged to confess to himself just as he had decided that that was quite a meritorious deed. "I say, mother," he asked, anxiously, when he reached home at noon, "the minister said God puts everything we do down in a book; do you b'lieve He does? Maybe He don't see everything, you know."

"Oh, yes, He does, Teddy—every single thing. We cannot hide even our thoughts from God. So we should be very, very careful, even of them," replied mamma, smoothing his rumpled curls lovingly.

"Well, then, I guess folks forget about it; don't they? Or else maybe they don't know."
"I think we all forget sometimes, Teddy; but mamma wants her little son to remember that God sees him always wherever he goes or whatever he does; will you?"

"I'll try," said Teddy, with an unusually grave look in his brown eyes.

Just then the dinner-bell rang. Teddy went downstairs, and, being very hungry, forgot all about the sermon, his book and all, until the next afternoon in the spelling class at school.

Now, Teddy did not like spelling. In fact, he was not overfond of study of any description, but spelling was his particular aversion. He almost invariably failed, and this very afternoon Miss Westwood made a rule that all who failed must remain half an hour after school. Teddy heard it in dismay. It was splendid skating down on the river—the first they had had this winter—and they were all going down directly from school. For once he was utterly oblivious of everything around him; he never lifted his eyes from his book after Miss Westwood said that, until the class was called.

But it was all in vain; the very first word that came to him was "believe," and he could not remember whether it was "ei" or "ie." He hesitated, grew red in the face, and was just going to say "leave," when Miss Westwood was called to the door.

"Ahem!" said some one softly.

Teddy looked around, and there was Will Adams holding up his slate with "ie" in great, big letters on it.

Teddy felt as though a mountain was lifted off his shoulders, for he was quite sure of the rest of the lesson. Then it was that he remembered yesterday's sermon, and his promise. Suppose he were to spell the word as Will had written it for him, which was not the way he would have spelled it himself, how would it look in that book? But then to think of having to stay in. What should he do? It seemed to him that it was all of half an hour before

Miss Westwood closed the door and resumed the lesson, though it was really but a few moments.

"Well, Teddy, how is it?" she said.
Teddy felt positive that every one in the room must hear his heart beat, it thumped away so loudly.

"B-e-l-i-e-v-e." What should he say?
"God sees us always; whatever we do is written down in our book of life. Remember that, children, when you are tempted to do wrong; think how it will look in your book."
"Eive," he said, hurriedly.

Will Adams looked up in blank astonishment. "Couldn't you read it on my slate?" he asked after school.

"Yes," replied Teddy, coloring; "but you see I—didn't want to write a cheat in my book."

GOOD HEALTH.

FOR POISON OAK.—The *Popular Science News* gives the following remedy. I have always been so susceptible to the poison of ivy and oak as to give me great annoyance, unless it is immediately checked on its first appearance. This common washing soda accomplishes for me, if properly applied. I make the application by saturating a slice of loaf bread with water, then cover one surface with soda, and apply to the eruption, the soda next to the flesh. When the bread is dried by the animal heat, I drop the water on the outer side, so as to keep it thoroughly moistened, and dissolve the crystal soda in contact with the skin. This, you will perceive, is merely a bread poultice, the bread being a vehicle through whose moisture the soda reaches the humor. I find that the washing or bathing with soda water, even continuously, will not suffice with me. My skin requires the heat and moisture of the bread in order for the soda to act on and neutralize the poison. I rarely have need to retain this soda poultice for more than 30 minutes on any affected part. No pain ensues. Formerly I suffered often for weeks, as the poison would spread all over my body. Now 30 minutes measure the duration of its existence.

HEALING DISEASE BY PHYSICAL CONTACT.—There is no question, but that there are numerous persons so generously endowed with vitalizing fluid as to be capable of alleviating pain and healing disease by physical contact, who have no conception of it themselves. We have been made acquainted with a number of instances of cure by such healers without contiguity or manipulation of any sort, their mere presence being sufficient to effect that object. This is particularly the case in respect to the lighter forms of nervous troubles. The presence of such persons in the sick chamber is of itself a healing balm to the afflicted, who is able to feel the vitalizing force though ignorant of its source. On the other hand there are persons whose presence at the bedside of a sufferer only adds to his suffering. Hence it is that the family physician, of all others, should be naturally refined and sympathetic, at once capable of comprehending not alone the physical but also the mental or spiritual wants of his patients, and in a manner, ministering to them out of his abundant sympathy and good cheer.

FOREBODINGS IN DISEASE.—In the *Asclepiad*, Dr. B. W. Richardson writes that there are two kinds of foreboding—the fanciful and the serious. False forebodings are presented by persons of flighty or fanciful natures, who are really fond of contemplating risks, and who suggest anxieties one minute but laugh at them a few minutes later. These forebodings have no serious importance. True or serious emanate from persons who are thoughtful and firm, who, as a rule, keep to themselves what is on their minds until something like a crisis has been arrived at, when they come to a conclusion to which they adhere and by which they are greatly influenced. These forebodings in a critical disease are bad; they have a direct effect upon the physical powers, the heart's action is impaired, the digestion becomes affected, and there is a want of tone very much opposed to restorative efforts. It is a wise plan to take as little notice of these forebodings as possible, but to ridicule them is bad.

MENDING SEVERED FINGERS.—Numerous instances have been recorded of late in the medical journals of the complete reunion of portions of fingers which had been cut off from the hand, in some cases by the knife and in others by the ax. In one case a man, in cutting kindlings for the morning's fire, accidentally cut off the end of his thumb. He had gone from the place some 20 feet when he returned, picked up the end, wiped it and replaced it, binding it in its original place as nearly as possible. The wound united, and the finger is now as good as ever, save that its sensibility is somewhat diminished. In another case a boy chopped off the ends of three fingers. He was seen by a physician three or four hours after the accident. The ends of the fingers had been found in the snow, and were brought to him. He attached them, and two of the three united.

AN ANTISEPTIC MOUTH WASH.—One of the greatest living authorities upon buccal bacteriology, Dr. Miller, finds that by using the following mixture he could completely sterilize the mouth, cavities in carious teeth, etc.: Thymol, four grains; benzoic acid, 45 grains; tincture of eucalyptus, 3½ fluid drachms; water, 25 fluid

ounces. The mouth is to be well rinsed with this mixture, especially before going to bed. For retail, a mixture of water and spirits is required for a presentable preparation, and it should be made much stronger, say five ounces instead of 25 ounces, and diluted when required.

DOMESTIC ECONOMY.

FRUIT CAKE.—The yolks of ten eggs, ten ounces butter, one pound sugar, one pound flour, one pound citron, one pound raisins, two pounds currants, one teaspoonful cinnamon, cloves, mace, nutmeg.

COTTAGE PUDDING.—One cup of sugar, one egg, one cup of sweet milk, three tablespoonfuls of melted butter, one tablespoonful of baking powder, 2½ cups of flour. Bake about 40 minutes. Eat with sauce while warm.

GINGER SNAPS.—Boil slowly for 15 minutes two cups of molasses; add one-half cup of butter, cool and add two spoonfuls of cold water, one heaping teaspoonful of soda, one teaspoonful of ginger and flour to roll.

BLACKBERRY JAM.—Take four pounds of fruit, put into a kettle with two pounds of good coarse sugar, and set over a slow fire, gently boiling it for one hour, occasionally stirring it to prevent burning. When done, put in jars and seal.

GOOD CAKE.—One cup each of butter, brown sugar, molasses and coffee, one teaspoonful each, even full, of cinnamon, cloves and nutmeg grated, three teaspoonfuls of soda dissolved in the coffee, flour to make stiff dough; add the last thing two cups of raisins chopped. Bake in a moderate oven.

FRIED ONIONS.—Have frying-pan hot, put in a good sized piece of butter (or meat fryings after frying meat), put in onions sliced; sprinkle with pepper and salt and pour in just a little hot water, cover closely, let cook 20 minutes; add a teaspoonful of flour in a little milk and when it boils it is ready to serve.

SPONGE JELLY ROLL.—Four eggs, 1½ cups of sugar, one tablespoonful of baking powder; beat the whites separately, and the sugar and yolks together till very light; then add part of the whites, then a cup of flour, then beat good, then a little more flour, then the rest of the whites, and stir easy, put it in and bake. Spread and roll as quick as you can.

DELICIOUS PUDDING.—Two eggs and their weight in butter, sugar and flour. Have the butter soft and mix it with the sugar. Beat the whites and yolks of the eggs separately, and mix with the butter and sugar; add the grated peel of half a lemon, and stir in the sifted flour. Pour into a buttered pan, filling a little over half full, and bake in a moderate oven.

TAPIOCA CREAM.—Soak one-half cup of pearl tapioca in water over night, put a quart of milk in a saucepan to heat, beat the yolks of three eggs and two-thirds cup of sugar with the tapioca. When the milk is hot, stir in and boil two minutes, stirring constantly. Set on the ice, and just before serving beat in the whites of three eggs beaten stiff, and season with lemon and vanilla.

APPLE MARMALADE.—Take nice sound russet apples, pare and core, cut in small pieces, and to every pound of fruit add one pound of sugar; put the sugar to boil, with just enough water to dissolve it, into a preserving kettle, add one large lemon to every four pounds of fruit, boil all together until the syrup gets thick, then add the apple and boil until it looks clear. This is well made half quince and half apple.

ICE CREAM CAKE.—Take the whites of eight eggs, beat to a stiff froth, two cups sugar, one cup butter, one cup sweet milk, two cups flour, one cup corn-starch, two teaspoonfuls baking powder. Cream the butter and sugar, sift flour, corn-starch and baking powder, add the beaten whites of the eggs last. Bake in jelly tins. For the icing: Boil four cups sugar until it will candy, and pour over the beaten whites of four eggs, and add one teaspoonful pulverized citric acid. Stir until cold and spread between layers.

FOR THE LADIES.—Flannel that has grown yellow by repeated washing will whiten considerably if left out of doors on a cold night. The useful chamois skin is easily cleansed. Rub until it plenty of soft soap, then lay it for a couple of hours in a weak but warm solution of soda water, rub until it is quite clean, and rinse in warm water in which soda and hard soap have been dissolved. Dry in a rough towel, then pull into shape and brush. With the mercury at zero, mittens are very desirable articles when hanging clothes, and making them as a lady has suggested certainly will not lighten the purse. Cut the desired length from the legs of worn wool hose, sew across one end and piece in for thumbs. To prevent shrinkage in flannels, use quite warm soft water for washing. Make a suds of soft soap, or shaved bar soap, and turn the garments before wetting them. Squeeze rather than rub out the dirt, rinse in plenty of warm water, and dry quickly. If they are smoothed with an iron, let it be done on the wrong side. "Helen Dorcas" gives the following direction for making washing easy: "Put four pails of soft water in the boiler and add one-half cake of common soap, or three cups of soft soap, and three tablespoonfuls of kerosene; heat, and put in the dirty clothes, boil 20 minutes, take out and rub in one water, rinse and hang out."



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The Week.

Approaching winter is sending skirmishers throughout the land. Just after the RURAL went to press last week there were showers which extended over quite an area of the State, catching rains in the San Joaquin valley, staining Lima beans in San Luis Obispo and doing some injury to other exposed products elsewhere; but there was not water enough to work any great harm to fruit on trees or vines. It was an angry storm in some places, marked by flash and roar which are not common in California. Early frosts, too, have touched some of the coast valleys; they have been sporting about some time in the mountain districts. It would not be surprising to have a heavy rainfall this year and it will certainly be welcome, for last winter gave us but small figures.

The rain has seriously vexed the California veterans who went last week with their best raiment and finest fruits to bear the standard of the West at the Grand Army assemblage in St. Louis. It is hard to manage an affair of such kind with leaky skies and muddy pavements. Californians will return more pleased than ever with their home-State.

The Mechanics' Fair is proceeding in most excellent style. The fruit exhibit is constantly renewed, and other products are increasing in amount. There are now about 15 counties represented and the main building and the an-

nexes are full to overflowing. There never was a greater display of industrial products in California.

A Dairy Sensation.

It clearly appears that the Dairy Commissioner of Oregon is using his office for purposes not designed by the law creating it. We are fair enough to believe that he is thus doing through misapprehension of facts, and that he has been misled by chemists to whom he has intrusted the examination of butter. For some time there has been trouble made for Portland merchants selling California butter by charges and indictments based upon the allegation that they were receiving from this State and selling in that market California butter which was composed in part of oleomargarine, lard or other substances not found in pure butter. Some months ago a Portland merchant was charged with such operation, and a sample of the butter alleged to be adulterated was sent to the California State University for analysis. A most thorough examination was made by Mr. August Harding, a well-known and competent chemist, and his testimony was sent to Portland, and if we remember correctly the grand jury killed the indictment upon Mr. Harding's statement. It did wisely, because there is no doubt whatever that the butter analyzed by Mr. Harding was pure in every respect.

Now it appears that the dairy commissioner has had other analyses of California butter made by local chemists, and upon their testimony has had a number of Portland merchants arrested, and desires to push the cases forward to conviction upon this evidence alone. These merchants have secured a postponement until they can have the butter examined by competent chemists, and then they will rest their case upon the results of such analysis. We understood that Thomas Price of this city, and August Harding of Berkeley, now have samples under examination. The samples were sent from Portland under seal, and in a few days probably one or both of the chemists named will go to Portland to testify in the case.

Naturally this issue has created considerable excitement among the dealers in Portland and San Francisco, for the charge is a serious one to them, and there is excitement also among the California butter-makers who are thus charged with adulterating their product. It is a very unfortunate affair, and if the examination results as may be anticipated, the dairy commissioner of Oregon may have to face not a little opposition for allowing himself to proceed upon untrustworthy evidence.

The analyses now in progress will of course be the ultimate test in the affair, and the makers of the butter and the dealers in San Francisco are well content to trust their case to competent chemists, because they know the butter is pure. Aside from this, there are many considerations which place the purity of the butter beyond question. First, there is no oleomargarine made here that we ourselves are morally certain of, and we have given the subject constant attention. Second, there is no false butter brought here for sale. The U. S. revenue officials now have that matter in charge, and are men who are experts at unearthing moonlight whisky and capturing smuggled opium and doing the most obscure kind of a detective business generally. It is not possible for oleomargarine to be made and shipped without detection. On this subject the following letter is of interest:

U. S. INTERNAL REVENUE, DEPUTY
COLLECTOR'S OFFICE, FIRST DIST. CAL.,
SAN FRANCISCO, June 14, 1887.

Hon. H. L. Dodge, Pres. S. F. Dairy and Produce Exchange.—DEAR SIR:—Your favor of June 11th in regard to oleomargarine, etc., has been received. In reply I would state that the internal revenue agent and my deputies have heretofore made diligent search for oleomargarine, but so far have not succeeded in finding any offered for sale in this district. There are no manufacturers of the said article in this city or district that we have discovered; and no stamps or licenses for the manufacture or sale of any such article have been issued. I will further state that all manufacturers of oleomargarine must report all sales to the commissioner of internal revenue, who in turn notifies every collector of internal revenue of each district, to whom such sales were made and the oleomargarine, etc., sent. So far there has been only two lots shipped into the first district of California, and that for consumption by the purchasers. Respectfully,
ASA ELLIS, Collector.

This letter shows that the revenue officials of the districts where the bogus butter is made inform the officials of districts to which it is

shipped, and thus the stuff is traced and all officers are warned of its progress. This statement of affairs bears out exactly what we know of our own knowledge.

Another moral consideration which carries much weight in our own case is the fact that the dealers in this city who made the shipments to Portland are among those who have been longest and best known for their connection with the legitimate dairy interest of this State. They were foremost in giving their time and money to secure the passage of the California law against oleomargarine, which has been the model upon which most of the State enactments have been shaped. They have been the leading foes of adulterated products for years. They fought and hedged about the factory, which was started in this city some years ago, until it was closed up and its machinery sold to the soapmen—a very proper fate for it. It would take pretty positive evidence to convince us that such men, after what we have personally known of their actions for years, have at this late date gone into debasing butter, thus endangering their reputation and business prospects and interests. We know them too well to consider them at all likely to be such fools.

It is not thinkable that California dairymen are debasing their own butter. They haven't the means of doing it nor the material to do it with, leaving out of all consideration their known honesty and zeal in securing a good reputation for their product. If Oregon needs more butter than is made at home, California butter will naturally seek a market there, and our producers are entitled to the trade. The Portland papers clearly intimate that their Dairy Commissioner is endeavoring to sacrifice consumers' interests by raising a hue and cry against California butter so that the price of the Oregon product may be enhanced. It seems hardly necessary to make such a charge, because a man may be misled by incompetent analysts into fighting a genuine product. This, it seems to us, is the most natural view to take of the affair.

The effort to secure correct analyses of the suspected material, and of sending the analyst to Portland to sustain the character of the California product, is assumed by the San Francisco Dairy and Produce Exchange. At their meeting in this city, Sept. 27th, it was resolved to assist in the defense of the Portland merchants, and to that end furnish all such evidence as might be required to establish the genuineness of the article sent. A committee of five, consisting of Messrs. Hegler, Whitney, Van Sycklin, Brigham and Feusier, were appointed to take charge of the matter.

We shall keep our readers informed of the future course of the unfortunate affair.

THE STATE BOARD OF TRADE.—This organization has secured permanent headquarters at No. 12 Second street, under the Grand hotel, close to Market street, and therefore a very desirable and accessible situation. Two floors and the basement will be occupied. The first floor will be given to permanent exhibits from the different counties. On the ground floor will be the office of the board, where information will be afforded by J. M. Davies, the Secretary, regarding any part of the State, and the visitor to the place will have the advantage of knowing that there are no private interests to serve and that the information afforded is not given with the idea of finding a possible purchaser of land. The basement of the building is to be used as a store and receiving house. The premises will be quite ready by the end of this week and already strangers are availing themselves of the opportunities afforded them, and the board is issuing circulars on all the incoming overland trains.

STATE BOARD OF HORTICULTURE.—On the 23d ult. the Governor appointed R. B. Blowers of Yolo county a member of the State Board of Horticulture, vice H. C. Wilson of Tehama county, term expired, and also reappointed A. Block of Santa Clara and Elwin Kimball of Alameda for the State at large, and W. M. Williams of Fresno county and Elwood Cooper of Santa Barbara county.

THE contract for completing the Mokelumne Ditch and Irrigation Company's dam near Burson, Calaveras county, has been awarded to Walker & Merwin of Chico, for \$17,072, and work is to be begun immediately.

Angora Goat Registry.

A movement which is interesting because of its novelty, and important because of the possibilities which may be involved in it, is that arranged by the California Angora goat-breeders at their meeting in Sacramento last week, and which is fully reported in another column of this week's PRESS. We speak of it as novel because we understand it is the first actual adoption of provisions for registry by any organization of Angora breeders in this country. Our readers will remember that the Texas goat men proposed a most elaborate system of goat registry last winter, which was fully described in the RURAL, but because of the illness of Mr. Hoerle, who had the practical leadership of the affair, the meeting held in June last for the adoption of the registry was ineffective. The California breeders were solicited to join with the Texans in the establishment of the register, but the failure of the Texans to give their measure final shape, and the fact that the provisions proposed in Texas for the entry of grade goats in lower classes did not meet the views of California growers, opened the way for original and independent action by the Californians, and this they have taken, as the report of their meeting shows.

It will be noticed that the California scheme is much simpler than that proposed in Texas. It seemed to the breeders present at the meeting that all they required was the registry of thoroughbreds. This will serve to preserve the records of descendants from imported goats and enable the breeder to select his stock with some surety. Hitherto there has been no guide except individual statements, and though a man could get almost any other kind of an animal with an authorized pedigree, he was quite at sea on the goat. This fact has prevented some from investment. It is clear, on general principles at least, that the buyer of goats should be able to trace the ancestry of his purchases, and that he can secure the blood of especially fine animals if he desires, as is now possible with every other kind of improved live-stock.

There may be some difference of opinion as to the methods and provisions adopted to secure registry. Such subjects are legitimate subjects for discussion, and our columns are open for contributions of this character. It is true that the Angora industry is a little dull at present because of the low prices for mohair; there is also dullness in the sheepfold. It is probable that the wave of better rewards will return, and no one can tell how soon. Those who will be best prepared to profit by it will be those who have the stock fitted to produce the best article, whether it be wool or hair.

ANOTHER HOP-HOUSE BURNED.—We are losing rather more hop-houses than usual this year. The latest fire was early on the morning of Sept. 27th. The hop-house of L. Ross, in Green valley, Sonoma county, was totally destroyed by fire, with its contents. The origin of the fire is not known, but it was first discovered by Mr. Ross' son, who was walking through the hop-kiln and displacing hops with his feet to ascertain if they were thoroughly cured. It is supposed some one carelessly dropped a bunch of matches, which were tramped upon and ignited. The loss is estimated at \$6500; insurance, \$5000. The suggestion has been made that arrangements should be made to store hops elsewhere than in the building with the kiln. It would seem to be the part of wisdom to arrange other and safer storage-room.

FOOD VALUE OF THE OLIVE.—Frank Kimball of National City thinks that the worth of the olive for food is not generally understood. He lately said to a San Diego Sun reporter: "I have become satisfied that for the man working with a pick and shovel, a pound of pickled olives is worth more than the same weight of the best beef that can be obtained. To obtain the full value of the fruit, it should be ripened on the tree and properly prepared for use after it is gathered. The bottled olives of commerce are pickled green, and their most valuable qualities are lost in their preparation."

TEXAS FEVER.—It is telegraphed from Nebraska that a fresh outbreak of Texas fever has appeared at Tekamah. Dr. Billings of the Veterinary Department says that the native cattle are undoubtedly extending the disease. It has been held heretofore that only Texas cattle could communicate the fever to others.

The State Fair.

The State Fair of 1887 closed on the evening of the 24th after a most successful run of two weeks. Our notes from Sacramento have shown in a general way the character of the exposition in its most striking features. We have other matters to present and the corrected list of awards to lay before our readers as soon as the data is secured.

Of the success of the fair the throngs of people at the pavilion and the park from day to day was evidence. There is also additional testimony in the financial statement which is set forth by the *Record-Union* as follows:

Below is given the comparative totals of daily ticket sales of the State Fair for 1886 and 1887.

Pavilion, 1887.....	\$15,220 00
Pavilion, 1886.....	9,861 25
Excess for 1887.....	\$5,358 75
Park, 1887.....	\$14,395 00
Park, 1886.....	13,339 25
Excess for 1887.....	\$1,055 75

Total excess for 1887.....\$6,414 50

These figures only show receipts for daily admissions. In addition to this, the excess in receipts from privileges, etc., will swell the total excess of receipts from all sources to about \$9000 over those of last year. The total receipts and disbursements of the Society for the current year will not fall short of \$100,000, which shows that it is an institution of some magnitude, and requires more than ordinary business tact and management to successfully handle such a volume of business in so short a period, as two-thirds of this amount is handled during the months of September and October. No safe estimate can now be made upon how much of the indebtedness of the society will be paid, owing to the heavy disbursements necessary for running expenses and premiums, which have not as yet been passed upon. But it is safe to say that a large portion of the \$22,000-note will be cut off, and needed improvements at the Park made.

Improvements at the park are certainly needed. More stock sheds are a necessity, the spaces between the sheds should be well rocked or graveled, and grades set so water will run off and not make the mud-holes which are now to be found here and there. These and other desirable things will, no doubt, be secured.

There is, however, one change which we would suggest as very desirable in the pavilion, and that is to make the machinery halls more thoroughly a part of the pavilion. At present there are only small doors connecting these large apartments with the main floor of the pavilion, and one might wander around all the evening without knowing what an amount and fine selection of agricultural machinery was displayed. If the buildings remain as they now are, there should certainly be large openings, which would enable the visitor to catch glimpses of the machinery from the main floor and the galleries, and thus be drawn to an examination of it. If these openings would admit too much noise they could be glazed over. Our agricultural-implement men made great efforts to present their displays in fine style this year, but they felt all the time that they were away off in a corner, and but few found them. It seems to us this matter could be improved without very great expenditure.

Awards for County Exhibits.

We have already briefly characterized the various county exhibits. They were creditable to all engaged in setting them forth, and they will be of lasting advantage to the counties which, either through public or individual en-

terprise, undertook the work of exhibition.

The following-named gentlemen served as a committee on awards, none of them being residents of the counties which entered in the contest: Governor Waterman of San Bernardino, L. H. McIntosh of Butte, H. W. Seale of Santa Clara, F. C. de Long of Marin, Paris Kilburn of Monterey. They made the following awards: San Joaquin county, first prize of \$500. The remaining \$1500 was awarded as follows: Sacramento, \$300; Placer, \$250; Colusa, \$250; Nevada, \$200; Humboldt, \$150; El Dorado, \$150; Yuba and Sutter, \$100; Solano, \$50; Tehama, \$50.

We alluded briefly last week to the banquet set out by the citizens of Sacramento in honor of the delegates who appeared at the fair in charge of the county exhibits. The idea was a happy one, and such meetings under such meliorating influences must tend toward mollifying the sectional feeling which is unfortunately becoming much too pronounced in this State. This sectional feeling sometimes springs from self-interest, of course, but is chiefly due to the fact that residents of one region do not really know the resources and adaptations of other parts, and thus are easily led to conceit in their own section and misrepresentation of others. Full acquaintance of people with each other

THE SHEEP LICENSE.—The *Inyo Independent* is greatly pleased with the decision of the Supreme Court that the Mono county sheep license is constitutional. It says: "For years past several counties in this State and in Nevada had tried in vain to find some way to make sheep-owners pay something to the counties where their sheep pastured. Much credit is due to the people of Mono county for their perseverance in pushing this matter to a successful issue. It is a high distinction for their attorney, R. S. Miner, Esq., that he should have succeeded where so many had failed to get a decision from the Supreme Court in favor of a law that appears to be a complete remedy for the difficult subject. It is nothing less than justice that where a vast number of sheep are pastured a good part of the year, to the great profit of the owners, they should be made to pay a reasonable part of the local taxation. And under this license law no injustice can be done the migratory herdsman; the permanent dweller in each county will be taxed on sheep the same as transient visitors. Against this the sheepmen can have no just grounds for complaint."

TEXAS AND CALIFORNIA.—The State of Texas comprises a larger area than either France or

Salinas Valley.

The extension of the railroad from Soledad to Santa Barbara, and a probability that when finished to Los Angeles this will be the overland route of the Southern Pacific, has stimulated inquiry in regard to the great Salinas valley, which is 100 miles long and from 5 to 15 miles wide.

The lower portion of this valley was occupied by Mexican settlers in 1800, and grants of land were made by the Mexican Government in 1820. At the time of the American conquest a large proportion of this great valley was covered with grants. It has a very strong, fertile soil and produces rich, succulent grasses, principally burr clover, alfalfa and bunch grass. For stock-raising this valley has always been regarded as one of the best in the State. The climate is equable, neither very warm nor cold, and well watered by perennial springs and the Salinas river that follows a serpentine course the entire length of the valley. For the last 15 years extensive grazing has given way to grain-raising and dairying in this valley. It has been no uncommon event for the traveler to ride continuously in a grain-field for 25 miles, where the stalks would reach on an average to the height of the bug-

gy wheels with patches of mustard from eight to ten feet in height. From Moss Landing at the mouth of the Salinas river to Soledad, there are over 6000 feet of warehouse room 50 feet wide, and the Ball warehouse at Salinas City is 1000 feet in length. At the present time all these warehouses are filled to their utmost capacity.

The first settlers in this valley were of the opinion that this section was only adapted to grazing. The phenomenal success attending growing grain has satisfied the occupants so well that their efforts to utilize this rich virgin soil



VIEW OF PORTION OF WAREHOUSE ONE THOUSAND FEET LONG, SALINAS VALLEY, CAL.

and with the different parts of the State is now greatly needed in order that California may exert a single and undivided influence for her own advancement. The speeches at the banquet indicated that the true feeling was entertained. For example, Mr. L. J. Rose of Los Angeles, among other things, said:

"The fruits of California have a world-wide reputation, and as for brave men and beautiful women, no State in the Union can compare with her. For 27 years I have resided in California, and in all that time there has not been a day nor an hour that I have not felt proud to claim it as my home. When I look about the pavilion and see the immense displays of luscious fruits, elegant productions, beautiful flowers and healthy faces, I need look no further for the cause of the boom. The boom has been earned upon merit and will continue to grow, for, as the Governor has truthfully remarked, there is but one California. I am from the South, but no pent-up Utica finds a place in my breast. There is no part of California that is equal to all the rest. I have a preference for the South; there is my home, but it is only a portion of my adopted State, California. There is no portion of this State which can exclaim: 'We have it all!'"

This sentiment should grow until the narrow and unfortunate sectionalism fades away. Other matters relating to the fair will be presented next week.

THE *Ventura Democrat* says that 1,200,000 bushels of grain will be shipped from Hueneme this year, all produced in that vicinity.

CORN CROP OF 1887.—The *Farmers' Review*, Chicago, estimates this year's corn crop at 13,000,000 bushels.

Germany. Its productive capacity in agriculture is also larger than either of those two great and powerful countries. The entire wheat crop of the United States could be grown on the land in that State, which is in excess of the entire area of Germany. The entire cotton crop of the world could be grown upon only one-seventh part of the entire area of the State of Texas. The possible productive and political power of Texas is equal to that of the present most powerful country of Europe. California is but little if any behind Texas in the possibilities which she may realize during the coming century. In view of the above facts, which may be realized by only two of the States of our Union, who can estimate the possibilities to which the more than 50 States which this Union will soon comprise, may attain?

THE LONG DROUGHT throughout the West has not only seriously affected some branches of trade, but it has also been the cause of unusual damage to property from fires started by sparks from locomotives. Bridges, fences, buildings and grass are as inflammable as tinder. On many of the railroad lines men have to be kept constantly on the watch for fire, constituting an actual fire department.

THE San Luis Obispo *Republican* says: From Judge Leff we learn that a German company will establish a beet-sugar factory in the Santa Maria valley, at a cost of \$200,000. It will be ready by next season, when a large supply of sugar beets will be grown.

have been almost exclusively in this channel. In a small way a few enterprising men have found that this section is one of the most favored in soil and climate for raising fruit of all kinds. Mr. H. Escolle of Monterey has an almond and orange orchard 12 miles from Salinas City. Near Salinas City there are several vineyards and a winery having an excellent reputation. These developments have inaugurated a new era in the valley. Several large land-owners will subdivide their large holdings in small tracts for settlers who wish to raise fruit and build homes. The celebrated Abbott ranch, one of the most noted dairies in the State, has lately been sold with a view of dividing in small tracts. Mr. Michael Lynn, who farmed over 2500 acres in grain this year, has sold his Gabilan ranch of 7665 acres to a syndicate who will subdivide and sell in small parcels. Mr. Hiram Corey, one of the most successful farmers and dairymen in Monterey county, has sold the noted Buena Vista rancho of 7725 acres, which have been surveyed in 60 lots, and a town laid out in the center of this tract.

We herewith give a cut of the Ball warehouse, which is 1000 feet long and 50 feet wide. It is owned by the Salinas Warehouse Association, who have the following additional warehouses: Soledad, 400 feet long; Chualar, 402 feet long; Gonzalez, 500 feet long. Mr. Jesse D. Carr is the President, H. S. Ball, Secretary, and the Salinas bank, Treasurer. The Directors are as follows: J. D. Carr, H. S. Ball, J. K. Alexander, T. F. Faw, H. R. Stephens.

MIGRATION OF ANIMALS.—While animals seem to be concerned only about their own individual welfare, it would seem that they often act in concert over a large tract of country. Thus we hear of frogs leaving in large numbers a pond that is nearly dried up; also of rats suddenly forsaking a ship or farm-house that they have made their home for many years. Precisely how these animals make each other understand that a change is desirable, and how they arrive at a unanimous conclusion, has not been explained. It is reasonable to suppose that they must have a leader, whom they follow through great danger. The past fall there has been a great migration of squirrels from Northwestern Mississippi in the direction of Arkansas. They crossed the Mississippi at various points along a line of 20 miles in length, their march tending westward. They traveled in thousands, and the people along a line of their march killed them with sticks in large numbers. Hunters followed them in their march and slaughtered them by wagon-loads and carried them to the nearest market. These squirrels seem to have lost all fear, and could not be turned from their course. It is said that a smaller migration occurred 13 years ago. It is generally supposed that the migration of squirrels is caused by a lack of the proper kind of food, but how should they know that there is a better supply in another direction, and how should all the squirrels of one vast tract become aware that such a movement is on foot? These migrations suggest that there may be a greater intelligence among the lower animals than is generally supposed.

HOW TO KEEP COOL.—A Nebraska correspondent tells the New York World how to keep cool. When the thermometer runs up to the nineties or one hundred, and people feel as if almost prostrated, if they will mix a quarter of a teaspoonful of pulverized cayenne pepper in half a teaspoonful of milk or sweetened water and drink it, they will find they can stand the heat ever so much better. This raises the internal heat to an equilibrium with the atmosphere, and makes one stronger and more comfortable. It cools one more effectually than iced drinks or stimulants. It has been used in our family for three generations. In case of sunstroke this is a remedy that gives almost instantaneous relief. The prostration experienced on hot days is caused by a preponderance of the external heat over the internal, and the more cold drinks one swallows, the more weakness and lassitude. Cold drink in hot weather should be used very cautiously and in small quantities. Spirituous liquors will stimulate only for transient relief, but pepper holds its own and does not cause thirst afterward.

TREATMENT OF INSECT STINGS.—The stings of insects, such as gnats, mosquitoes, etc., says *Le Pharmacien Populaire*, are often painful. In such a case apply spirits of hartshorn or volatile alkali to the part. Spider bites are not only painful, but often venomous, and it is necessary to wash them with salt water or diluted vinegar. The sting of the bee is harmful only when the sting remains sticking in the wound. So the first thing to be done is to press the wound in order to make it bleed, since the blood that flows will carry along a portion of the poison. Then suck the wound and wash it well with water and then with a solution of kneo powder. This latter, which is much used in England, consists of three parts of chloride of lime to eight of common salt. An ounce of this powder is to be dissolved in a tumbler of water. If this composition is not to be had, Goulard's extract may be used. For the sting of the scorpion, volatile alkali should be used, and after the pain subsides, an emollient cataplasm may be applied.

TREATING WOODS ARTIFICIALLY.—Pine naturally treated is one thing; painted in brown or red and called black walnut, mahogany, or cherry, it is decidedly another. So in hard woods; to show the natural color and to bring out the beautiful grain of the wood is far preferable to any treatment which aims at different results.

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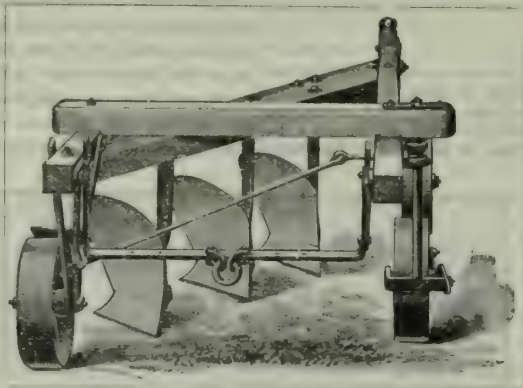
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Reversible and Slip-Share PLOWS.



WRITE FOR PRICES.

HANFORD, August 31, 1887.

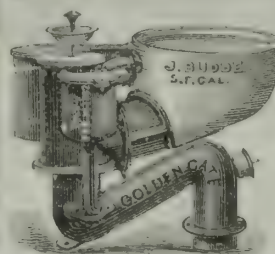
H. C. SHAW, ESQ.—I used one of your Improved Slip-Share Gangs in a piece of salt grass land, perhaps the toughest in the county, and found that it clung to the soil better and left it in better shape than any plow I ever used, besides running one horse lighter.

C. W. CALLAHAN.

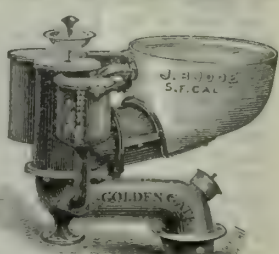
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THE GOLDEN GATE PLUG CLOSET.



WITH TRAP.



WITH OFFSET.

This Closet is the Best, Because

1. It has a simple, strong valve, suitable for any pressure, self-closing by a genuine Phosphor Bronze Spring, acting with the pressure. To prevent breaking and weakening of the spring, I have gone to the expense of using Phosphor Bronze Wire, which will have the desired effect.
2. It has a real sanitary overflow, a copper float attached to a bell of the same metal resting on face of the brass overflow pipe, operated by the rising of the water in the closets above its level, thus absolutely preventing any escape of sewer gas, even the closets being without water.
3. It has no dead corner, consequently no foul water will be left in the closet after lifting of the handle. A constant rush out of the floor chambers will keep the closet and trap perfectly clean.

With above stated points, I am able to call my closets the most perfect and cheapest in the market. N. B.—Architects who endeavor to furnish their patrons with the most reliable goods, should not hesitate to give this closet a trial. Send for descriptive catalogue.

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A TOWN PLAT has been laid out in the center of this tract on the new road leading to Spence Station on the S. P. R. R. There is a free District School and preparations made to erect a Church near the center of this tract.

THIS RANCHO IS IN THE THERMAL BELT,

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TYLER BEACH, San Jose, Cal.,

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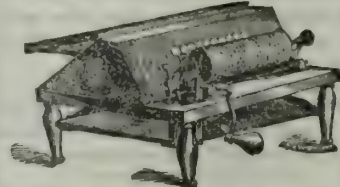
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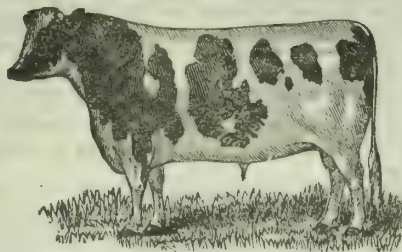
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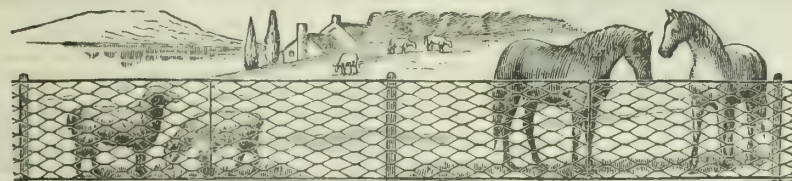


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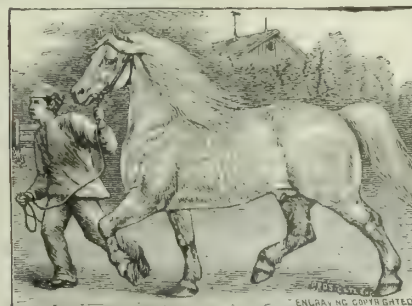


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Facilities for teaching and clinical advantages
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S. F. MARKET REPORT

NOTE.—Our quotations are for Wednesday, not Saturday, the date the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Sept. 28, 1887.

The past week has been more or less a repetition of the preceding weeks. The fine, brilliant weather has done no little in aiding raisin and dried fruit curers; and it now looks as if the pack will exceed former estimates. From Europe and the East daily telegraphic advices gave a steady advancing wheat market. To-day's cables are as follows:

LIVERPOOL, Sept. 28.—Wheat, firm. California spot lots, 5s 1rd to 6s 2d; just shipped, 3s 3d; nearly due, 3s 3d; cargoes off coast and on passage, firmer and held higher; Mark Lane wheat, steady; English and French country markets, firm; wheat on passage to Continent, 253,000 qrs; wheat and flour on passage to U. K., 1,622,000 qrs; wheat and flour in Paris, firm; weather in England, colder.

Crops at the East.

WASHINGTON, Sept. 25.—The following is the weather and crop bulletin issued by the Signal office: During the week ending Sept. 24th the weather has been colder than usual in the districts east of the Mississippi and on the North Pacific Coast. The temperature for the season from Jan. 1st to Sept. 24th was slightly below the normal for Northern New England westward to the North Pacific Coast and in the South Atlantic States. It has been warmer than usual in all other districts. Reports from the greater portion of the winter wheat region show that the work of preparing the ground is being retarded on account of continued drouth. Reports from Tennessee, the Middle Atlantic States and New England show that the weather was favorable for crops, and that the seeding of wheat was in progress. Reports from Kansas, Nebraska and the western portions of Missouri and Iowa indicate that the weather was favorable to growing crops. Killing frosts occurred as far south as Central Illinois, Northern Indiana, Ohio and Michigan during the latter portion of the week.

Eastern Wheat Markets

NEW YORK, Sept. 26.—Wheat closed for Sept. at 80c; Oct., 80½¢; Nov., 80c; Dec., 82½¢; Jan., 84c; May, 88½¢.

NEW YORK, Sept. 28.—12 M.—83½¢@83¾¢ for cash, 81½¢@81¾¢ for Oct., 82½¢@82¾¢ for Nov., 84½¢@84¾¢ for Dec., and 89½¢ for May.

CHICAGO, Sept. 28.—12 M.—71c for cash, 71½¢ for Oct., 72½¢ for Nov. and 73½¢ for Dec.

California Fruit at Chicago.

CHICAGO, Sept. 27.—California dried fruits are firm, especially apricots, which are scarce, with few more to come forward. Peaches sell fairly well, but there are not many here, as it is a little early for them. Some parties say there will not be many, owing to so large a part of the peach crop being taken for canning purposes. New raisins are just beginning to appear and the market has not yet fairly opened. Prices are quotable as follows: Apricots, sun-dried, bleached, choice, 18½¢@18¾¢; apricots, sun-dried, bleached, prime, 16¢@16½¢; apricots, sun-dried, unbleached, 13¢@14¢; peaches, peeled, evaporated, choice, 23½¢@25¢; peaches, peeled, evaporated, good, 20¢@22¢; peaches, unpeeled, evaporated, fancy, 17¢@18¢; peaches, unpeeled, evaporated, choice, 14¢@16¢; peaches, unpeeled, sun-dried, 13½¢@15¢; plums, pitted, new, 13½¢@14¢; raisins, loose Muscatel, old, ½ box, \$1.45@1.50; do, London layers, ½ box, \$1.60@1.65.

California Fruit in New York.

NEW YORK, Sept. 26.—900 bxs of Tokay grapes, which arrived from California in fine order, were sold at auction to-day, bring from \$1.10 to \$1.70 per cri. Considering that large quantities of grapes are being received daily from vineyards near at hand, the prices obtained were excellent.

The Commercial Bulletin says: Messrs. T. H. Leggett & Co. have received samples of Lieb's new crop of San Jose, Cal., prunes. Much to their regret they are unable to offer additional quantities to their customers, as they have already disposed of their entire purchase, and there remains no unsold stock on the Pacific Coast.

Eastern Hop Markets.

CHICAGO, Sept. 26.—Hops continue to rule quiet at former prices, and sales are not important. The offerings are small, for new hops are arriving slowly, which is due to growers asking above what buyers are willing to pay. We quote Pacific's new crop, choice, 20¢@22¢; do medium, 17¢@20¢; Pacific's 1886, choice, 14¢@18¢; Pacific's 1886, medium, 10¢@14¢; Pacific's 1885, 5¢@14¢.

Eastern Wool Markets.

NEW YORK, Sept. 25.—A more hopeful tendency is to be noted in some cases and appears in a measure justified by the large run of orders dealers have secured. Among sales were 20,000 lbs Eastern Oregon at 20¢@23¢; 8,000 lbs do. at 24¢; 40,000 lbs Territory, at 21¢@25¢; 5,000 lbs do. 20c; 28,000 lbs do. at 18c; 20,000 lbs spring California at 19½¢; 14,000 lbs do. at 52¢@52½¢.

In the Philadelphia market the demand for Territory and fine wools, which constitute the bulk of the supply, has continued light and unsatisfactory. Medium fleeces are in small supply and steady but quiet. There is no material change in prices, but the market is weak. Among sales were 30,000 lbs Territory fine, at 15¢; 13,000 lbs Montana medium, at 26¢; 12,000 lbs do. at 25¢; 14,000 lbs Territory improved, at 23¢.

BOSTON, Sept. 27.—Wool dull. Fine Territory scoured, 57¢@59¢; fine medium scoured, 53¢@55¢; coarse do 45¢@50¢; Michigan and Ohio unwashed fleeces, 18¢@25¢. Other grades are unchanged.

NEW YORK, Sept. 27.—Wool is firm. Domestic fleece, 26¢@34¢; pulled, 14¢@33¢; Texas, 9¢@14¢.

Local Markets.

BAGS.—The market is quiet but firm at 7½¢@8¢ for Calcutta.

BARLEY.—Notwithstanding the heavy consumption, large receipts keep the market down. In options on Call, dealings were fair, but at low prices. Owing to the heavy receipts the bears hammer the

market so as to keep values from advancing. At to-day's Call, sales were as follows:

Morning Session: Buyer season—200 tons, \$1.05½; 100, \$1.05½; 400, \$1.06. Buyer 1887—200 tons, 97c. Seller 1887—600 tons, 89½¢@90¢. Seller season—100 tons, 89c @ 90c. Afternoon Session: Buyer season—200 tons, \$1.05½. Buyer 1887—200 tons, 96½¢; 700, 96½¢; 100, 96½¢. Old contract—100, 96½¢. Seller 1887—100 tons, 89½¢. Old contract—600, 90c; 100, 90½¢; 500, 90½¢ @ 91c.

CHEESE.—The market is again higher, under a good demand and stocks well concentrated.

BUTTER.—Hot weather, a lessened demand and an increase in the receipts, caused prices to shade off, and close weak.

EGGS.—Strictly choice fresh laid are wanted at full figures, but off qualities are slow. The supply of the latter, owing to hot weather, is increasing.

FLOUR.—The market is steady, with a stronger tone.

WHEAT.—Sales of actual wheat are few, owing to holders' views being above buyers'. Buyers take all parcels put on the market at our quotations. On Call, trading was more active at gradual advancing prices, owing to an improving market abroad. To-day's sales were as follows:

Morning Session: Spot—100 tons, \$1.30; 100, \$1.28; 100, \$1.28½. Buyer season—400 tons, \$1.48; 400, \$1.47½; 700, \$1.47½; 200, \$1.47½; 300, \$1.47½ @ 1¢. Afternoon Session: Buyer season—400 tons, \$1.47; 100, \$1.46½. Buyer 1887—100 tons, \$1.36½; 100, \$1.36½; 100, \$1.36½ @ 1¢.

(COMMUNICATED.)

Market Information.

Cereals.

During the crop year ending Aug. 31, France imported 39,015,507 bu. wheat, against 18,528,831 bu. during the previous 12 months.

H. Kains-Jackson says: The barrenness of the European granary and mill-floors this season is a reproach to commerce.

Late accounts place the winter wheat crop of Russia at ten per cent above an average, while spring wheat will be five per cent less than last year. Stock of old wheat very light.

The Cincinnati Price Current makes the corn crop of the United States 1,570,000,000 bu., and the Chicago Trade Bulletin calculated upon 1,575,000,000 bu.—both based on the Department of Agriculture report.

It is estimated that the United Kingdom will have to import 140,000,000 to 145,000,000 bu. wheat during the current crop year.

Quantity of barley on passage for the United Kingdom on Sept. 1 is reported at 970,000 bu., against 2,600,000 bu. last year.

The London Millers' Gazette makes the following estimates of the production of wheat in 1887 in the countries named, compared with the yield in the year 1886:

	Estimated Crop of 1887—qrs.	Crop of 1886—qrs.
U. S. and Canada.....	60,000,000	63,500,000
France.....	40,000,000	36,000,000
Russia.....	27,000,000	21,500,000
British India.....	28,500,000	34,500,000
Austria-Hungary.....	21,000,000	18,000,000
Germany.....	11,000,000	10,250,000
United Kingdom.....	9,500,000	8,100,000
Spain.....	10,000,000	10,450,000
Italy.....	15,000,000	16,170,000
Australia.....	4,000,000	2,780,000
Turkey.....	5,500,000	5,140,000
Persia and Syria.....	5,500,000	5,500,000
Roumania.....	4,000,000	2,800,000
Chili and Argentine Republic.....	4,500,000	3,600,000
Egypt.....	2,100,000	2,000,000
Holland.....	650,000	600,000
Belgium.....	2,500,000	2,300,000
Denmark.....	600,000	600,000
Greece.....	600,000	600,000
Portugal.....	1,000,000	1,020,000
Norway and Sweden.....	300,000	300,000
Switzerland.....	250,000	200,000
Servia.....	700,000	550,000
Sundries—		
Africa, Tunis, Asia Minor and Mexico.....	6,000,000	6,000,000
Total.....	262,200,000	252,360,000
Equal bushels.....	2,097,600,000	2,018,880,000

Thus the estimates for this year, which it will be remembered are but estimates, show the world's production to be about 8,000,000 qrs. greater than last year and about 13,000,000 quarters greater than in 1885. In this connection it is worthy of note that the average production in these countries during the five years ending 1885 was estimated at about 2,200,000,000 bu.

Berthold of Sept. 9 says: Showery and rather cold weather has been experienced this week, both in England and on the Continent; in the extreme north of England and Scotland the harvest is not yet finished, and some damage to the outstanding crops is here and there reported from the rain. English farmers are delivering their wheat, compared with last year, more freely, but in France they hold aloof, owing to the low prices offered.

Berthold's Corn Trade List, Sept. 9, says: The American corn crop reports do not improve; the Roumania crop is a failure, only half a crop being expected, while in Hungary the crop is officially reported to be equal to only one-third of an average. In Roumania the food of the natives consists principally of corn, so that the failure of this crop is a national calamity, and wheat, of which there is a good crop this year, will have to take its place. In South Russia, too, the outlook is for a very short crop. Under all these circumstances, and considering the scarcity of feeding stuffs generally this year, it is not surprising that higher prices for corn in the near future are expected.

Statistical writers are engaged in the interesting work of figuring out the world's wheat requirements and the available surplus. H. Kains-Jackson places the requirements at 26,000,000 bu. in excess of the surplus; W. J. Harris places the surplus at 32,000,000 bu. excess, and another authority makes the surplus 8,000,000 bu. in excess of the requirements. With a short rye crop and root crop in the United Kingdom and on the Continent, it is within the

range of possibilities that a speculative movement in wheat will set in before the turn of the year, which will force values well up. The stock of old wheat Sept. 1, the world over, is below last year's at the like date.

The visible supply of wheat at the East is decreasing, but last year in September it was increasing. The exports from the United States continue larger than last year at this date.

Oregon advices report free sales of wheat to both millers and exporters, but latterly, under strong holding, buyers are unable to operate except at a higher range of values, particularly for the better grades. In this State buyers and sellers are still apart. Considerable fair wheat has been taken by exporters at from \$1.25@1.30 to fill sales made for September-October shipments. Millers are paying from \$1.40@1.45 for choice to gilt-edged wheat. Holders are indifferent sellers at these prices, believing that a higher range of values will follow. The tonnage here and to arrive to move the crop is more than enough for our wants, and therefore lower charters are expected.

Continued free receipts of barley keep that cereal down, notwithstanding the large increased consumption. The stocks here are not excessive for the season, considering the large demand, while the supply in the country is less than last year at this time. Oregon advices state that they will not send much, if any, to this market this season.

Oats continue in fair demand, but owing to the low price of barley and the liberal stocks here with free receipts still coming forward, buyers only take for immediate wants, unless they can secure a large parcel below the market.

Corn is steady, with buyers taking sparingly, under the impression that prices will fall when new comes in; but as the market at the East is advancing, ours is also apt to move up.

Rye and buckwheat are firm, with a fair inquiry reported.

Feedstuff.

As indicated last week, both bran and middlings are weak at lower prices. The consumption is quite large, but the low price of ground and rolled barley interferes with them. Rolled barley continues low in sympathy with barley. Other feedstuffs are unchanged.

Choice hay continues scarce and commands full prices; poor grades are in oversupply and are only worked off in buyers' favor. Alfalfa is in liberal supply. As the consumption of hay is increasing, any falling off in receipts is soon felt, and a higher range of values established.

Fruits.

Choice apples are in better inquiry, with some extra fetching an advance on top quotations. Wormy and otherwise defective apples are hard to place.

Strawberries and blackberries are growing scarcer, and command more money.

Grapes have come in more freely, but the more choice held up well under a good shipping and home demand. There has been a much freer movement than last year. Canners are taking in a small way several varieties for packing.

Wine grapes are in increased demand, causing prices to be well maintained. More wine-presses are in use in this city by small dealers in wines. Our advices from the interior report a larger consumption than last year at this time.

A large number of horticulturists are buying refrigerators for cold storage. E. Jungerman of Oakland, agent for the Beck's patent, has disposed of quite a number, with orders on hand for more.

In New York the grape crop is reported to be large and of good quality. The growers there keep their fruits by the cold-storage process, by which means better prices are maintained.

Peaches and pears are in lighter receipt, but owing to the lateness of the season, prices are not much higher.

Choice figs are firmer.

Watermelons and canteloupes fluctuate from day to day, the price being governed by the receipts.

The crop report issued by the Agricultural Bureau is very discouraging as to apples. It says the apple crop will be very short in every section where extensively grown. Prospects have been unfavorable from the beginning of the season, and the condition has steadily declined at each report. Only in New England and New York was there at any time a prospect of even a medium crop, and their condition has seriously fallen off, suffering a marked decline during the past month. Elsewhere generally the product will be limited. The Atlantic and Gulf States lose much from drouth, rotting and dropping from insect injuries. The returns from Ohio westward are of a very similar tenor, condition in most of the States standing at the lowest figure ever reported. There is an exception in the case of Michigan, where a crop but slightly under the average of non-bearing years is indicated. On the Pacific Coast condition is comparatively high, indicating a crop of medium proportions.

There has been no change in dried fruits except perhaps a weaker tone in unpeeled peaches. The Eastern demand for apricots is probably hardly as strong as it was, but the stock here of both evaporated peaches and apricots is now getting very low, and we shall soon go out with a clean deck. In the entire State there is probably not over five to six cars of evaporated apricots and as many more of evaporated peaches left, while we have a good three months' trade yet.

Dried prunes continue to boom, and are showing more strength every day. They are meeting with marked favor in the Eastern States. It was demonstrated last year that California prunes occupied a unique position in the market, and that the prices of the French and Turkish products had no appreciable effect upon them. California prunes sell for themselves, without reference to the prices of the products from other countries.

Raisins are not strong. There are peculiar circumstances at work (the chief element of disturbance being the fact that there is intense competition shown in this article this year, as has been the case heretofore) affecting this product. By all rules of trade California raisins should sell in their biggest market, that is, the Missouri River valley and Chicago, on the basis of the cost of Malaga fruit in New York, of equal grades, with freight added to Western points. In point of fact, California raisins are selling, delivered at Western points at much lower prices than the Spanish fruit can be landed for at New York. This is all wrong. California raisins are fully up to the Spanish standard, but as long as the present competition lasts we will see cut

prices. All this unsettles and disturbs the market. And this feeling is further emphasized by the fact that large operators here have not taken hold with their wonted activity, and it is said that lower prices may be looked for.

Hops.

Receipts are free, but buyers' bids are too low to tempt sellers, who look for improvement in prices. The crop of the coast is less than last year's. The Chicago Trade Bulletin, Sept. 23d, says: Washington Territory hops have usually met with a first choice, but the improvement made in the cultivation of California hops has resulted in placing them on about a par with Washington Territory. There is not the usual quantity of hops selling for future delivery. Brewers, in view of a generally good crop and the uncertainty of prices, are not disposed to contract for any large quantities; at the same time contracts have been made at 18¢@22c for prime to choice New York and Pacific Coast hops for November and December delivery. Latest reports from England, which it is believed are somewhat exaggerated, represent serious damage from recent storms, and up to this time the indications are that more contracts have been made for exporting than for importing hops.

Live-Stock.

Hot weather the past week reduced the demand from butchers, causing bullocks to rule in buyers' favor. No improvement in prices is looked for until cool weather sets in. Mutton sheep are fairly steady. Hogs are firm and wanted. Choice will fetch an advance on quotations. Horses are unchanged; the demand noted last week is still continued.

BEEF—Extra, 7¢@7½¢; first grade, grass fed, 6½¢@6¾¢ per lb.; second grade, 5½¢@6c; third grade, 4½¢@5½¢.

MUTTON—Ewes, 5½¢@6c; wethers, 6¢@6½¢.

LAMB—Spring, 7¢@8c.

VEAL—Large, 6¢@7c; small, 6¢@8c.

PORK—Live hogs, 4½¢@4¾¢ for heavy and medium; hard dressed, 6¢@6½¢ per lb.; light, 4½¢@4¾¢; dressed, 6¢@6½¢; soft hogs, live, 3½¢@4c. On foot, one-third less for grain or stall fed, and one-half less for stock running out.

Vegetables.

Onions are weak and lower, notwithstanding a good demand. Receipts continue heavy.

Potatoes are in buyers' favor. Receipts are very heavy, while the supply to draw from is ample. The consumption is large.

Tomatoes are stiffer, owing to a growing scarcity and a good demand. Canners are still in the market for choice.

Summer vegetables are, as a rule, steadier, but then the market is governed by the daily receipts.

It is estimated that the crops of hay, straw, oats and turnips in the United Kingdom are 14,600,000 tons less than last year.

Owing to the light cabbage crop at the West, more cabbages are being cut up in this city for sauerkraut.

Miscellaneous.

The tonnage movement compares with last year at this date as follows:

	1887.	1886.
On the way.....	337,173	285,627
In port, disengaged.....	60,442	79,286
In port, engaged.....	6,489	64,303

Totals..... 404,104 428,616

The above gives a carrying capacity as follows: 1887, 651,848 short tons; 1886, 677,764 short tons; showing a decrease compared with last year of 25,916 tons.

In poultry, turkeys are lower, but hens are higher. Beans are stronger, with limas and pinks making quite a decided advance.

The receipts of fall wools have increased, giving buyers a better assortment. Holders are not pressing the market.

Honey is wanted at an advance.

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

Apples, bx com.....	40 @	75	Figs, loose.....	4 @	6
do choice.....	100 @	1 25	Nectarines.....	10 @	14
Apricots, lb.....	— @	—	do evaporated.....	16 @	18
Bananas, bunch.....	1 50 @	3 00	Peaches.....	12 @	12 1/2
Blackberries, ch.....	5 00 @	6 00	do pared.....	— @	—
Cantaloupes, cr.....	50 @	1 25	Pears, sliced.....	24 @	25
Cherries, wht bx.....	— @	—	Pears, sliced.....	8 @	9 1/2
do black bx.....	— @	—	do qrt'd.....	8 @	9
do Royal Ann.....	— @	—	do do.....	— @	—
Cherry plums.....	— @	—	do do.....	11 @	12 1/2
Cranberries.....	10 @	12 50	Plums, evapo'd.....	13 @	14
Currants, ch.....	— @	—	do unpitted.....	3 @	5
Gooseberries, lb.....	— @	—	Prunes.....	10 @	13
Plum, black bx.....	40 @	75	do French.....	11 @	14
do white bx.....	30 @	65	Zante Currants.....	8 @	—
Grapes, white.....	30 @	50	RAISINS		
do black.....	30 @	50	Delmas Clus, fcy 2 40 @	2 50	
do Rose Peru.....	35 @	50	Imperial Cabin.....	— @	—
do Muscat.....	50 @	75	do fancy.....	1 75 @	—
do Tokays.....	50 @	75	Crown London.....	— @	—
Isabel.....	— @	—	Layers, fcy, 1 50 @	—	—
Wine, Zinfandel 15 @	21 90	90	do Loose Muscatels, fancy 1 40 @	—	—
do Mission..... 12 50 @	17 50	50	do Loose Muscatels.....	1 35 @	—
Limes, Mex..... 6 00 @	7 50	50	Cal, Valencia..... 1 25 @	—	—
do Cal. box.....	— @	—	do Layers..... 1 25 @	—	—
Lemons, Cal, bx.....	— @	—	do Sultanas..... 1 25 @	—	—
do Sicily, box..... 6 00 @	—	—	Fractions come 25, 50 and 75	cents and higher for halves, quarters and eighths	
do Australian.....	— @	—	VEGETABLES		
Nectarines, box..... 50 @	75	75	Artichokes, doz.....	— @	—
Oranges, Com bx.....	— @	—	Asparagus 1/2 bx.....	— @	—
do Choice.....	— @	—	do ext Choice.....	— @	—
do Navel.....	— @	—	Onions, 1/2 bx.....	15 @	20
do Panama.....	— @	—	do green lb.....	10 @	8
Peaches, bx.....	40 @	80	Paraulis, chl.....	1 50 @	—
do basket.....	— @	—	Peppers, dry lb.....	10 @	—
Crawfords, bx.....	50 @	80	do green, box.....	25 @	50
do basket.....	— @	—	Pumpkins pr ton.....	— @	—
do choice.....	— @	—	Squash, Marrow.....	5 00 @	8 00
Pears, bx.....	40 @	60	do Summer bx.....	25 @	60
do choice.....	— @	—	String beans lb.....	2 1/2 @	3 1/2
do Bartlett, bx.....	50 @	1 25	Tomatoes box.....	2 1/2 @	25
Persimmons.....	— @	—	do choice.....	30 @	35
Jap, bx.....	— @	—	Turnips.....	55 @	50
Pineapples, doz..... 4 00 @	5 00	00	Beet, chl.....	30 @	50
Plums lb.....	2 @	3	Cabbage, 100 lbs.....	50 @	75
Pomegranates, b.....	— @	—	Jarrots, chl.....	35 @	—
Prunes, lb.....	2 1/2 @	3 1/2	Eggplant, 1/2 bx.....	35 @	60
Quinces, bx.....	25 @	50	Garlic, lb.....	14 @	2
Raspberries, ch.....	— @	—	Green Corn, cr.....	50 @	75
Strawberries, ch..... 5 00 @	6 50	00	do sweet.....	75 @	1 25
Watermelons, 100..... 7 50 @	10 00	00	do large box.....	1 00 @	1 50
DRIED FRUIT					
Apples, sliced, b.....	— @	—	Green Peas, lb.....	— @	—
do evaporated.....	12 1/2 @	13 1/2	weet Peas lb.....	2 @	3 1/2
do quartered.....	13 @	14	stature, doz.....	10 @	—
Apricots.....	9 1/2 @	10 1/2	do Large.....	8 @	—
do evaporated.....	16 1/2 @	18 1/2	Mushrooms.....	10 @	20
Blackberries.....	13 @	13 1/2	Rhubarb bx.....	— @	—
Citron.....	20 @	20 1/2			
Dates.....	8 @	10			
Figs, pressed.....	6 @	7 1/2			

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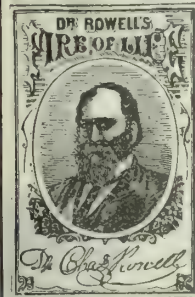
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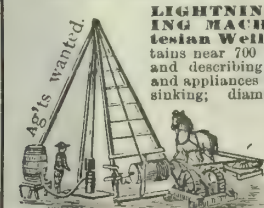
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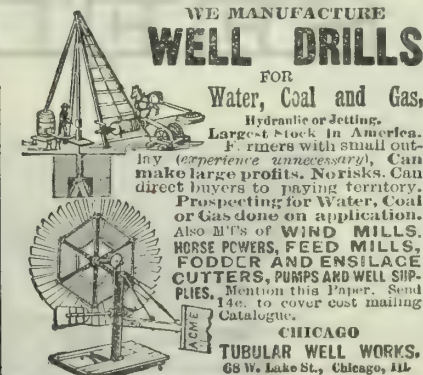
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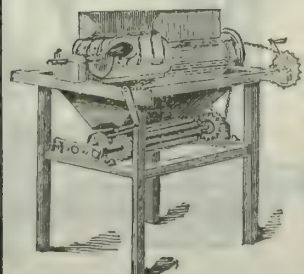
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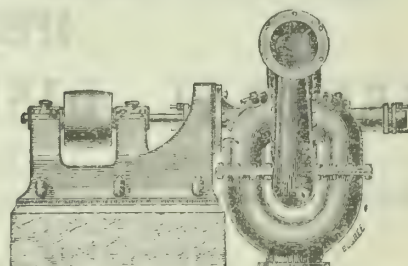
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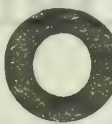
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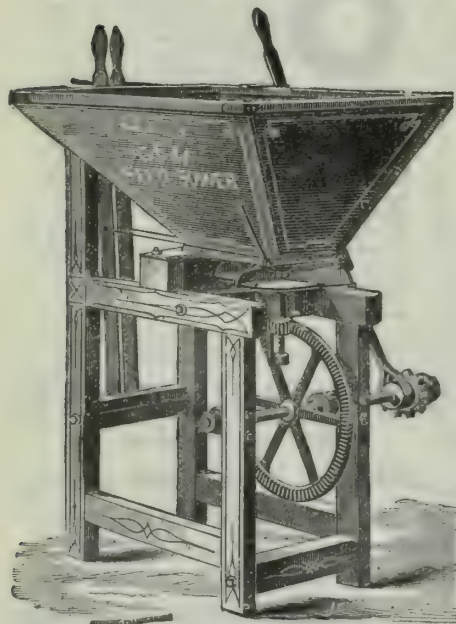
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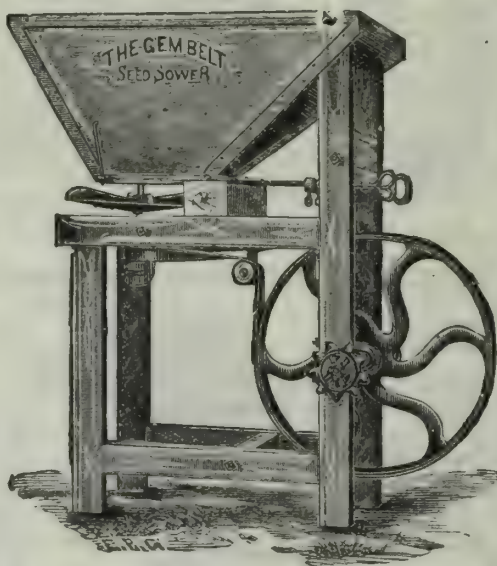
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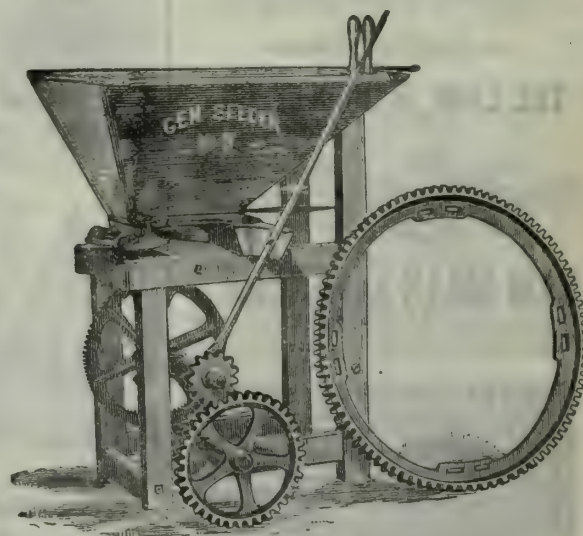
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Vol. XXXIV.—No. 15.

SAN FRANCISCO, SATURDAY, OCTOBER 8, 1887.

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Adulteration of Foods and Medicines.

The issue pressed upon our notice by the false charge of adulteration made against California butter in Portland draws attention to the general subject of adulteration of food and medicine, which is a matter of the greatest importance the world over. Great progress is being made in this country in detecting and preventing frauds of this kind; and where there is one mistake made and injury done, as in the alleged analysis of California butter at Portland, there is on the whole the highest benefit resulting from censorship of foods and drugs, as it is now being exercised by the State and City Boards of Health at the East. It has been shown clearly that in New York and Boston, since the inspection of milk began, the average of purity has increased in a most gratifying manner. Milk-sellers do not dare to handle bogus or watered milk, because the danger of discovery and punishment is so great.

We believe the control of foods and drugs has reached a higher perfection in Massachusetts than elsewhere. The project has been a popular one for years. Governors have commended it most highly and legislatures have appropriated good sums of money for the carrying on of the work. We are told that now a manufacturer of foods or drugs, before putting a line of goods on the market, submits samples for examination, and if he does not get a favorable report, he ships the goods to some unfortunate locality out of the State, and does nothing to sell them within the limits of the old Commonwealth. This is not welcome news to the rest of the country, for we may have to consume the Yankee notions which will not do to sell in Massachusetts. To protect against this, each State must adopt protective measures, and so hedge about the way of the adulterator that he shall cease his nefarious arts or practice them only upon the heathen.

The General Government is making an important contribution to the effort for purity in food and medicine by publication by the Department of Agriculture of a series of special reports on "Foods and Food Adulterants." The first treated of dairy products and was by Prof. Wiley. The second is just out and relates to "Spices and Condiments," by Clifford Richardson. It is an exceedingly interesting publication, describing the materials commonly used to adulterate these articles and methods for detecting them. It is illustrated by a series of engravings made from photomicrographs of pure and impure materials as seen with the microscope. Any one who likes to work with the microscope should apply to his representative in Congress for a copy of the pamphlet and then go to work with the materials which come from the stores. We need a vast host of qualified observers to detect adulterations and to aid in cultivating public sentiment against them. Educate the people in these matters and they cannot be easily imposed upon.

GRAIN IN SIGHT.—The visible supply of grain for Oct. 1st, compiled by the N. Y. Produce Exchange, was: Wheat, 30,906,777 bushels; corn, 7,087,448 bushels; oats, 5,177,636 bushels; rye, 321,962 bushels; barley, 1,128,358 bushels.

W. M. WILLIAMS, whom the Governor lately appointed Commissioner for the San Joaquin District on the State Board of Horticulture, declines the proffered honor.

FORESTRY REPORTS.—The State Board of Forestry has received from the State Department at Washington a most valuable book on forestry in Europe. It is made up of the reports of the U. S. Consul-Generals and Consuls

GOOD BRANDS AND POOR FRUIT.—The Santa Rosa Democrat claims that a large canning concern, which has a branch at that place, is using Santa Rosa labels on the inferior fruit which they ship out of the State and on which

The Witch Hazel.

We reproduce from Dr. Vasey's sketches of Native Medicinal Plants another growth which will recall to many of our readers memories of youthful rambles to the neighborhood of the old home east of the Mississippi. The plant is the witch hazel, which from the earliest times has been employed as a curative agent, and which, from its peculiar appearance and autumn blooming, is one of the first bushes known to the wood-roaming children. It is a small tree, 15 to 25 feet high under favorable circumstances, but more commonly a straggling bush, 10 to 15 feet high, growing in most of the States east of the Mississippi, usually in damp woods or on the banks of streams. It forms the type of a natural order (*Hamamelaceæ*), which includes about 15 genera in different parts of the world. The genus *Hamamelis* is represented in the United States by one species, *Hamamelis virginica*, another very similar one being found in Japan. The leaves are short-stalked, three to six inches long, oval or obovate, slightly heart-shaped at the base, with the sides unequal, with straight conspicuous veins, the margins wavy or with coarse obtuse teeth, and somewhat downy when young. The tree or shrub is remarkable for its late period of flowering, which is in September and October, while the leaves are falling, and continuing on until winter. The development of the ovary or young fruit begins in the following spring, and is not matured until the fall. The flowers grow in small clusters or heads, each with a three-leaved scale-like involucre at the base. The calyx is thick, four-parted, and woolly on the outside. The petals are four, strap-shaped, nearly half to three-quarters of an inch long, and of a bright yellow color. There are eight short stamens, only four of which are perfect. The small hairy ovary occupies the center of the flower; this finally develops into a two-beaked, two-celled, thick and hard pod, with a single, black, bony seed in each cell.

Both the bark and the leaves are used medicinally in domestic practice, in the preparation of certain proprietary remedies, and in the practice of physicians. It is stated that they were used as a remedy by the Indians. Fig. 1 shows the flower's natural size; and Fig. 2, an enlarged flower.

INJURY TO SPANISH RAISINS.—According to a cable dispatch from Denia, Spain, Oct. 3d, the Valencia raisin-growers are having a sorry time with the weather. The dispatch says: "It has been raining for a week, and the loss to the crop is estimated at 10,000 tons. Cannot get any stock, as the market is bare and is expected to so continue for some time."

W. H. REED and O. L. Sharpstein, counsel for the wheat-growers of Washington Territory, have gone to Washington to prefer charges against the Northern Pacific Railroad Company for extortionate freight rates on wheat from Walla Walla to Portland, and are to be heard before the Interstate Commerce Commission on the 14th.

HORTICULTURAL SOCIETY.—The pressure of the State Grange report, the accounts of fairs, etc., upon our columns this week, forces us to lay aside until next week the report of the Horticultural Society. The meeting was well attended and interesting, as the report will show.



THE WITCH HAZEL—*Hamamelis virginica*.

on the forestry of the nations to which they are accredited. These reports were ordered by the Secretary of State at the suggestion of the Chairman of the State Board of Forestry of California, Hon. Abbot Kinney. Persons interested in forestry can obtain this book by applying to the secretary, Mr. Sands W. Forman, Room 42, Nevada Block, San Francisco.

GLANDERS.—The Morning Call says that 15 glandered horses have been killed in Oakland recently.

they do not care to put their own brand. If this is true, it is a very reprehensible proceeding. The remedy would be for each locality to own its own cannery and then it would control the use of its own labels and could see that there was nothing but good fruit under them.

CONDENSED MUST.—The Healdsburg Enterprise reports that the Condensed Must establishment at Geysersville is working smoothly, and several carloads of condensed must have been shipped.

POULTRY YARD.

Poultry a Means of Wealth.

I. K. Felch, the well-known writer on poultry, has the following interesting notes in the *Poultry Monthly*:

A long essay could be written upon this subject before it would be exhausted. This poultry industry has been so evenly distributed over the land, and the products of our poultry-yards so largely consumed at home, that few have looked upon it as a means of accumulation, and few understand what a factor it is in a nation's wealth, but the experience of the past few years has established this fact, and that by its agency many have been able to amass quite a savings bank account. Many items appear from time to time to bring this subject forcibly up for consideration, among them the following:

During the season of 1885, from June 15th to September 15th, one hotel in Saratoga paid in one bill for supplies, the following list, which aggregated \$125,000: 90,000 pounds of beef; 18,000 pounds of mutton; 20,000 pounds of lamb; 7000 pounds of veal; 15,000 pounds of pork; 60,000 pounds of chicken; 35,000 pounds of game; 26,000 pounds of fish; 6000 pounds of salmon; 900 dozen squabs; 24,000 dozens of eggs; 22,000 pounds of butter; 65,000 quarts of milk; 10,000 quarts of cream.

How is this for a list of farm products consumed by one hotel? I suppose you are aware that the item "game" takes in the green ducks and geese which are now being raised to fill the place of wild ducks, trout, etc., now protected by the game laws of the land at that season of the year.

The point which I wish you to consider, and the reason for introducing this bill, is the large proportion that comes from poultry culture. Fully 127,000 pounds of that bill was produced in our poultry-yards and lofts. Is not this bill a substantial backing for our estimate of the magnitude of our pet industry, as reaching \$640,000,000 annually?

This hotel is as large as many a common-wealth we could name, and this bill a fair criterion of the meat supply and the proportion furnished by poultry-raising, and another proof of the poultry agency and wealth of a nation.

Many of us are rearing fowls for the love we have for the beautiful found in animated nature, but take from this industry its utility and the numbers raised would be but as a handful of sand compared to that which makes up the ocean's shore. This influence you see in the scarcity of numbers in the ornamental breeds in our exhibits of them.

Those breeds having the greatest practical worth, being the most prolific layers; those producing the largest eggs and the best meat as broilers and roasters; those laying the larger number of eggs in the winter months—these will ever be the kind to hold the popular call and the steadiest sale, and their breeders will always be "tided" over a dull season, while the breeder feels more quickly the fluctuation of the market whose tastes lead him to breed those termed ornamental.

We have only to survey the field to find that a majority of the breeders, who make poultry culture a business and means of support, are breeding the most practical kinds. Self-interest takes them in this direction, and you hear them loud in their praise. It is not because they do not breed the other varieties, but that the practical breeds are a necessity to them and the success of their business. Taking such a survey of the industry, we find, of all the breeds that have added most to this item of wealth, that the Light Brahmas, Plymouth Rocks and Wyandottes stand first in the list of breeds, and while the others pay a profit, in comparison become ornamental, so to speak, for they pay less.

When we take up the branch of exhibition specimens into which personal taste and love of the beautiful in their plumage influences largely the price, we find a greater fluctuation as the exhibitions in our land increase or diminish, consequently fewer breeders of them. The exhibition becomes the prime motive in the breeding of the more fancy sorts, for they beautify the collections; yet these very exhibitions find their largest classes made up of the most beautiful specimens from the most practical breeds, and the winners from these useful classes always demand the highest prices. England furnishes us instances where \$500 per trio, and \$250 have been paid for single Brahmas. America boasts of \$200 paid for a pair of Plymouth Rocks, and single males in Wyandottes bringing nearly \$100.

Love of the rich for possession makes these prices possible, and even the requirements of breeding enable the breeder to sell a cock to score 95 honest points at \$100, and instances of breeders refusing a larger price are on record. But although these prices are beyond the reach of poor men, I am thankful breeders, by skill and hard work, often produce them, and in selling them to the rich and generous, causes the purchaser happiness in the possession, while joy comes to the seller in the thought of the added comfort he is thereby enabled to furnish to his family. And this is the question: How may this wealth and industry best be controlled by the poultry breeders of the land? That should interest all.

The women in this connection should not be forgotten. It is a gratifying fact that this in-

terest is attracting many women to the breeding and exhibition associations. Both women and children engage in this calling successfully. Women, by their gentleness and large stock of patience, even by the love of pets and children, show themselves best fitted to care for the flocks. Many women suffering from illness because of close confinement indoors are recovering their health in this interesting occupation. The time is coming, and shortly, when the women of America will vie with their French sisters in controlling largely the poultry culture of their land. Woman has asserted herself; has already forced an acknowledgment of her ability. Not a trade, profession or calling but woman is to be found therein. Even Chicago has her woman blacksmith and horse-shoer.

This industry is open to her; she will embrace it, succeed in it; for in any business demanding attention to detail, women always excel men, but the field is open to both. Let both work together to control this industry for the benefit of the wage-workers of the land.

COTTON AND WOOL.

Cotton-Growing in California.

Persons who are thinking of going into the cultivation of cotton in this State as a profitable agricultural industry, must count upon managing the same upon a basis of the closest economy in every step of the work. A late number of the *Savannah News* gives the following as the cost of raising cotton in Georgia:

"A very reasonable estimate on fair land is figured out as follows: Rent per acre, or interest on investment, \$2.50 (this, of course, includes taxes, fencing, etc.); preparation of land, \$1; fertilizers, \$6; planting and seed, \$1; hoeing, \$2; plowing, \$1; gathering, \$4; ginning and packing, including bagging and ties, \$2; total, \$18.50, less seed valued at \$2.25. Say the yield is 250 pounds, the cost at the gin-house ready to be baled to market is 6.3 cents per pound. The above is a fair average estimate when seasons are favorable. It will cost an extra cent to send the cotton to market and sell it, allowing for drying out and consequent loss in weight. It will be seen from this that there is no money in the crop at prices that have prevailed in recent years, unless the quality is extraordinarily good. The average quality of cotton produced in Georgia is low middling, and the price is singularly near the estimated cost of production. When fertilizers and supplies are bought on time, the cost of the crop is usually from 15 to 25 per cent greater than the foregoing estimate. This, of course, makes the cotton cost more than it brings in the market, and it is not difficult to see how it is that planters lose money when they do not conduct their plantations according to strict business principles and with economy. It is true that there are few planters that own their land who make more than fair rent off their cotton crop, and there are very few renters that make any money at all on cotton. There are plenty of farmers in every part of the South, however, who make money from diversified farming."

Experiments in this State show that we have the advantage over cotton-growers in the Southern States in a larger average of yield per acre. It is also well known that we have here less difficulties to contend with in the climate. Our freedom from rain during the picking season is a great advantage, and for some years at least there will be little or no need for fertilizers. This last item is a very important one. A California-grown cotton is also of a much better quality than the average of that grown on the uplands of the South, approaching more nearly to the character of the sea island cotton of the eastern portion of the Atlantic States. We also have the advantage of transportation in our favor. Cotton grown in this State should be manufactured here, as it undoubtedly will be. Indeed there is even now quite a demand here for the raw material to supply the Oakland Mill and the Woolen Mills as well, all of which latter use more or less cotton to mix with their wool. Taking all things into consideration, there is good reason for believing that cotton-growing will eventually become an important industry in California. A cotton-seed-mill should also be provided for utilizing the seed.

The Woolen Industry.

Bradstreet, some time since, gave reports of the condition and prospects of the New England woolen industry as obtained from 227 mills. These reports corroborate the general impression of the unsatisfactory status of woolen manufacturing in New England, which is but an example of what prevails in all the States. The practice of making goods only upon orders has now become quite general, and one that cannot be prudently disregarded. It has been growing in favor since the close of the civil war, but more especially since 1872 and 1873, till now no mill seems disposed to hazard the manufacture of goods in anticipation of their favorable reception by the trade. If there be any exception to this rule it will be found with mills on staple commodities whose styles remain practically the same from season to season. Orders are now given very limitedly, and much machinery is idle in consequence. Many mills

that are now running on orders will stop unless new orders come in before the old ones are filled. The reports from the 227 mills indicate a condition, as compared with that existing 12 months ago, of general inactivity, as follows: Forty-four per cent of the mills are doing the same, 32 per cent are doing less, and 24 per cent are doing more. The large percentage doing less is enough to denote a marked depression that must have a general influence. A number of the mills that report the same amount of production do so because of having on hand unexecuted orders, but as these will soon be filled the mills will stop unless supplied with fresh orders. Manufacturers will avoid the stopping of machinery, if possible, preferring to take orders at cost rather than to accept a loss resulting from the idleness of machinery and the disorganization of the labor system of the factory.

The opinions as to business prospects vary, of course, with each manufacturer's affairs, as they stand in the present and as they give promise for the future. Thirty per cent of the opinions reported regard the prospects good, 35 per cent bad, and 35 per cent uncertain. From this representation, less than a third of the manufacturers have reasons for expecting a favorable trade for the future, and more than two-thirds consider the prospects as unpropitious. Manufacturers who are on fine goods feel the inauspicious condition of business more than those on medium or low grade of woolen fabrics. The demand is excellent for satinetes, fancy and plain, and is likely to remain so during the season. The complaints from manufacturers allude but slightly to labor troubles. Allusion, however, is made to the importation of foreign merchandise at undervaluation—enough to furnish a supply of woolsens that, in quantity and price, seriously interferes with domestic productions. Since the beginning of the year the importations of dress goods have been 28 per cent more in quantity than those for the same time last year. In connection with this we will remark that the last statement from the Bradford consulate showed a falling off of nearly 26 per cent in the value of worsted coatings exported to this country in April, as compared with the value of exports during the same month last year. There was also a falling off in the value of worsted yarns of nearly 83 per cent for the same period.

THE LUMBERMAN.

The San Diego Lumber Trade.

The San Diego Union gives an array of figures and facts which speak well for the growing prosperity of the extreme southern portion of the State. They tell a tale of wonderful progress. According to this report the importation of lumber into San Diego during the month of August was nearly double that of May last. The Union says: The receipts of lumber at this port is a good index of the amount of the building operations in progress. With a view to ascertaining what is the present condition of that trade, a Union reporter interviewed a number of lumbermen yesterday afternoon. They were unanimous in declaring that their sales of lumber are almost doubling every month, and the present demand is more than taxing the full capacity of all available shipping facilities. There is a great scarcity of vessels, notwithstanding the fact that many of them have lately left other freighting to go into the lumber-carrying business. In consequence of the rush, the freight charges on lumber from Puget Sound have advanced from \$6 to \$7 per thousand.

The Mills Overtaxed.

Besides the difficulty in finding means of transportation, there has also of late been much delay on account of the mills not being able to get out lumber fast enough to supply orders. Orders that were formerly filled in six or seven weeks now require three or four months. A number of orders have also been rejected by mills, from whom word was received that they had more orders ahead than could be filled in six months. Formerly almost all the mills in the lumber ports had a constant supply of lumber of all kinds on hand. Now often a vessel is compelled to wait till the lumber is brought from the mill. All lumbermen are complaining that in consequence of the rushing demand and difficulty of getting ready supplies, their stocks are being kept down to such small quantities that they are barely able to fill orders as they come in from day to day. As there is a large increase in the demand every month, there will of necessity soon come a time when orders from builders will have to be rejected, unless the number and capacity of the mills in the lumber region are greatly increased. It is said that at present all the mills are run to their fullest possible capacity, and the demands are barely being met.

Figures and Facts.

The number of feet of lumber received at this port last month was 15,000,000. This was an advance of nearly 3,000,000 over the receipts for July, and nearly double the number of feet received in May of this year. It was also nearly as much as was received during the months of January and February of this year. The total amount of lumber received at this port up to September 1st, of this year, was in

round numbers, 84,000,000 feet. This, in eight months, is an increase of 45,400,000 over the receipts of last year, when 38,600,000 feet came into the port. Last year there was also an increase of 23,600,000 feet over the receipts of the year before, when 15,000,000 feet were received. It will thus be seen that last month there was as much lumber received in this port as was received during the whole of the year 1885, only three years ago. During the last three months there were 20,000,000 more feet of lumber received in this port than during the whole of last year.

The Outlook.

It is estimated, according to the outlook at present, that a total of 135,000,000 feet will be received in this port during the present year. This will be four times as much as was received last year and nine times as much as came to this port in 1885. As a prominent lumber dealer remarked, these comparisons give a startling idea of the tremendous growth of the trade, not only during the last year, but also during the last few months of the year.

Lumber Items.

The Puget Sound mills are said to supply 90 per cent of all the pine lumber used in this State.

It is said that 29 vessels and 130 lives were lost last year in the lumber trade on this coast. This is a most extraordinary loss of life for the number of men engaged in that branch of our coast trade.

The rapidly increasing demand for lumber in the southern portion of the State has drawn so largely upon the production of the Puget Sound mills that the demand is greater than any possible supply. Much delay is caused in vessels having to wait their turn in loading.

The lumber produced by the small mills in the Sierras is mostly taken up by the local trade near the mills, and very little of that product ever reaches the larger markets.

The boom in Southern California has largely increased the price of lumber on this coast.

Among the last year's losses in the lumber business it is claimed that Pope & Talbot dropped \$300,000. Dean & Co. are said to have lost \$75,000. Many minor millmen met with severe losses. It was such facts as these that had much to do with the organization of the lumber combination by which it has been possible to bring about the advanced price of lumber which has been met with the present season.

PACIFIC COAST LUMBER—LIVELY TRAFFIC.—Large sawmills are now in operation at various points on the North Pacific Coast railroad, and the lumber traffic on the line is at present tremendous. The Willows Creek mill at the head of the new extension is turning out at least 50,000 feet of lumber daily, while the mills on Austin creek and on Russian river are turning out similar quantities. On Friday night there were 133 loaded cars on their way to Sausalito and San Quentin, besides others being unloaded at these points. There are now eight vessels at the various wharves belonging to the company loading lumber for the city. The largest cargo moved lately was a quantity of beams and timbers for the use of the Spring Valley water-works in the construction of their flume across the bay.

ILLEGAL TIMBER CUTTING.—Acting Secretary of State Muldrow, at Washington, has requested the Attorney-General to institute suit against Thomas L. Greenough, principal contractor for the Northern Pacific Railroad Co., for the value of 700 ft. tamarack and pine trees, alleged to have been unlawfully cut from Government land by the defendant. C. C. Frost, Special Timber Agent, has reported to the General Land Office that the Northern Pacific Railroad Co. has seven lumber-mills on unsurveyed lands in the Cascade mountains in violation of law and the department regulations. The *Shasta Courier* says: It is reported that a few platoons of individuals will be arrested by United States Marshals for fraudulent filing on timber-lands in Shasta and Siskiyou.

A PUGET SOUND SAWMILL PRODUCT.—There is an interesting exhibit at the Mechanics' Fair in this city, which consists of an immense stick of lumber from Puget Sound. Its proportions are colossal, its length being 151 feet and 20x20 inches. Supt. W. P. Stout, who is a connoisseur on lumber, hazards the assertion that it is the largest stick of lumber ever turned out of any sawmill.

SEASONED TIMBER.—It is said that timber may lay under shelter for years, and become thoroughly seasoned, and yet, when sawed into smaller dimensions, the pieces will shrink. This is because of the new surfaces which are exposed to the air, and which always change slightly when first exposed.

TIMBER IN PLACER COUNTY.—It is estimated that Placer county has 450,000,000 feet of lumber fit for manufacturing purposes in her forests.

FORESTS cover 24 per cent of the entire area of Norway.

THE St. Helena Independent says: In conversation with Mr. Schram, he stated that the amount of sugar was greatly in excess this year, some of his grapes running as high as six per cent above what is normal. The result is a great amount of trouble to get good and proper fermentation.

THE VINEYARD.

To Avoid and Correct Imperfect Fermentation.

The Chief Executive Viticultural Officer has prepared the following statement:

The number of grape-growers who have this year become wine-makers for the first time warrants the publication of a few rules for the management of troublesome fermentation. Dry seasons are particularly productive of what, in California wine makers' parlance, are known as "stuck wines." These are wines which fail either in commencing or completing their fermentation.

To Start Fermentation.

Wines which are slow to commence fermentation are easily started. This trouble occurs most commonly with the first grapes crushed, particularly where they lay exposed to the chilling effect of a cold night and are crushed early in the morning before being again warmed by the sun. The must is then apt to lie dormant in the fermenting vat for several days before the germs show any healthy action. The same delay in starting is sometimes produced in grapes crushed for white wines, when the must is run into barrels exposed out of doors over night, thereby becoming cold. The delay in starting these cold musts is seldom productive of any great evil; but the annoyance and loss of time caused thereby may be completely avoided by crushing the grapes when warm, and then protecting the must against any considerable reduction in temperature.

The temperature most favorable to the action and development of the yeast germ ranges between 75 and 85 degrees. The fermentation would, therefore, be greatly aided in starting by bringing the new must to this degree of heat and maintaining it thus until a good, healthy action prevails, after which the heat produced by the ferment will be sufficient.

If the grapes have been chilled before crushing it is well, in addition to the warming, to add a little clean, fresh yeast. The best for the purpose is the compressed yeast, sold in small cakes throughout California, although any well-washed, fresh yeast will do. Some wine-makers always introduce this yeast into the first must to insure a prompt commencement.

Once the yeast plant gets established in any vat of the fermenting-room it readily takes possession, unaided, of all the must subsequently introduced.

There are some wine-makers, however, who insure a prompt start of each vat after the first by mixing in some of the lees or yeast of a working or previously finished must.

To raise the must to a suitable temperature, a steam coil may be used. In districts where the sugar runs high, the steam is blown directly into the must by means of a hose, the opening of which is placed within and near the bottom of the tank. Where steam cannot be had, portions of the liquid may be heated successively and returned to the vat or cask until the whole marks 70 degrees or over. In doing this, the heated portions should not reach a temperature exceeding 125 degrees. Under peculiar circumstances, the yeast plant will stand a temperature approaching 140 degrees, but it would not generally be safe to heat it above 125 degrees.

Very low temperatures, if not changing too suddenly, do not destroy the yeast plant, but render it temporarily dormant and unproductive.

Some winemakers deprecate the use of yeast as injurious. I have yet to learn, however, of any deleterious results accruing therefrom. Some even resort to a handful of grape leaves or other materials claimed to assist the must in starting.

Musts High in Sugar.

The trouble in starting the first vat is small, as compared with what often comes later, especially when the weather is dry and hot or when the must shows 26, 28 or 30 per cent of sugar. Then comes the new winemaker's trial, and with old ones, too, the trouble not infrequently begins.

Without attempting to explain the causes which may lead the wine to cease fermenting, I will proceed to state the best and commonly adopted methods of avoiding the trouble and the best methods of finishing wines "stuck" with from two or eight per cent of sugar.

When the season is dry, and the must marks over 24 per cent saccharine, especially if the atmosphere seems wanting in moisture, and there is an absence of dew, fog or rain, the utmost care should be exercised to avoid any other causes liable to obstruct fermentation in red wine.

Shallow Vats.

Shallow vats are invaluable for disposing of troublesome red musts, principally because of the ease with which the same may be worked and aerated; also because the mass is so spread out as to avoid the excessive accumulation of heat. For these reasons cement vats are preferred in many of the southern districts of Europe, where wine-makers are similarly troubled.

These vats are made large and shallow so that the must may be continually stirred and worked over. The cement answers better than wood, as it serves to carry off the heat which accumulates too rapidly in some districts of the South. Some wine-makers, I have learned, ferment commonly in wood, but have their

cement vats to which the stuck wines are relegated when they chance to occur.

Next in value to a shallow vat is a shallow mass in a deeper tank, which serves somewhat to alleviate the impairment of the ferment, but this is never equal to the shallow tank in seasons of excessive sugar.

The Use of the Stems in Fermenting.

Fermenting on the stems aids the process, and may be safely adopted in red wines if they be found ripe enough. When the butt of the stem is brown and woody and the whole possesses a tough and wiry appearance—not green, brittle and sappy—it may be safely added, and will aid greatly in avoiding trouble later on.

Much difference in opinion prevails as to whether the use of the stems improves the wine or not, and this, too, among competent wine-makers; some ferment all red wines on the stems while with others they are never employed. The best authorities, however, agree on their value, being governed by circumstances, the season, ripeness of the grapes, etc., as to the quantity to be used. In the case of troublesome wines which we have under consideration, it is doubtless best to employ part or all of them. They are needed not only to assist fermentation but to increase the acid of the wine—wanting usually in this respect, in seasons of over-ripeness. Such wines, too, can safely stand some of the harshness arising from the stems which will also give them keeping quality.

I should never counsel the use of stems that are green, brittle and sour, but as those seldom accompany troublesome seasons they need hardly be mentioned.

Blending in the Fermenting Vat.

The fermenting together of different varieties, or of the same variety from different soils, is a method well to adopt in seasons when trouble is apprehended. Red grapes generally ferment better when 10 or more per cent of white grapes are added. The fine wines of Europe are often made in this manner, the quality being improved by the process.

If, for fear of losing color or other reasons, the white grapes cannot be had, the blending of two or more varieties of red grapes will prove healthful to the ferment and will make, too, a better blend if mixed intelligently with a previous knowledge of the qualities of each and their appropriate proportions.

In filling the vats, if the first crushing runs high in sugar, the balance should be made up of grapes running enough lower to bring the whole to a medium strength.

Proper Maturity.

It is difficult to indicate the exact degree of sugar desired in all cases, in that it should be governed largely by circumstances. It is safe to say that wines seeking an early market will profit by all of the sugar which can be fermented out. Wines lacking in color will be improved by as complete maturity of the berry as is possible to ferment dry; in fact, there is everything in favor of complete maturity of the grape, except the difficulty produced by its fermentation. Not only does it become difficult to manage the fermentation, but when too high in sugar, the wine resulting, though apparently dry, may possess sugar sufficient to trouble it for years after.

These considerations must all be known in limiting the maturity of the grape and in determining at what degree they should be picked.

By a little attention to the mixing of the grapes at time of picking, all of the good qualities may be obtained in a single vat, each lot performing its proper function. Not infrequently, however, we find varieties picked and fermented separately, each making a wine which possesses some excess or defect, but which would be corrected by judicious blending with some other variety or lot possessing a corresponding defect or excess, be it color, acidity, strength or harshness.

Fermenting Without Crushing.

Where there is any promise of trouble in fermentation some wine-makers resort with red wines to what is known as the "Moret process," viz., that of placing the grapes directly in the tanks without either stemming or crushing. The mass is stirred and worked an unusual amount to start fermentation, which then continues, slow and uniform, and usually finishes without trouble. The greatest objection urged to this method is that in the subsequent pressing of the pomace some grapes that were not ripe enough to ferment and burst are here opened and contribute a certain amount of sugar to the liquid, by this time supposed to be dry. Drawn into sulphuring tanks or a cool cellar for keeping, the sugar manifests itself later on, to the great annoyance of the maker and detrimental to the wine. This objection may, however, be overcome by arranging to continue fermentation of the wine when pressed, or, better still, by keeping the press wines separate for further fermentation or brandy-making, retreating only that to the keeping-cellar which comes off without pressing.

Be it known that this process conduces to slow, uniform and complete fermentation of just those berries which are ripe enough to make the best wine, and that this drawn off without pressing separates the better from the poorer wine. The method is by no means common, though it has afforded satisfactory results in many cellars and proved an efficient preventive of tumultuous and incomplete fermentation.

As a last resort, when the must marks 28 per cent of sugar or over, water may be used for extending the same. This method is recognized as legitimate by the Pure-Wine law of California. It is employed freely by some vineyardists and authorized by many good authorities. Others there are who contend strongly against it, and there are laws in Europe prohibiting it.

Without entering into a discussion as to its merits or demerits, I should advise that musts showing too high a percentage of sugar should, in the absence of other and better remedies, be reduced with pure, fresh water or else fermented with a view to making port wine.

The addition of water alone to high musts will not always insure perfect fermentation, as many people suppose. To obtain the best results, however, the water should be added as soon as the grapes are crushed, and it should be then well incorporated with the mass, bearing in mind that the addition of this, as of any other substance not coming directly from the vine, should be used only as a last resort. To extend the must with water, it is found that about five gallons of water are required to reduce the must from a ton of grapes 1 per cent in sugar. For example, to reduce one ton of must from 28 per cent to 25 per cent would require about 15 gallons of water.

Other Aids to Fermentation.

Enaotannin and cream of tartar are employed by some to assist fermentation and are valuable for either white or red wines. These substances produce, it is claimed, desirable qualities in the wine and improve the color of red wines. Their use is permitted and recognized by our law as harmless. When employed for red wines, they should be sprinkled over the must at the time the grapes are crushed, at the rate of two ounces of enotannin and one-half pound cream of tartar to each ton of grapes. Thus used they have been found to make the fermentation regular and uniform.

Stirring the Must.

Complete and constant stirring forms a valuable adjunct to fermentation at all times; particularly it is necessary when the must is hottest and most active. The measure of success is not infrequently determined by the amount of working-over the wine receives. In working red wines in high tanks this is done with a tool made of a piece of scantling about six feet long, enlarged by cross pieces, or even cleats, nailed on at the lower end. A cross piece answers for a handle at the top. A close-tined stable fork or other more effective tool may be employed if the tank be shallow and the must is not too deep.

The "Stuck" Tank.

If selecting and adopting in advance of the work, proper precautions, as above described, there is seldom cause for further trouble.

There often occur, however, through carelessness or otherwise, tanks "stuck" at from two to eight per cent of sugar. The wine has commenced fermenting all right, has boiled up tremendously, to the intense delight of the maker, when lo! on coming out the next morning the cap has dropped; the wine has become inactive and cold. The bubbles have almost ceased to rise, and yet the must marks several degrees of sugar remaining.

There is one common and usually effective proceeding to start up fermentation. The wine, or partly finished wine, if for claret, should be drawn off and the pomace pressed and rejected or sent to the distillery. Let the wine so drawn be placed in two or more tanks and an equal bulk of fresh grapes added. For the best results the grapes added should be, if possible, some variety known to produce good fermentation. See, too, that they are low in sugar. If such grapes are not available, secure the same variety from some other locality or soil, taking care that they are as low in sugar as possible.

The desired result has often been obtained by drawing the stuck wine directly on to newly crushed grapes of the same kind and from the same place; but there is greater assurance of success when the variety or locality is varied somewhat, and the grapes chosen are lower in sugar. White wines should be pumped on to new must in a similar manner.

Errors of Beginners.

New wine-makers are prone to fall into the error of only half doing this work by adding a few boxes of fresh grapes to the stuck tank, expecting thereby to complete fermentation. This has been known to succeed in rare cases, when the trouble was light and the variety added was Berger or some other—noted alike for its low saccharine and favorable fermenting qualities. Generally, however, it is time thrown away to do other than what I have indicated at first, viz.: If red wine, draw off the wine, press and reject the pomace, and commence fermentation on newly-crushed grapes. If this fail—which it will do but rarely—the maker can try the same again, employing fresh grapes of some other variety, still lower in saccharine, and combining all of the precautions indicated in the first of this article, or, if these latter are unsatisfactory, it may be necessary to reduce the newly-mixed must to about 24 or 25 per cent sugar by the addition of water. If all of these fail there is left no alternative but to make port wine, or send it to the distillery. There is rarely any necessity of this latter extreme if the first instructions I have given are followed.

In place of pumping the stuck wine on to new pomace some wine-makers prefer to let the fer-

mentation finish in casks or tanks. This it will do if small packages be employed and the must kept in a favorable temperature. No one, however, is so certain of good results, nor so frequently practiced, as the method of renewing fermentation on new pomace, or new must, if for white wine, and finishing the wine up before the final drawing or pressing.

I have not attempted here in this hurriedly prepared article to explain the reasons why these troublesome fermentations occur. There are many theories as to their causes, and great difference of opinion exists unnecessary for me to discuss at this time. We know the circumstances under which the trouble usually occurs and the methods of their avoidance. These methods—most of them well known to old wine-makers—I have aimed to present at this appropriate moment. This is done more in view of keeping the inexperienced out of serious trouble by artificial means than of explaining the causes of the natural phenomena which occur as they have in times past, or may occur in the future.

J. H. WHEELER,
Chief Executive Viticultural Officer.

HORTICULTURE.

Apricot Paste.

EDITORS PRESS:—I am asked by one of your readers to tell through the PRESS all I know about the making of that "delicious apricot paste" to which I incidentally referred in my paper on prunes, as read at the last meeting of the State Horticultural Society.

What I know is but little, except that in France they turn an immense quantity of apricots into what may be termed more properly in English "apricot candy" than "apricot paste." Some towns in the apricot districts in France make a specialty of this candy or paste, such as Clermont-Ferrand, in Central France. The common apricot is the kind mostly used in the making of that paste. It is cooked with sugar—in what proportions I could not tell—and boiled down to the consistency of a thick jam or dough. It is then spread out on cloth or large tin plates with a long, thin-bladed knife such as is used by confectioners, to half an inch or about in thickness. After having cooled off somewhat, it is cut in small blocks through tin patterns figuring rounds, squares, lozenges, hearts, etc. When dried these little blocks have the consistency of soft candy, and they are packed in fancy boxes like prunes. France consumes and exports an enormous quantity of this apricot candy, and it struck me that in California, where apricots are so plenty that people do not know what to do with them, some of our enterprising people could turn this immense waste material into this delicious candy, which, I am satisfied, would take well with the American people.

But apricot candy is far from being the only use which the apricot could be put to, for there is no fruit that can be turned into so many different forms as the apricot. The French have about 15 different ways of preparing the apricot.

First, when perfectly green and small, it is pickled; and the thinning out of trees too much loaded cannot but help the remaining fruit.

In Bordeaux, apricots are prepared in a crystallized state in syrup and apricot juice, and put up in boxes under the name of "abricot au sirop," of which vast quantities are exported from that industrious city. There are also apricot jam, apricot jelly, apricot preserve, made both with green and ripe apricots, apricots preserved in brandy, in syrup, dried apricots, canned apricots, apricot sauce or cider and a number of other ways of preparing the apricot, and all very "Frenchy" in their very preparation.

Thus you will see to how many good uses this pretty fruit can be put. Let some enterprising confectioners start in an apricot center an apricot confectionery, where apricot paste or candy, apricot jam, crystallized apricots, etc., would be prepared, and I predict that much money could be made in that way, and a new impetus given to apricot-growing in this State.

In Turkestan, Central Asia, the peasants dry the apricot in the sun and on the roofs of their habitations, and make with it in its dried state a kind of mush or soup.

In Paris, cheap restaurants serve on the table of their customers stewed apricots, or rather, under that name, pumpkin so skillfully prepared that some people cannot tell the difference; and yet the Capital of France swallows every year over 12,000,000 pounds of apricots.

FELIX GILLET.

Nevada City, Cal., Sept. 24, 1887.

TO PRESERVE ROPES FROM DECAY.—It is said that ropes used for scaffolding purposes, especially in localities where the atmosphere is apt to destroy hemp, should be dipped when dry into a vat containing 20 grains of sulphate of copper per niter of water, and kept in this solution about four days. The sulphate of copper absorbed will, it is believed, preserve them from attacks of parasites and rot.

ABOUT A HUNDRED men are engaged in enlarging the Bear River ditch. In a few weeks Placer county will have all the water necessary for irrigation purpose.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

The State Grange.

The California State Grange, P. of H., met at Santa Rosa, Tuesday morning, Oct. 4th, at 10 o'clock. Hahman hall had been handsomely decorated for the occasion. The Grange was opened in due form by Worthy Master William Johnston. Twenty-one Granges were represented, and 216 fourth degree members answered at roll-call. Committees were appointed as follows:

Credentials—A. T. Dewey, G. W. Hancock, V. W. Still, A. P. Merritt and A. P. Roach.
Order of Business—Amos Adams, B. F. Frisbie and A. L. Chandler.

California Patron—George P. Loucks, Amos Adams, W. W. Greer, C. A. Hall, J. Strentzel, S. T. Coulter, O. Dennis and Mrs. S. J. Cross.
Press Reports—Secretary J. Chester and H. G. Keessing.

Assistant Steward E. W. Davis felicitously welcomed the delegates to the hospitalities of Santa Rosa. Judge Blackwood offered a resolution that quarterly dues from subordinate lodges to the State Grange be increased from 10 to 20 cents for each member of a Subordinate Grange in good standing. Referred to Committee on Resolutions.

The following resolution was introduced by A. P. Roach of Watsonville:

WHEREAS, Taxation without representation is unjust, unfair and unworthy of a liberty-loving people, and our law prohibits women from voting, thereby denying them the God-given right of saying how they shall be governed; and, whereas, our Government affairs have been shamefully corrupt through the administration of man alone; therefore, be it

Resolved, That women have the same natural right to vote as men; that through their inability to vote, our politics lose the only natural factor by which it can be kept pure; that we should no longer withhold a right from our mothers, wives and daughters that we grant to aliens of nearly all nations; that our laws should be so amended as to allow all Americans, regardless of sex, the same human rights.

Referred to the Committee on Resolutions.

Worthy Master Johnston delivered his annual address, as follows:

Officers and Members of the State Grange of California:

In compliance with the requirements of the fundamental law of our Order, we are convened for the fifteenth time in annual session. The events of another year have passed into history—the books are closed—our year's work is finished, and we have come together to give an account of our stewardship. The year just passed is one of unusual prosperity. The health of our people has been unusually good. All the avenues of trade have been crowded with business—plenty of labor for the laborer at remunerative wages—plenty of food and clothing at reasonable prices.

Our Shops Are Overrun With Work.

Our crops are abundant all over our Golden State—so much so that the carrying trade is tasked to its utmost capacity in forwarding our produce to market; and although the prices of some articles have ruled low at times, yet, take the season through, the tillers of the soil have been fairly remunerated for the year's work. Then let us, as a fitting preparation for our duties, render our homage of praise, adoration and thanksgiving to Him who doeth all things well and has crowned the year with His goodness.

The Grange presents to the agricultural interests an organization of both State and National character, and is the only strictly farmers' organization through which the wants of the humble tillers of the soil are daily brought before the law-making power of the State and nation. At present it is doubtless clear to every reflecting mind that no great object, either of State or general interest to our people, can be accomplished by single individual enterprise or effort. All branches of business enterprises and occupations have fully awakened to the importance of

Organization for the Better Protection

And advancement of their respective interests. Farming is a *business enterprise* and requires co-operation. It is a *profession*, and requires as much study, talent and training to secure success as is required to succeed in any of the so-called learned professions. The really skillful and successful farmer nowadays must be a thoroughly wideawake business man, as well as a thorough scientist. He must be able to accommodate all his operations in the soil to the favorable conditions of nature, or to regulate and control nature's agents to correspond with his operations. It will no longer do to follow in the old, worn-out grooves of his fathers, unless those grooves are proved by science and enlightened practice to be in the right direction.

Now it is unnecessarily tedious and laborious to climb this scientific agricultural hill of progress alone, but by

Organization and Co-operation

We can mount the hill of progress together very much more easily than we can single-handed and alone. No man can make farming pay who does not in every respect keep up with the times—who does not attend strictly and punctually to his business, and take advantage of all the best modes of the cultivation of the

soil, planting, harvesting and marketing crops—who does not secure the best labor-saving machinery and keep it in the best of repair while in use—who does not obtain and keep good stock to do the work on the farm as well as for breeding purposes—who does not secure and keep good and reliable work hands with skill and ability and will to do his work in proper time and in a proper manner. And in order to be prepared to take advantage of his circumstances, he must co-operate with his fellow-tillers of the soil, not only in muscle and dollars but in ideas as well.

The past year is replete with success to our Order. Unusual activity has been displayed by our membership. More new members have been enrolled,

New Granges Established.

And dormant organizations revived, than during the same length of time for several years past. It is a pleasing duty to report the Order throughout the State in a prosperous and healthy condition. The very encouraging outlook just referred to is, no doubt, largely due to the able corps of deputies in the field during the year. It has afforded us much pleasure to meet our people in different portions of the State and become better acquainted with the Patrons throughout the State. In response to many urgent appeals for our services we have traveled and delivered numerous lectures in the interests of our noble Order, and on every occasion we received a cordial reception and evidence of appreciation. We exceedingly regret that private business prevented us from responding to many other demands for our services, which, under the circumstances, was impossible.

One of the grandest things the Grange is doing for the tillers of the soil in the way of education is teaching our young men and women to

Think for Themselves.

Not only in the study or library, but upon their feet. They are learning to stand upon the rostrum and tell what they know as well as any other class of young men and young women, no matter what their advantages have been. It has been one of the leading objects of the Grange to put in operation a system of education by which the farmers would eventually strike out from the old paths where they have been so long journeying, and place themselves on a higher plane of usefulness. Through this system we have been enabled to make some progress. Already we are realizing the importance of more information upon the great topics of the day in order that we may be better prepared to meet the issues of the times. Already we are standing in political bodies demanding and receiving recognition. Already we are sending representatives of our interests to

State and National Legislatures.

Who are demanding and receiving recognition in behalf of the interests of the tillers of the soil; and although we have not made as much progress in that direction as we should have done, nor as much as we expected to do, yet we have made a great advance over what we could have done without the Grange, and whenever we prepare our members to fill the important positions of honor and trust, and are willing to stand together and say, "These men are honest and capable, and we desire that they shall represent us in the legislative halls of the State or nation," we have the power to place them there if we are united and insist upon our rights.

The Grange found the tillers of the soil in an isolated condition, living too much alone, thereby increasing their selfishness and strengthening their prejudices. It persuaded them to give up *self* and

Live for Others.

And avail themselves of the power of the co-operation of a combined brotherhood. The Grange offers the farmers of the United States a means of combination of harmony of action such as they have never before possessed. It offers them the means of expressing their views and wishes as a body, and of enforcing them. Its objects and mode of accomplishing them are distinctly stated, and are such as to commend themselves to every member of the Order. An opportunity is afforded each member to give expression to his views, and the general discussion which follows such expression subjects the ideas advanced to a test which proves either their excellence or their fallacy.

The Grange is not a political organization, but it strives to educate men and women to think for themselves, and not to follow the dictates of party leaders and packed caucuses unless their own judgment approves. The Order seeks no affiliation with either or any of the political parties of the present day. It has nothing to do with what is called party politics. It is devoted to

The Interests of the Farmers

And leaves political questions to its individual members respecting every man's right of opinion and action in political matters. Just now the influence of the Grange simply loosens the bands that bind men to the old parties and makes them feel free to choose their own places. This at least places the balance of power in the hands of the Patrons of Husbandry, and if they will be true to their own interests and see to it that only men who are tried and true receive the support of the farmers, then the Grange will have accomplished one of its missions.

The farmers of the United States hold in their grasp a vast power, and they are begin-

ning to see that they must use it for their own protection. We think that we are warranted in asserting that fully one-half of the entire voting population of the Republic are engaged in agricultural pursuits. We have no statistics since 1880 from which to form a definite conclusion, yet we are sure we are very near the actual truth in placing the voting strength of the farming classes at one-half of that of the entire country. Now, if this be true, it needs no argument to prove to the farmers of this country that

They Have the Power.

And it is a duty they owe to themselves and to posterity to remedy the grievances of which they so justly complain. One-half of the voters of the United States, united in a common cause and seeking the triumph of a common principle, are capable of accomplishing anything that is just and right; but they must be united. There must be no divisions among them, no quarreling over petty issues. The great object for which we strive must be first achieved and minor differences can be settled afterward. State and National legislation can be so thoroughly controlled by this powerful army of voters that no unjust or burdensome laws can be enacted. The repeal of those of which they complain can be effected, and the passage of such laws as are necessary to the inauguration of an era of justice and equality secured. The founders of our noble Order did not do all they intended to be done, but they did more than any other set of men ever have done to advance the interests of the tillers of the soil and make it easier for us to fulfill the great purpose.

If we want to do a great and good thing and get out of the old grooves and ruts, the sooner we set about it the better for us and for those who follow after us. I know of no grand invention, no noble reform, no peerless enterprise, no superb stroke of work of any sort, which was not started from a spark

In the Fervent Fires of Youth.

Once well past that youth and you may dream of success, but the chances are that if you do not strike out in youth you will not reach the degree of success which you would have done had you improved your early opportunities. If we want to make our dream of a wider, better and more useful life of any kind come true, we must push out and do while the glow of it is in the heart, which is more than half the battle. I think the whole wealth of enterprise in all directions lies within the line of our earlier manhood and womanhood. There lies our chance of rising from the collective mediocrity into some sort of clear and clean nobility. There are very few of us indeed who do not find ourselves running in rather a narrow groove when we begin to think and look out for ourselves, and a good many take to the groove kindly and never want to get out of it. But there are a great many, again, who cannot quite believe what they are told or do as they are bidden. There is the stuff in them for something better than that, and so the idea dawns on them of leaving the old beaten paths, and if they ever do it to any sure purpose, they will start in youth.

Is there a divine ambition pulsing in the heart of your youth to do a grand work of any kind?

Push Out and Push On.

Would you be a leader and not a mere follower in a wider and better life? Now is the time. Wait a few years more and you will lose your chance and take your place with those who are on the down grade and cannot reach the brake. In this connection, and among the fruits of the Grange, I call your attention to the very elegant response to the intellectual address of welcome we have listened to to-day. While the young Brother did nobly, he is only one, picked up at random out of a hundred young gentlemen and young ladies in Sacramento county, who are his equals in every respect, and who, like him, are largely indebted to the Grange for their ability to properly clothe their ideas with words upon the rostrum. I do not wish to be understood of boasting of Sacramento county, for other counties are doing equally well, but to show what the Grange is doing for the young people as well as those of mature years. And while I point with pride to this, as grand a body of Past Masters and Matrons as any State in the Union can produce, I feel that it is only a question of time, and very short time, too, when these silvered heads shall have laid down their implements on earth and will have rendered an account of our stewardship and left our unfinished work in the hands of young ladies and gentlemen who comprise the youth and beauty of California Patrons of Husbandry. And I feel when that time comes they will take up the work and push on with more vigor and with greater success than we have been able to do.

When I read the accounts of the hardships, privations and difficulties under which the farmers of other States and countries labor, and then turn and look at those of our own beloved State, I exclaim with L. Montgomery Mather—

"Fair California! State of golden pride!
Thy fields are ever green and wide;
Thy virgin soil, tilled by industrious hands,
Has been transformed to most productive lands,
Yielding delicious fruits and harvests prime,
Feeding both mouths of home and foreign clime.
Hillsides and valleys that were once a waste,
Producing wines of rare seductive taste.
Thy sandy beach, kissed by an ocean's spray,
Appears an Eden in thy Monterey.

"Brave Pioneers! Tribute is due to you,
Whose brains and muscles framed your State so true.

To you she is indebted more than gold;
You gave to her your youth and manhood bold.
In ripened age your recompense must be
Her onward march to meet her destiny,
And in your declining years enjoy the gains
Wrought by your life of labor and of pains.

"You men of native birth who call her 'home'
Should not remain unknown in history's tome,
Borne to the light of day with scarce a cloud,
See that your natal pride ne'er wears a shroud.
The future's zealous care falls to your lot;
Let not the sacred charge be e'er forgot.
It rests with you and with your moral force
To wisely shape and safely guide her course."

California! An Empire in territory, climate and soil. Her mountains are surpassed by none in grandeur and formation. Her valleys are equaled only by those of the Po and the Nile. Her products are equaled by none. This year we have 1,000,000 tons of wheat to sell to feed the hungry nations of the world. The vintage this year will yield at least 20,000,000 gallons of elegant wine. If the season holds out favorably for drying, we will have 20,000,000 lbs. of raisins and 10,000,000 lbs. of other dried fruit for sale. I am informed by the secretary of the California Fruit Union that there have been shipped out of Sacramento alone this year, up to Sept. 20th, 21,000,000 pounds of green deciduous fruits, besides large quantities from other points which did not come from or pass through Sacramento. This fruit brought a net price of at least two cents per pound to the grower. I believe California is entering upon a

Continuous Prosperous Decade.

think that the State will make greater progress in the next 10 years in products, population, enterprise and prosperity than she has in the 20 years last past.

California is a grand field for investment; the opportunities are unlimited, and it would be strange indeed if a country possessing all the advantages of which California is possessed did not prosper. While the products of her gold-fields have been great and have largely swelled the treasures of the world, the products of her wheatfields, orchards and vineyards are far greater, affording a more abiding wealth and promising a far more stable prosperity; and I believe the fertility of her soil is equaled only by the enterprise and intelligence of its tillers.

But while we are booming everything and everybody, I think there is great danger of overdoing in our anxiety to increase our population; we are very liable to make a mistake, or rather repeat some that have already been made in regard to immigration. We cannot have too many sober, economical, industrious people here; but we already have too many such men as those who conducted the Haymarket murders in Chicago last year. The time has come when steps should be taken to guard our shores against

Promiscuous Invasion from Europe.

As well as from China. We should protect ourselves by some passport system, so that no immigrant would be permitted to land here unless vouched for by a U. S. Consul at the port of embarkation or at some city contiguous to the district from which he comes. Doubtless some persons will contend that a system of this kind is objectionable, inasmuch as it savors of European methods of espionage. Granted that it does, so do our custom-house, our police and our quarantine establishments. If we have found it necessary to protect ourselves against imported contagion, surely we have an equal right to protect ourselves against moral contamination and against the fanatic fools who wave the red flag. We have given asylum to the oppressed of other lands, but we are under no obligations to throw open our doors to ruffians who remain alien in sentiment, advocate assassination and threaten to burn down the roofs above our heads.

We have found it necessary to resist Chinese immigration, yet the Chinaman is an inoffensive and desirable creature when compared with the bomb-throwing anarchists. If the communists want to put their principles into practice, let them go out and occupy virgin territory, such as can be found in Africa, New Guinea or South America, and

Experiment On One Another

To their heart's content. We should be more careful in selecting our agencies for promoting immigration from foreign lands. We should not beg people to come to this country, but should give them to understand that it is a favor to be allowed to come to this land of the free and the home of the brave. There should be nothing of the Know-nothingism of 30 years ago, but there should be a disposition to welcome all deserving and honest emigrants, and it should be understood that we do not propose to make this country the dumping-ground for Europe, and that we are going to be more particular in the future whom we allow to come into it.

If natural causes were left to operate alone, the immigration into the United States would be large enough, but where it is stimulated, as it is now, by steamship and railroad companies whose only aim is to get as many passengers as possible, who do not have to care for the emigrants should they become a burden on the community, as they do not bear their share of the governmental expenses, and are therefore not interested whether they are good citizens or not, under these circumstances immigration

has become a serious injury and a great danger to the country.

This question of restricted immigration will play an important part in politics in the near future, and deserves the careful study of all interested in our continued prosperity, since it is evident we can no longer safely receive this vast herd of diversified humanity, this large infusion of disreputable, undesirable hostile element who are at war with the great principles of law and social order underlying our Government. Against the further importation of these paupers, criminals, anarchists, red republicans and scoundrels, the general acum and refuse of the Old World's cesspools, we enter our most solemn protest.

Constitutional Amendments.

At the last meeting of the National Grange the following Amendments to the Constitution were adopted, and I herewith submit the same for your consideration.

Amend Article I by adding the following:

"SEC. 4.—County or Pomona Granges may be represented in State Granges under such regulations as the State Grange may provide."

SEC. 5.—The State Granges shall have authority to confer the degree of Flora on all members of the Order in good standing in their respective States, who have taken the degree of Pomona, in like manner and form, as the same is now conferred by the National Grange; and each person receiving the degree shall be entitled to a certificate of membership in the sixth degree from the National Grange, duly attested and under its seal.

SEC. 6.—The initiation fee for the sixth degree, when conferred by a State Grange, shall be \$1 for each person—one-half to be retained by the State Grange, and one-half to be paid to the National Grange.

Worthy Master Darden promulgated the following amendments to the Constitution as having been adopted by the Constitutional Majority of State Granges:

Amend Article I. District and County Granges, Fifth Degree. Strike out, in fourth line, all after the word "be," to the end of the sentence, and insert, in lieu thereof, "Recommended by the Subordinate Granges as qualified and worthy candidates for membership in the District or County Grange."

Amend Article II, Section 4—Strike out all after the word "committee," in fourth line.

Amend Article VI.—In second line from end of said Article, between the words "by members," insert the word "two."

Amend Article VIII, Section 2—Strike out all after the word "determine," in second line, from end of said section.

Amend Article IX, Section 3—Strike out, in first line, the following words: "or charters."

Amend Article IX, Section 4—Strike out, in last line of said section, the following words: "Nor more than 20 men and 20 women."

Amend Article XI, Section 1—Strike out, in second line, the word "officers," and insert "Master and Executive Committee."

Since our last annual convocation, death has again entered our ranks and, as usual, has plucked some of our choicest specimens.

Hon. D. Wyatt Aiken departed this life April 6, 1887, at his home in Bokesburg, S. C. Bro. Aiken was one of the early advocates of the Order of Patrons of Husbandry, and in his death it has lost one of the strongest pillars of its support. His voice was heard on all proper occasions in the Subordinate, State and National Grange; also in the halls of Congress, in defense of the tillers of the soil, and, although he has gone from among us, his name will live forever on the brightest pages of the history of American agriculture, and will be remembered with emotions of affection and gratitude by its devotees.

Bro. A. D. Nelson, a member of this Grange, died at his home in Butte county. He was a charter member of Evening Star Grange; he was a devoted friend and an advocate of our noble Order, and his voice was often heard in defense of its principles; but he has gone to render an account of his stewardship in the Great Grange above.

Sister S. A. Ashley, a member of this Grange, died at her home near Woodbridge, Nov. 23, 1886. Sister Ashley was a charter member of Woodbridge Grange. She was a true Patron of Husbandry, a faithful wife, an indulgent mother, a kind friend, and is mourned by all who knew her.

Patrons, I will not trespass further upon your time. My official relations as Master of the California State Grange will close during this session, and when I return to you this gavel, the beautiful symbol of authority with which you invested me two years ago, I desire sincerely to thank you for the honor and the many expressions of your fraternal courtesy and regard. The remembrance of my official labors and association with you will ever remain as one of the brightest pages of my life. The honor of presiding over such an intelligent, honorable, honest, upright and representative body as the California State Grange of Patrons of Husbandry is one of which any man may well be proud. One and all, once more I return you my heartfelt thanks for your fraternal assistance.

Wednesday Morning.

At the session of Wednesday forenoon, 5th, committees were appointed to draft resolutions of respect to the memories of D. Wyatt Aiken, A. D. Nelson, R. S. Clay and Mrs. Ashley.

The following standing committees were appointed:

Irrigation—A. P. Merritt, V. E. Bangs, T. E. Ketchum, Wm. Ogden, T. T. Hooper, Mrs. G. Wheatley, M. N. Williams and Mr. Glad-ding.

Finance—V. E. Bangs, George W. Hack, R. M. Nixon, V. W. Still and Mrs. A. T. Dewey.

Legislation—J. Capels, J. H. Gardner, N. Jones, A. L. Chandler and G. W. Hancock.

Resolutions were introduced by J. Larkey, relating to a Viticultural Commission and by A. T. Dewey concerning agricultural work by the Geological Survey. Respectively referred to Committee on Good of the Order.

The District Deputies reported for appointment were G. P. Loucks, B. F. Frisbie, J. D. Huffman, Walter Renwick and V. E. Bangs.

Amos Adams gave notice of appeal from the action of the State Grange in regard to the election of two alternates to the State Grange, when the Master of a subordinate Grange has not a wife who is eligible to be a representative.

We shall report further proceedings next week.

Immigration and Temperance.

At the General Assembly of the Knights of Labor in Minneapolis, on the 3d inst., General Master Workman Powderly addressed a crowded audience in a hall whose seating capacity is 15,000. A portion of his speech is thus reported by telegraph:

"I have been taken to task on a few things. It has been charged that I do not favor immigration. It is a mistake. I am of foreign birth myself. I have no objection to foreign immigration. I favor it. Several land-grant companies, however, have their immigrant agents, and they bring in all manner of foreigners. If one of these poor creatures raises his hand, not against the laws (for he knows none), but against what he sees just before him, he is called an anarchist and is punished, while the men who loaded these poor creatures on this country go scot free. [Tremendous applause.] I hate anarchists and anarchy, but how can the child reared in poverty, squalor, ignorance and vice grow up to respect the institutions of his country? I say stop the agent of the steamship company. Take home the agent of the land company. Stop importing foreign paupers. Let only those come to our free America who come of their own free will to make their homes here. Is that saying anything against a foreigner? [Cries "No, no, no!"] This is why I am called a crank on the immigration question.

"I am also called a crank on the temperance question. I may be a crank on this question, but I am not ashamed to say that I would far rather see a man a sober man than a drunkard. There are those who have threatened to leave the Order because of my position on this question. To all such, I say go. I will trust the faith of this nation with sober men and women, and I will never take back one word of what I have said on the temperance question, so help me God."

In the death of Bro. D. L. Williamson, American River Grange mourns the loss of an earnest, thorough and faithful member.

Glimpses at Stockton Fair.

[Written for the RURAL PRESS by Mrs. W. D. A.]

On the 26th of September the bell in the fine, new pavilion proclaimed the opening of the 29th annual fair of the San Joaquin Valley Agricultural Society, comprising nine counties.

The First Artillery Band of Sacramento gave a grand evening concert and furnished music for the 12 days.

The crowd paid quiet attention and frequent applause Thursday evening to the address by J. P. Irish, remarkable for brevity and sense, and to the offhand speech of Gov. Waterman, with its prophecy that in ten years "we'll be selling our land with its rare climate by the foot instead of acre." Friday evening "The Floral March," conducted by Miss Bates of S. F., drew 10,000 spectators. One hundred and eighty young ladies in Ocan webs of ecru, in gauzy white, that graced rounded limbs and drooped from bunches of flowers, fruit, grain and nuts, marched twice through the main floor. One thousand eight hundred dollars was taken that day and evening. Wreaths, chaplets, clusters, a quaint cabbage-leaf bonnet set off youthful beauty in Grecian, artistic costume. Saturday evening Mrs. Dohrman's kindergarten school went through exercises pleasing to child-lovers.

At the main entrance one faced an array of hardware. John Jackson showed pumps of all sizes, gasoline stoves, etc.; Jackson & Earle, ranges, stoves, lamps and cutlery; J. E. Ruggles, an old-style printing press, on which he printed odd cards. To the left, Bowdoin's kitchen cabinets, smallest \$10, largest \$14. They hold so much and look so nice! Near is an admirable ice-chest for \$21. All these have sockets around the legs to hold water or anti-rust fluids. Mr. Bowdoin has also the "steamless, odorless, non-boil-over kettle," S. P. Millard agent, Stockton. Boiling and steaming is done at one time. A raised cover, water joint and a flue in the side, which carries sniff of cabbage and snuff of onion back into the stove, completes this boon to the housewife.

Austin Bros. had the finest home exhibit in the building—in a prominent and central position—an hexagonal figure or temple 26 feet in height, so exquisite in its color-tone, so unique

its design, that it shows the master-power of an artist. Hardware is made to yield itself to the necessities of mechanical drawing. The several devices for the firm-name would do credit to a professional designer.

Stockton Mail exhibited bookbinding, paper ruling and perforating machines—excellent in their line.

H. G. Boieselier had a pyramid of yeast powders and packages to give the body guessing the number in the pyramid. The "Blue-Gum Bitters" exhibit kept malaria out of the hall.

P. Musto showed bottled goods, sauces, wines, macaroni, chinaware and elegant dinner sets. H. H. Moore & Son, druggists' goods; H. H. horse liniment and beautiful wood-moldings and mantels by P. A. Buel & Co., also "Hill's" patent inside blind. Williams & Moore had a fine exhibit of soap and Cashmere goat mats. P. A. Buel, fine planing-mill goods. Kullman & Wagner, Pacific Tannery (largest in the State) made a handsome show of leather, harness, tanned skins and robes. Their posts were covered with bark, bright with green moss. A box of mountain quail twit near. C. V. Thompson filled part of the northeast conservatory with fruit and vegetables almost wholly from this county. Ashelving of canned fruit was flanked by immense squashes, melons, sweet and Irish potatoes, egg plants, etc., limbs of orange trees, with oranges of last and this year's growth, large and sweet; branches of raspberries and blackberries, strawberries and luscious peaches showed how late and early our soil yields (chestnuts and other nuts). A beautiful collection of non-irrigated fruit by Jos. Putnam, Clements Station, completed this splendid collection. A lovely lot of jellies graced this show.

The rest of the annex was filled by E. C. Clowes, "Stockton Nursery," with the now-popular olive trees, a large umbrella tree in the center, palms in the background, ferns and rare plants around it, elegant shrubs, specimens of dried fruit from the Zimmerman drier and fruit in glass; lettering in flowers and a beautiful sign, wrought by his aged mother, in evergreen; Mrs. Jos. Hale, tasteful pyramid of canned and dried fruit, jellies, etc.; U. S. Brewery, bottled goods surmounted by a big bottle; Southworth & Grattan, a four-columned pyramid of canned fruit; large jars fruit in spirits and fine disposal of grocery goods from their popular store. The Buhach Co. handsomely displayed their powder, dried fruit and melons from Merced; Moore & Smith showed plank-sawing—Humboldt plank, 5 feet wide and 20 feet long; Mrs. J. C. Reid, notable for jellies, canned fruit, etc., had a beautiful silk exhibit which, by mistake, was not on the list in Sacramento, but was of much interest, as are her jellies here; W. B. West had an unequalled table of grapes, nuts, fruit and flowers; S. March showed fine apples, fruit and vegetables and a fine tomato tree.

San Joaquin County.—Letters of wheat invite to all of the northeast side, where everything growing in the county was collected. Magnificent is the "Harvester," a picture, in colored and shaded club wheat, with a little barley and oats, eight feet ten inches long and seven feet high, sketched by G. D. Freeman, who directed the Stockton ladies in the work, on a wire screen 14x24 feet, through which the wheat stalks were drawn till the first mesh caught. To the right grandly rose 45 ten-inch bundles with corresponding sack and box. Under the harvester was another pile; most of it gathered by S. C. Waters and J. D. Huffman, of the committee; some of it bought and put into the neatest of bundles by Huffman, superintendent of the exhibit, wearing premium blue, won from ten other counties. S. Thornton, New Hope, showed up the tobacco industry, two crops in the year. Mrs. Locket, Brighton, had a fine show of dried fruit in variety, crowned with premium at the State Fair.

Mrs. Hill, Mokelumne, raiser of first buhach in California, shows plant and powder, fine fruit and vegetables. Geo. Wolsey of Q ranch, Amador, is welcomed for his fine green and dried fruit and other growths. Mrs. Miller, Calaveras River, lovely fruit, vegetables, flowers. Mrs. C. C. Castle, table vegetables and fruit. Geo. West, graded shelves, filled with choice wines and brandies from the famous El Pinal vineyard. John Elliott had a large and magnificent shelving of fruit, vegetables and nuts, praised by all. Mrs. R. S. Bates, in the S. E. conservatory, had lovely plants, flowers, tomatoes. Dickson and Woodhull had a fine marble exhibit. The unique Live Oak Log Cabin of watermelons, furnished by Mr. Childs, was a house 14 by 16 feet, and the best showing of the Lodi industry that brings \$80,000 to that town. Her ladies evinced great taste in its make-up of lace, moss from the live oaks, crowned with palms. Next came a "realtree," made of bark and branches of live oak, from which peered two squirrels and an owl; and here a walk led up a grassy slope to a rustic bridge, over a stream where lilies and grasses bent. In the shrubbery two geese were half hidden. At the side rested a ladder of red geranium and ivy. To the left a hammock swung, near where a bear emerged. The quiet of nature pleased every beholder of the sylvan scene, carried by the Floral Committee with Miss West at its head.

On the northwest corner a fine grain exhibit from the tule lands of New Hope was made by R. C. Sargent and others.

The west wing was filled by the large exhibit of H. C. Shaw in hardware and a grand lot of implements; and by M. P. Henderson and

Wm. P. Miller, with beautiful buggies, riages and buses. This is a manufacturing city. Next the Oregon Fruit Dryer, \$125, complete, carrying five first premiums, and drying from 300 lbs. to 3 tons a day. First prize at the State Fair, 1887, for unbleached fruit. H. S. Jory, who also shows pie-holders.

A. Bink had a patent buggy spring. Fine! B. S. Hite's patent cook-stove, fender and fruit evaporator, shuts heat and odors from the room. A. P. Day showed roller-bottom wash-machine, heater underneath, ironing-board—all \$30. A rotary dasher churn for a small family proved how easily butter can be made. The Del Monte Milling Co. had a fine show of flour and gasoline stoves. Sperry's mills, a pagoda made of choice brands. Inside on shelves, jars of grain, screenings, etc. Crown mills had a handsome pyramid of their excellent brands with a broad, gilded crown at the top.

F. S. Clark, San Francisco, beautiful folding furniture and iron bedsteads. J. T. Mills, ranges, tinware. J. Gross drew all the children by his candy factory in operation. The Examiner had elegantly designed samples, and near the entrance were dispensed samples of our own RURAL and the Illustrated Weekly. The new Decker washer, by E. W. Melvin, is sensible in make and liked by all who have tried it.

I am indebted to Mr. Jones' politeness for the following notes on

Machinery Hall.

In the machinery department the first thing to attract attention was the exhibit of W. T. Garrett & Co. of San Francisco, manufacturers of Hooker's direct acting steam pump, Richards' patent hydraulic machinery for irrigation and reclamation. Fred Ruhl of Stockton had in operation a large number of pumps of his own invention. Root, Neilson & Co. of Sacramento exhibited the College City pump. The endless chain sickle for use on harvesters, headers and reapers, manufactured by Ashley Bros. & Clark of Stockton, attracted a crowd of admirers. The Cal. Fence Manufacturing Co. had one of their machines in operation.

H. C. Shaw made an extensive display of gang, sulky and single plows and a general variety of agricultural implements.

J. H. Condit & Co. also had a fine exhibit of plows, cultivators and farmers' tools. The Grangers' Union occupied a large space with their exhibit of carriages, reapers, mowers and other farming implements. The Lubin pulverizer and clod crusher was also on exhibition. John Christian of San Jose showed thrasher teeth of his own manufacture.

The Stockton Combined Harvester and Agricultural Works make a fine display of grain-cleaners moved both by hand and by power. The Angle Sieve Cleaner and Separator is rightly named "The Champion Grain Cleaner and Separator of the World." All who see it work agree that it is the "boss." They also have in operation their improved cleaner for Combined Harvester. The Miller's Lightning Hay Press occupied a prominent place. It is becoming a great favorite on this coast. All the above won the first premium at the late State Fair.

† Daniel Best of San Leandro showed two fanning mills and one attachment for harvester and thrasher.

L. A. Lasher of Stockton had on exhibition the simple device which he calls "The Golden Age Trace and Whiffletree Guard" for the protection of trees and vines.

At the Park.

The six days of parade, racing, ladies riding and antics and races of the 100 Pintos with their chief, drew great crowds, as did the exhibits of harvesters.

A fine sale of Herefords was made. Four head to Senator Hearst, two-year-old cow, \$120, cow, \$140, yearling heifer, \$130, Bountty, a calf, \$150; to Mr. Burke a calf, \$85, and to Andrew Smith, calf, \$75, and cow, \$155.

Report of the State Board of Horticulture.

The biennial report of the State Board of Horticulture for 1885-6, which has just been issued because of delays in the State printing office, is the largest publication ever made in the interest of California horticulture. It includes upward of 580 pages, and contains the official statements of the transactions of the State Board, the accounts of expenditures under its authority and other official memoranda. Besides this, it has the stenographic report of the Sixth Annual Convention of Fruit-Growers held in Sacramento and of the seventh, held in Riverside. These two reports are of great value. There is also a condensed report of the Los Angeles Convention of 1885. Another leading feature is the report of State Inspector W. G. Klee of his work done during the year 1886, comprising his observations in various parts of the State. Mr. Klee has also a paper on the olive growing, noting the growth and production of the tree in different counties. This, together with President Elwood Cooper's essay, read at the Sacramento Convention, and Mr. Pohndorff's essay on varieties, makes the report especially interesting on the olive. The essays on other fruits read at the conventions, the full discussion on injurious insects and their repression, the colored plates of some of the most injurious scale insects and other matters make the report very rich in information on California fruit-growing. We are glad that a large edition has been published. Copies can be had by applying to B. M. Lelong, Sec. State Board of Horticulture, 220 Sutter street, S. F.



The Bravest Battle.

The bravest battle that ever was fought,
Shall I tell you where and when?
On the maps of the world you will find it not;
'Twas fought by the mothers of men.

Nay, not with cannon of battle shot,
With sword, or nobler pen;
Nay, not with eloquent word or thought
From mouths of wonderful men;

But deep in a walled-up woman's heart,
Of woman that would not yield,
But bravely, silently, bore her part—
Lo, there is that battlefield!

No marshaling troop, no bivouac song,
No banner to gleam and wave;
But, oh, these battles! they last so long—
From babyhood to the grave.

—Joaquin Miller.

The Feast of the Dragon.

San Francisco had the pleasure, on the 23d and 24th of September last, to see a really grand procession, gotten up entirely by our Chinese residents. It was large, expensive, gorgeous and barbarous to the last degree, except that no special cruelty had any part therein. It was intended as an occasion of joy and feasting.

The legend of the occasion was that the great god of China, represented by the material form of a monster dragon, and seen on the national standard, is weary of his confinement in the temple and must have a view of his people, and a temporary place of residence for one night. On Friday he went on his excursion, and on Saturday returned home for duty till next year.

The dragon, with a monstrous head, had the body and tail of a snake. It was at least 65 feet long, made up of wood, paper, brass, spangles and silk of the most gaudy colors, and supported all along by men who were supposed to be out of sight, but took no pains to support that pleasant illusion.

This leading dragon was followed and supported by another, no less monstrous in appearance, but with a much shorter body. This was the offset to the other. While the first was kind, this was all fury and destruction. A stout warrior, well armed, was ever maintained at its head, to restrain it from wholesale mischief. His prowess, however, always proved equal to the occasion, and no reckless spectator was devoured.

Otherwise the procession had many of the features of our own. There were soldiers, princes, nobles, priests and fairies. Several lesser divinities were carried in state. Banners abounded, and Chinese bands of what they called music. Some illustrations of these figures would perhaps be very interesting to those of our readers who did not see "the elephant" itself.

To the casual San Franciscan it was all very fine, but very foolish, though there were those who were so intensely anti-celestial as to put these bands in another shape, and pronounce it all very foolish and not very fine. It was indeed the barbarism of early dawn of invention before the severest critics of a matured civilization. California is solid, practical and real, and takes little delight in tinsel gewgaws. It is not capable of being horrified by monsters of paint and paper. Herein our Chinese entertainers were greatly chagrined at the utter failure of all their ef-

forts to inspire fear. When the monsters opened their huge jaws, even our women were more intent on discerning some new kind of trimming for a bonnet than paralyzed by that fierce cavern. To the ordinary observer it was just a thing of beauty, that like

germ and recognized it at once. China is at the head of the stream of human civilization. None of these chattels have floated up-stream to her. Wherever there is a faint likeness she was the teacher. The fable of the wolf and the lamb illustrates

borhood. It will read thus: New York, London, Paris, Rome, Greece, Persia, India and China. China was the first to have a great monarchy that we know anything about. It was the first to have a church. In the Court there, the fashion of dress the attendant halberdiers, the priests, the form of obeisance before the throne, were all well settled long before our modern civilization had its dawn. The Emperor was absolute and the obeisance uprofond. The same forms found their way westward. They were modified by a more free and sturdy race. In China they break their noses on the floor. In India they do little less. In Persia the form tapers a little. The manly Greek went on both knees. The Roman much the same. In France and England one knee filled the bill. In Washington a respectful bow is all that the sovereign citizen deigns to give the President. But it is all, the whole court, its dress, appurtenances and manners, almost a servile copy of the Chinese.

In church matters the likeness is even more striking. The priests in that procession had imitation metallic breast-plates and flowing somber robes. In the Josh-house lights and incense burn perpetually. The form of worship is the same, to kneel, to bow, to join the hands with the tips of the fingers up, the images, the altars, it is almost an exact copy. Our Protestant churches have stepped well away from the ancient Chinese forms, but still the germs are there.

The tinkling cymbal, the conch-shell and the ram's-horn by which the walls of Jericho were blown down were in that procession. And the celestial musician blew as though he thought our San Francisco might yield in the same way.

Our old men and women will remember the time when the morning milkman came with his yoke over his shoulder and his two buckets of milk. The original type was in that procession; not copied from ours, but on a Chinese pattern, manifestly original with them.

Those who have seen the procession of the Lord Mayor of London with the figures of Gog and Magog, in a moment recognized this Chinese procession as its original. Gog is the dragon and Magog the lesser and evil spirit that is fought at every step by an intrepid warrior.

Nay, St. George himself, the patron saint of But I-am-see is better, greater, and will in the end be greatest."

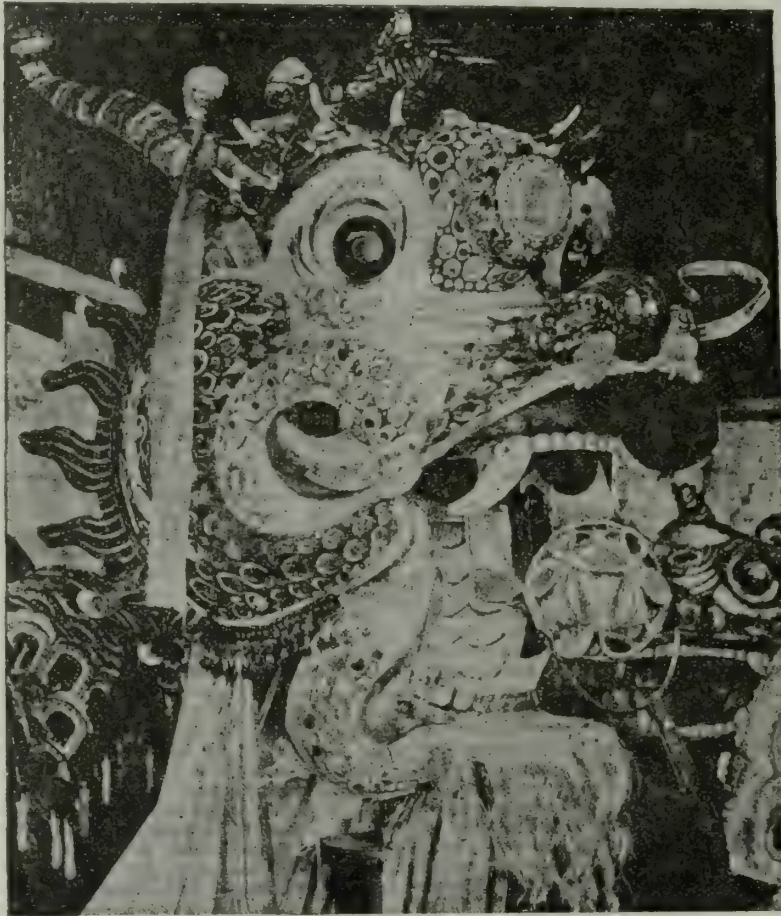
England, is only this same warrior, mounted on a good English steed, who kills the dragon outright.

An aged Chinaman, after all had gone by, said to us: "Plenty fool Chinaman! China got two kind of people. One kind fight that dragon of paper and think he all right. He got no sense. The other he fight the dragon of sin and injustice. He plenty understand. The first he follow Con-fut-see. He talk riddle, paradox, metaphor. He plenty fooler all men. He say, 'You no think! You workee and obey.' This good for all poor man, make him easy to rule."

"The other, he follow I-am-see. He speak fact, no more. He teach men to govern. 'I-am,' that mean what is, what is true, what is a fact. China wise man follow I-am. See, is truth. I-am-see, means I am truth. Con-fut-see, means to mix truth with figures and fables. Con-fut-see, (you call him Confucius,) said the people were foolish and must not be made wise. The Emperor like him, and call him great man, and the coolie worship

him. So there is wisdom in China. There are those who regard these mummeries as sacred things, and there are others who see them as they are. We, who have sipped at all these fountains of progress, of Persia, Greece, Rome, England and our Eastern States, smile at the foibles of old China, though still some dregs remain in our own customs.

We are destined to carry the flag of progress across the Pacific, and enlist the cradle of civilization in the march. LUKE.



THE DRAGON'S HEAD.



GREAT CHINESE DRAGON PROCESSION IN HONOR OF TAN WONG.

Bradley & Rulofson Photo.

a summer flower, fades and is gone forever. But to the scholar, the historian, the antiquary and the naturalist, there was more in this procession than what presented itself to the casual observer. It was a peep at the cradle of human society. These unprogressive children of Asia, in their simplicity, paraded before us many of the germs of our greatest institutions. We have modified them, strained them a little to our own taste and purpose, but in that procession we saw the original

this most beautifully. The lamb, drinking below, could not soil the stream above. So the nations who come after China could not have given her these fables. She gave them to those down-stream. She was the teacher. Whatever was in these mummeries that is like unto our own, we got from her. We find their origin in this procession.

Let San Francisco trace its pedigree as a ty back through the ages, and it will be found to settle back to China or to that neigh-

Autumn in the Sierras.

(Written for the RURAL PRESS by MRS. RANCHER.)

Here in the foothills above Sonora we have had our first storm for the season. All day Wednesday, the 21st, the clouds began to gather, and toward evening a slight shower fell. But it was not until Thursday morning at about 2 o'clock that the elements burst forth in their grandeur. From that time until almost sunrise flash after flash of lightning lit up the darkness, and the thunder reverberated through the mountains, while the rain fell in a heavy downpour.

This latter continued at times throughout the day, settling the dust and cleansing all nature in a delightfully refreshing manner. The amount of rain that fell here six miles above Sonora I have heard estimated at about one inch. From an eye-witness I heard a thrilling account of the same storm at the Buchanan mine, which is on the Tuolumne river, about 30 miles above Sonora. "The canyon where the mine is situated," said the narrator, "is very steep—1000 feet to the river—while the office is high up on the mountain and overlooking the gorge. The trees are immense here, and even in daylight the canyon is shadowy and dark. I had been up with the sick man until after 2, and had lain down for a little rest, when I was awakened by the terrific roar of the thunder. Looking down into the canyon, such a majestic scene I had never beheld. The entire ravine was lighted up as with the brightness of noonday. Here, where even the sun never dispels the darkness, shadows were entirely gone, and every twig and little rock was brought out in bright relief. And the thunder! It was as if the mountains were being torn asunder."

A feeling of sorrow has been cast over this community by the sudden death of your long-time correspondent, Mr. John Taylor of Mount Pleasant; and all hearts go out in sympathy to the daughters, on whom this second bereavement falls so soon after the death of their mother. One cannot but heed the lesson—"Be ye also ready."

As we write, the brightest of fall days is smiling upon us. The sun has triumphed once more, and a clear sky without cloud or fleck, such as only California gives, assures us that the melancholy days in our favored clime are indeed few in number.

Mayer's Ranch, near Sonora.

Well-Known Women.

QUEEN VICTORIA is writing another book, but what about nobody knows.

THE phenomenal violin player of Canada is Miss Edith Littlehale of Hampton, Ont.

MISS MARCIA MARVIN, daughter of the late Bishop E. M. Marvin, has been appointed matron in the Mission school at Piracicaba, Brazil.

MRS. EDITH KINGDON-GOULD cut up a \$10,000 point d'Alencon flounce that once belonged to the Empress Eugenie, to trim her baby's clothes.

MRS. JAMES G. BLAINE, JR., is one of the most enthusiastic of photographic amateurs, and her flower pictures form a collection worth examining.

SIGNORA VERDI, wife of the author of *Il Trovatore*, is a very charitable woman. She is now putting up a splendid hospital at Busseto, which she and Verdi will endow.

MISS MARY GRANT, an English sculptor of considerable reputation, and a niece of a former president of the Royal Academy, is on a visit to this country, and is now in Boston. She has made a bust of Queen Victoria.

MISS CELESTE STAUFFER of New Orleans is one of the leaders of out-of-door sports at Newport. Her taste in dress is superb, and Samuel Tilden left her enough money to enable her to gratify her tastes in any direction.

Lincoln as a Dry Goods Clerk.

When Abraham Lincoln was clerk in a dry goods store he sold a woman a little bill of goods, amounting in value by the reckoning to \$2.06 $\frac{1}{4}$. He received the money and the woman went away. On adding the items of the bill again, to make himself sure of correctness, he found that he had taken 6 $\frac{1}{4}$ cents too much. It was night, but closing and locking the store, he started out on foot, a distance of two or three miles, for the house of his defrauded customer, and delivering over to her the sum whose possession had so much troubled him, went home satisfied. This is a very humble incident, but it illustrates the man's perfect conscientiousness, his sensitive honesty, better perhaps than if it had been of greater moment. —*Toledo Blade*.

YOUNG FOLKS' COLUMN.

Miss Acton's Plan.

Hettie Hawley sat in the deep recess of the dining-room window. The snow was falling silently and swiftly; but Hettie was not thinking of the cold outside or the warmth or comfort within. To judge by her tear-stained face and the occasional quiver of her under lip, her thoughts must have been anything but pleasant; still, a close observer might have seen that it was not ill temper or sulkeness that caused her to look so very doleful in this the third week of her Christmas holidays.

"I can't help it," she said aloud; "I've tried and tried till I am sick of trying, and it's all no use."

"Tried what, dear?" said the kind, pleasant voice of a young lady who had entered the room unnoticed by Hettie.

"O Miss Acton!" cried the latter, springing to her feet in visible confusion, "I did not know you were here."

"And why do I find you alone, Hettie?" asked Miss Acton, when she had kissed her young friend, taking no notice of the traces of her grief.

Hettie colored and turned her head away a little; then she said abruptly:

"Mamma won't let me go out with the others because Jack and I quarreled. Of course he came off conqueror as usual. O Miss Acton! I really believe mamma hates me, I do, indeed."

"Hettie, my dear, hush!" said Miss Acton, seating herself in an easy-chair by the fire and drawing the little girl to a seat at her feet. "I am sure you do not know what you are saying or you would not speak of your good, kind mother in that way. But tell me all your trouble; I may be able to help you."

"No, Miss Acton," replied Hettie sadly, "I cannot help myself; so I am sure no one can help me. It's all my own fault; but oh, I am so unhappy!"

"Poor little girl!" said Miss Acton, kindly; "tell me all about it, and how it is your fault."

"Why, it is my own bad temper that makes everybody hate me," said Hettie tearfully; "and they do all dislike me, I know. Why, only last night when Lottie was bringing her doll to show me the new dress nurse had made for it, Eva called her back, saying: 'Hettie won't care for your doll, Lot, she's such an old crosspatch;' so Lottie went back, and I was too angry to say anything."

"And don't you think, dear," asked Miss Acton, "that you had done something to cause Eva to call you a crosspatch?"

"Oh, I dare say I had," replied Hettie, slowly; "but because I had scolded Eva for drawing on my exercise book, it was no reason she should try to make Lottie dislike me."

"You said before that it was all your own fault, but now you are blaming others," replied Miss Acton, gravely.

"Well," answered Hettie, "it is hard to think I am so bad when I really have tried to be better. One day I did everything I was asked, and took no notice when Jack and Bertie teased me and tried to make me answer back; but at night when mamma asked why I was so quiet, Jack said, 'Oh, she has put on the air of a martyr all day; I guess she feels sulky.' Then I could stand it no longer; so I spoke roughly and angrily to him, and spoiled all the good I had done during the day."

"Not quite all," replied Miss Acton; "you tried to do good, but you did not go to work the right way. You wanted to be perfect all at once, and that was impossible; and then you felt so proud of what you did that you thought yourself better than any one else. You could not expect the others to think so, because it takes a long time to earn a good name. Now, I think the others have faults, too, but you are the eldest girl and ought to make the first start; and I think I can tell you of a plan which, if carefully followed, may lead to great results."

"Oh, how I would love you if you could," said Hettie. "I will do anything you tell me."

"Listen, then," said Miss Acton. "You must begin to-morrow morning and provide yourself with a note-book; you need not try to do a single kind action at first, only refrain from making an ill-natured remark when any of the children are disputing. If you have nothing pleasant to say, be silent; then you must make a note every time you restrain yourself; and you will be surprised at the end of the day to find how many opportunities of being angry you have avoided. Will you do this, dear?"

"Certainly, Miss Acton; that will be very easy," said Hettie.

"I am afraid not," said the former; "but I will come over to-morrow evening and see how you have got on."

A few minutes later Miss Acton took her leave and left her young friend pondering over her advice.

The next morning Hettie got up a little earlier than usual. She took from her desk a small note-book and a nicely sharpened lead pencil; putting these in her pocket, she descended to the dining-room. Bertie and Jack were there alone. They had been out skating, and were scraping the snow from their skates on to the carpet. They had been forbidden to take them off anywhere but in the hall, yet like many

other boys they often forgot what they did not wish to remember.

"How mean they are," thought Hettie, "to do what they know is wrong." And she was about to tell the boys so, when she remembered her promise, and going over to the window made her first entry in the note-book. The rest of the family came in soon, and breakfast passed over without any dispute.

"Hettie, I wish you would wind this wool for me," said Mrs. Hawley, just as Hettie had taken up her story-book and settled herself to read.

"Oh, yes, mamma," said Hettie, more pleasantly than usual.

"Thank you," replied her mother; "Oh, here comes Eva! she will hold the skein while you wind it." Eva did as she was asked; but before the wool was half wound she began fidgeting. She was only seven, and naturally restless. "Oh, Hettie!" she cried, "how long this takes! you are moving like a snail."

Hettie was on the point of saying, "How dare you be so rude!" but she checked herself, and said instead, "It will be done soon, dear; I dare say your arms do ache."

"Oh, how nice you are to-day!" cried Eva in surprise; "will you come and play house-keeping with me?"

"Yes, dear, presently," replied Hettie, with a feeling of deep shame as she thought how unkind she must have been for Eva to think so much of a few pleasant words.

Mamma thanked them both when they took her the wool, and though she said nothing she noticed the bright expression on Hettie's face.

Just as the girls were leaving the room, Jack rushed in looking very hot and angry. "Mamma," he exclaimed, "those clothes you ordered are horrid. I don't want to be dressed like a baby all my life. Look at that!" and he threw on the table a pretty little gray plaid coat, trimmed with braid to match.

"These are not what I ordered," said Mrs. Hawley; "but what is the matter with them?"

"Why, you promised I should have a coat and vest like Harry Grant," answered Jack.

"And look like a little old man with your hands in your pockets all day," were the words that rushed to Hettie's lips and tried their best to escape before she remembered they were not kind.

We cannot stop to tell our readers how many opportunities Hettie had that day of restraining her unpleasant remarks. I am sorry to say that she forgot more than once; but when the evening came, and she brought her note-book to show Miss Acton, she was shocked and surprised to find there were no less than 23 entries.

"O Miss Acton!" she cried, "I did not think I was so bad."

"I did not expect you to do so well," said Miss Acton. "This is only one day; see how much more you will have achieved by the end of the week."

"But, Miss Acton," said Hettie, ruefully, "these are such little things. I am ashamed to think I ever felt inclined to be so unkind."

"My dear Hettie," said Miss Acton, "don't you know that a whole life is made happy or unhappy by small things like these? Many people who could sacrifice a great treasure find the tiny daily troubles more than they can bear bravely."

Hettie sat quite still for a few minutes; then she looked up with a more hopeful face. "I did not think of this before, Miss Acton," she said thoughtfully; "but will you please try to forget what I said about mamma yesterday? I found out to-day that she has loved me all the while, only I tried not to see it, because it was nicer to think the others were wrong and I was right."

"That is the way with older children, too," said Miss Acton, rising; "they often try to hide their own faults under cover of other people's."

From that day Hettie kept a very careful watch on her conduct, and was surprised to find how much pleasanter it was to be kind and cheerful when she had once made the effort.

GOOD HEALTH.

Mechanism of the Heart.

In Dr. B. W. Richardson's recent Canton Lectures, in speaking on the mechanism of the heart, he described the number of the pulsations of the heart in different animals—in fish, frog, bird, rabbit, cat, dog, sheep, horse—and made a few comments on the remarkable slowness of the heart—40 strokes per minute—in the horse. Then the number of pulsations in man at various periods of life, and at different levels, from the level of the sea up to 4000 feet above sea level, was brought under review, and was followed by a computation of the average work performed by the heart in a healthy adult man. The work was traced out by the minute, the hour and the day, and was shown to equal the feat of raising 5 tons 4 cwt. one foot per hour, or 125 tons in 24 hours. The excess of this work under alcohol in varying quantities formed a corollary to the history of the work of the heart, Parkes' calculation showing an excess of 24-foot tons from the imbibition of eight fluid ounces of alcohol. The facts relating to the work of the heart by the weight of work

accomplished was supplemented by a new calculation, in which the course of calculation explained by mileage. Presuming that the blood was thrown out of the heart at each pulsation in the proportion of 69 strokes per minute, and at the assumed force of nine feet, the mileage of the blood through the body might be taken at 207 yards per minute, 7 miles per hour, 168 miles per day, 61,320 miles per year, or 5,150,880 miles in a lifetime of 84 years. The number of beats of the heart in the same long life would reach the grand total of 2,869,776,000.

MOSES' KNOWLEDGE OF HYGIENE.—The eleventh chapter of Leviticus and those which follow are so remarkably replete with the most detailed and yet unimpeachably correct information that even the ancients have been struck with wonder at the completeness of the knowledge possessed by Moses. These chapters convey most interesting sanitary rules, which are to this day a treasure of infallible truth and an object of the admiration of all experts. But there is more in these chapters than mere sanitary rules. What entitles them to a place in the holiest of books is their moral import. It is a most mysterious fact in the household of Nature that, to a great extent, man is that which he eats. People rarely think of this fact when they are obeying the dictates of their constitution in their own way, but ethnology confirms this fact sufficiently to make it more than probably true. People who live on the seashore, and are compelled to subsist upon mollusks, are found to become foolish, while those Indians who live on a diet of vegetable and animal food are susceptible of culture. Other tribes that live on meat exclusively are savage, and those living on vegetable food gentle. What is true of nations applies equally to individuals; it is an established fact that a habitual eater of pork finally assumes the disposition and amiable manner of a hog—in short, the food makes the man, morally and in regard to habit and intelligence. There are, therefore, numerous sensible men who follow these biblical commandments, and regard them as excellent rules, which a man must follow in order to be a perfect man.—*Rev. Dr. I. N. Wise*.

DOMESTIC ECONOMY.

FRUIT PUDDING.—Place in the bottom of a pudding dish fruit or berries of any kind, as raspberries, strawberries, sliced oranges, peaches, etc., and sprinkle well with sugar. Let them stand an hour or two, then take one pint of milk, put on the stove and when it boils stir in the following mixture: Yolks of four eggs, a little salt and sugar, one teaspoonful of corn starch. Let it cook till stiff, stirring all the time. When done, turn over the prepared fruit and let it stand till cold. Just before sending to the table, make a meringue of the whites of two eggs and a little powdered sugar, and place on the top of the pudding.

GRAPE MARMALADE—RED COLOR.—Boil the skins of the grapes and strain them through a coarse cloth or jelly bag; to three quarts of juice add three quarts of cooked sour apples, and juice and pulp of four lemons, one ounce of stick cinnamon and seven pounds of sugar; break the cinnamon in small pieces, tie it in a spice bag made of fine white net or muslin; let all get hot together, and then add the sugar, stirring well until it is dissolved; cook for half an hour after it begins to boil; take out the spice bag when the flavor suits. To be put up in bowls like jam and covered with paper after it is cold. Will keep for years.

APPLE PUDDING.—Butter a pudding dish, place in it alternate layers of bread crumbs and thinly sliced apples; sprinkle sugar over each layer of apples; when the dish is filled, let the top layer be of bread crumbs, over which three tablespoonfuls of melted butter should be poured. Bake in a moderately hot oven, and place three nails under the pudding dish to keep from burning on the bottom; let it bake from three-quarters to a whole hour, according to the quality of the cooking apples.

CHOCOLATE CREAMS.—This recipe and the one following are given in response to an inquiry from a subscriber. They are both excellent. One quart of pulverized sugar and one-half pint boiling water. Boil 10 minutes without stirring, then set the basin into cold water and stir briskly until cold. Make into small balls and put on a buttered plate or waxed paper to harden. Melt one-half pound of Baker's chocolate over a boiling teakettle, and roll the balls in it with a fork.

CREAMED APPLES.—Pare your fruit and either scald or bake it until sufficiently soft to pulp it through a colander; sweeten to taste, fill your glasses three parts full with it, then plentifully sprinkle in some powdered cinnamon, put a good layer of rich whipped cream on the top and sift white sugar over it.

PEAR MARMALADE.—Peel and cut some pears and macerate them 24 hours, with three-quarters of a pound of white sugar to every pound of fruit. Boil them an hour at most, adding the juice and thin yellow peel of lemons to taste. The lemon peel should be cut very small, and be cut from fresh lemons.

GRAPE CATSUP.—Five pounds of grapes, boil and press through colander; 2½ pounds of sugar, one pint of vinegar, one tablespoonful each of cinnamon, cloves, allspice and cayenne pepper and a half-tablespoonful of salt. Boil until rather thick.



A. T. DEWEY. W. B. EWER.

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Registered at S. F. Post Office as second-class mail matter.

SAN FRANCISCO:

Saturday, Oct. 8, 1887.

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The Week.

The week has been a fair one despite the meteorological threats of the preceding days. Grape gathering has proceeded under favoring skies, and the outdoor raisin-drying has progressed favorably. The wineries are at the height of their season. There is some complaint that the juice is too rich in sugar, which might be expected when the rainfall is as short as this year. The crop also will be of lessened quantity, and the grower finds no compensation in the low rate ruling for his grapes.

The fairs continue in full force this week, no less than eight exhibitions being in progress as we write. This week closes the Mechanics' Institute Fair in this city, and the prize awards for agricultural displays are printed upon another page. The State Fair premium list is also given this week.

This week the State Grange is enjoying its annual gathering in Santa Rosa, and our advices are redolent with the fragrance of cordiality and fraternity. Our full report of the proceedings begins in this issue.

The Portland Dairy Sensation.

The dairy sensation at Portland has progressed considerably since our last issue. On Thursday last, according to the dispatches from Portland, a butter-dealer who had been charged with "selling adulterated butter from San Francisco" was convicted, and Justice Tuttle imposed a fine of \$50. The dispatch continues: "The conviction was made on the testimony of local chemists, who testified that the article furnished them for analysis contained only 40 per cent of butter. Ferrara will appeal to the Supreme Court."

This case was, it appears, decided upon the testimony of Portland analysts. The defendants in other cases had secured postponement until Wednesday and Thursday of this week, so that good expert testimony on the character of the material sold could be obtained. As we stated last week, the butter came down in duly sealed packages and was received by Mr. Harding. The analysis was made by Messrs. Harding and O'Neil in the laboratory of the State University at Berkeley, under the supervision of Prof. Rising. After a full examination Prof. Rising went north on Monday evening of this week, with everything needful to demonstrate his results in the court at Portland.

The chemical analysis showed, as we anticipated, that the material is pure butter beyond any doubt. Prof. Rising spent the past summer at the East and attended a convention of State chemists and public analysts at which the determination of purity of butter and detection of adulteration was one of the leading subjects under consideration. Some time before, specimens had been sent to 12 leading chemists for investigation, and at the convention they compared their results, discussed processes of analysis and agreed upon a method which would yield results beyond controversy. Prof. Rising employed the knowledge he gained during his Eastern trip in directing the analyses made of the material sent from Portland, and the result showed its genuineness and purity beyond any peradventure. His testimony cannot help but avail against the testimony of local Portland chemists whom we fear have proceeded in the matter without sufficient data, and have therefore declared results which they cannot demonstrate.

As corroborative of the results attained by the chemists, a microscopic examination was made by one of Prof. Hilgard's assistants, which also demonstrated the genuine nature of the material. The method laid down by Prof. Thomas Taylor, microscopist of the U. S. Department of Agriculture, with the use of the polariscope, was carefully applied, and the results were unmistakable. Prof. Rising goes to Portland equipped to introduce a practical demonstration with the microscope for the benefit of the court, if opportunity offers.

This matter, as we stated last week, is of great importance to our dairy interest. We do not propose to allow an officer of another State, through the results of incompetent analysts, to tarnish the good name of California butter. There is absolutely no question about it. If a person buys California butter at this time, he will get a pure article. We do not vouch for the future, though we have no reason to expect that it will be different. As we make pure butter and ship pure butter, we are entitled to the best price it will bring in any market it reaches, and it will be idle to attempt to crowd out California butter by trumping up charges that it is adulterated. This is the way our dairy merchants feel, and they have acted in a very enterprising manner. A dispatch from Portland on October 4th says:

John R. Sayers of C. E. Whitney & Co., San Francisco, arrived here to-day, and Feusier of Martin Feusier & Co., Brigham of Brigham, Hoppe & Co., Wheaton of Wheaton, Luhrs & Co., all dairy produce dealers, are on the way, accompanied by Matua, a dairyman, and Professor Rising of the California State University, to attend the trials of William Dunbar and Wadhams & Elliott, charged with selling adulterated butter imported from California. The Dairy Commissioner here and James Fisk, who assayed the butter and pronounced it only 40 per cent butter, have evidently trouble ahead. Dunbar has commenced suit for damages against Dairy Commissioner Sunderland, and the others arrested will do the same.

There is, as the dispatch says, a good chance that the Oregon Dairy Commissioner will have hard work to wash his hands of this matter. This aspect of the case he will have to settle with the Portland dealers, upon whose busi-

ness he has cast a shadow. We have nothing to do with the retaliatory measures. We are content to demonstrate the quality of California butter, and that, it appears, will be easy to do. One has a strong case when he has the right on his side. The experience in this case will doubtless serve as a good lesson to State officials, and to those who conduct chemical analyses. We hope it will lead them to proceed very cautiously when they think of declaring California butter impure.

Indians' Rights and Settlers' Wrongs.

An exceedingly sorry piece of business is being consummated at two points in this State, to wit: the ejection of settlers from what are claimed to be Indian reservations at Round Valley, Mendocino county, and Banning, San Bernardino county. Naturally, driving settlers from sites where they have for years been laboring and have made comfortable homes, excites much indignation in the neighborhoods, and the local papers in the two counties affected contain most indignant protests against what they call an outrage. We are not in possession of the ultimate facts in the case, but so far as we can judge, the Government is doing a most serious injustice to some of our people. The case as made out by the settlers who have had to give up their homes is certainly a strong one. The following protest was filed by S. Z. Millard of Banning, with the official who came to dispossess the settlers:

First, we are not trespassers on the lands. Congress invited citizens to occupy all unoccupied lands and improve them, and by doing so for five years become entitled to a clear title to them. This we have done. Our settlement was made months before the land was reserved for Indian purposes.

Second, on hearing that we were on railroad lands, which were given to the Southern Pacific in 1871, we applied to them for one section on which we had a valuable right.

Third, in compliance with the State law, we have acquired a valuable water right, which we have reserved for personal use. It has a value of \$10,000.

Fourth, on these lands we have mineral claims on which we have spent money and time.

Fifth, we have lived over ten years on these lands and have made improvements of value to us, which belong to nobody else.

Sixth, our right in equity is acknowledged, but our removal is ordered by the Executive, and we are not allowed the opportunity of proving, in a court of equity, these rights, thus denying us a right under the Constitution not to be dispossessed of property without due course of law.

Seventh, it is taking from American-born citizens their property, and giving it to those who are not recognized by the Government as such—although they were clearly made citizens by the treaty with Mexico.

Eighth, such acts are despotic and unjust, and deserve the denunciation of all citizens of the republic.

These seem to be very strong points, and if they are true, which we have no reason to doubt, the people should not be dispossessed. It is well enough to guard the property of the Indians and all that, and to prohibit hunters who kill their game and various other classes of trespassers; but to cast out settlers who came and made homes under government regulations, before the land was ceded to the Indians, is a breach of faith on the part of the Government which cannot be too strongly condemned. There is certainly unoccupied land enough to suffice for the Indian rancherias. It is a senseless operation to set apart an isolated territory for the California Indians, anyway. They are needed as workmen by our agriculturists and can do best in that way. As a matter of fact, it would be best for the Indians to have land in the neighborhood of American farms, and if such should be deeded to them individually or given to them without right of transfer, the interests of all would be subserved. Indians have been wronged fearfully, no doubt, but it is no way to right a wrong to commit another on an innocent party. So far as we can see, this business will be no credit to our executive department.

CATTLE DISEASE.—A dispatch from San Luis Obispo, October 5th, says: A disease resembling Texas fever has broken out among cattle in the vicinity of Cayucos, in this county, and several fatal cases have resulted. The disease first appeared at Los Alamos, Santa Barbara county, about ten days ago, and carried off a large number of cattle. There is alarm lest it become epidemic. It is considered an importation from Texas.

Nevada State Fair.

The Nevada State Fair began at Reno, Sept. 21st, and closed last Saturday, Oct. 1st. The earlier days were somewhat rainy, but the fourth morning opened beautifully, with clear, invigorating air after the showers, and most of the leading horse and cattle-breeders of the State were at the fair-grounds to view the stock-parade. This procession, according to the *Gazette*, was "unquestionably the finest of the kind ever seen in Nevada."

E. W. Crutcher, the famous stockman, appeared at the head of his herd, which embraces Shorthorn, Herefords, Polled Angus and Galloway—17 in all. Sam Davis of Carson and M. Gilling of Reno each had several superb Holsteins. Vail Bros. of Dayton made a magnificent showing—16 Shorthorns headed by the imported eight-year-old bull, Professor Mike; the hardy Galloway, Black Knight, with two of his calves from common range cows, which closely resemble their sire; and three beautiful, little red Polled Norfolk cattle from England. Jos. Scott & Co. of Halleck exhibited Herefords—Homestretch, a four-year-old bull weighing 2200 pounds, being at their head, and a Hereford-Shorthorn cross, John Henry, a five-months-old calf, which has gained 129 pounds of flesh per month since birth.

W. F. Marsh of Fort Churchill sent 13 fine Shorthorns, and the Jerseys were well represented in the herds of Gov. Stevenson and B. C. Platt.

Senator Stanford's score of Holsteins arrived on the grounds from Sacramento somewhat later, and aroused much interest among experts.

Among the horses the most remarkable were those of the Oasis Ranch Co. of Toano, who exhibited 11 admirable Norman Percheron stallions, and Jesse Harris of Fort Collins, Colorado, whose six superb Cleveland Bays attracted a deal of favorable notice.

Gov. Stevenson exhibited a dozen choice Berkshire swine; and the poultry shown comprised Houdan, Plymouth Rock, Brown Leghorn and game fowl, Pekin ducks and Bronze turkeys.

The horticultural display was not so large as in some previous years; but enough apples, pears and grapes, corn, pumpkins, beans and cabbages, potatoes, beets, turnips, etc., were set forth to redeem the credit of Nevada's fields, gardens and orchards.

Mr. Moore, an apiarist, had a very tasteful exhibit of honey, and a hive of bees busily at work under glass.

The ladies' riding tournaments and Indian pony races, proved very entertaining to the crowds that witnessed them. The tone of the Reno papers is exceeding cheerful as to the success of the fair as a whole. We shall try to find room another week for the list of premiums awarded.

Economic Entomology.

Every farmer should have in his library a work on entomology, and for California there is nothing better than Matthew Cooke's "Insects Injurious to Orchards, Vineyards, etc." It is fully illustrated, and by its aid most of the insects against which the farmer and fruit grower has to contend can be identified, and ways to destroy them learned. A number of copies of this book were left at the death of Mr. Cooke, and those likely to be benefited should procure them at once. We are authorized to offer them for sale, and they can be had at our office. The sale will not only benefit the purchaser but will be of advantage to Mr. Cooke's family, and knowing the general esteem in which Mr. Cooke's self-sacrificing work is held, we expect the remaining copies will soon be taken. The price is \$3 per copy.

Economic entomology is making progress in our public schools. The last Legislature passed a law making instruction in this useful branch of knowledge compulsory. Mr. Cooke's smaller work, which was entitled "Insects Injurious and Beneficial," is now being revised and a new edition will soon be ready. It will henceforth be called "School Entomology by Matthew Cooke." The Solano County Board of Education last week adopted this work as a text-book in the schools of the county for the next four years, and they also adopted "Cooke's Entomological Charts," which will soon be issued, for use in the primary grades. These works are the best to be had for these uses.

THOS. A. EDISON, the famous inventor, will spend the winter in California.

The Santa Barbara Mission.

This is, perhaps, Santa Barbara's most attractive point of interest, toward which all visitors gravitate, and whose quaint outlines all artists and amateurs transfer to their sketch-books. On the 4th day of last December was celebrated with imposing ceremonies the centennial of foundation of this most interesting of the Franciscan Missions. Its situation is more beautiful and commanding than that of any other, the building standing on an elevation 300 feet above the sea, and about three miles distant from it, overlooking the town and harbor. The view to the south and east across the channel to the dreamy islands of Anacapa and Santa Cruz, and to the valleys of El Montecito and El Carpinteria down the mountain-outlined coast, thence to the varied slopes of the rock-crowned Santa Inez and the cultivated plains of La Patera, on to the softened blue of the mountains of the Gaviota and the distant Point Conception, furnishes a series of impressions rarely equaled. From its elevated position, the whitened facade and long corridor of the Mission is seen far out on the Pacific, and forms a striking object to the sailor and tourist on his approach to Santa Barbara.

The church is built of sandstone covered with stucco and roofed with tiles. The larger timbers used in its construction were obtained on the distant San Rafael mountains, drawn by oxen to the summits of the Santa Inez, and by a slide were sent down their steep slopes and taken to the Mission.

The church and the buildings surrounding the court are well preserved, as are also the quaintly constructed fountain and washing-tank and the bath-house on the opposite hill; but the long rows of Indian barracks, guard-house, tannery and mill have little left but broken walls. The dam constructed by the Fathers to hold the waters of Mission creek was so solidly built that it serves to-day as a reservoir to supply the city. This is the only Mission in California yet in the possession of the Franciscans, 8 or 10 members of the Order residing there. The venerable Father Romo, who has long been at the head, has recently left the Mission to take up his residence in Jerusalem, where he will probably spend the remainder of his days. The library contains many valuable manuscripts pertaining to the work of the Order in California that have escaped from the wreck of the other Missions, and the student of the early history of the

coast finds in them a rich reward for his research. The accompanying view is looking along the corridor and facade of the church toward the mountains.

THE condition of the labor market in California was never healthier or better than it is to-day. Our iron-workers hardly know what it is to have an idle hour on their hands. Our lumbermen are as busy as beavers. The ordinary run of day labor is better than formerly, and there is not the least difficulty in getting a

The Santa Barbara Fair.

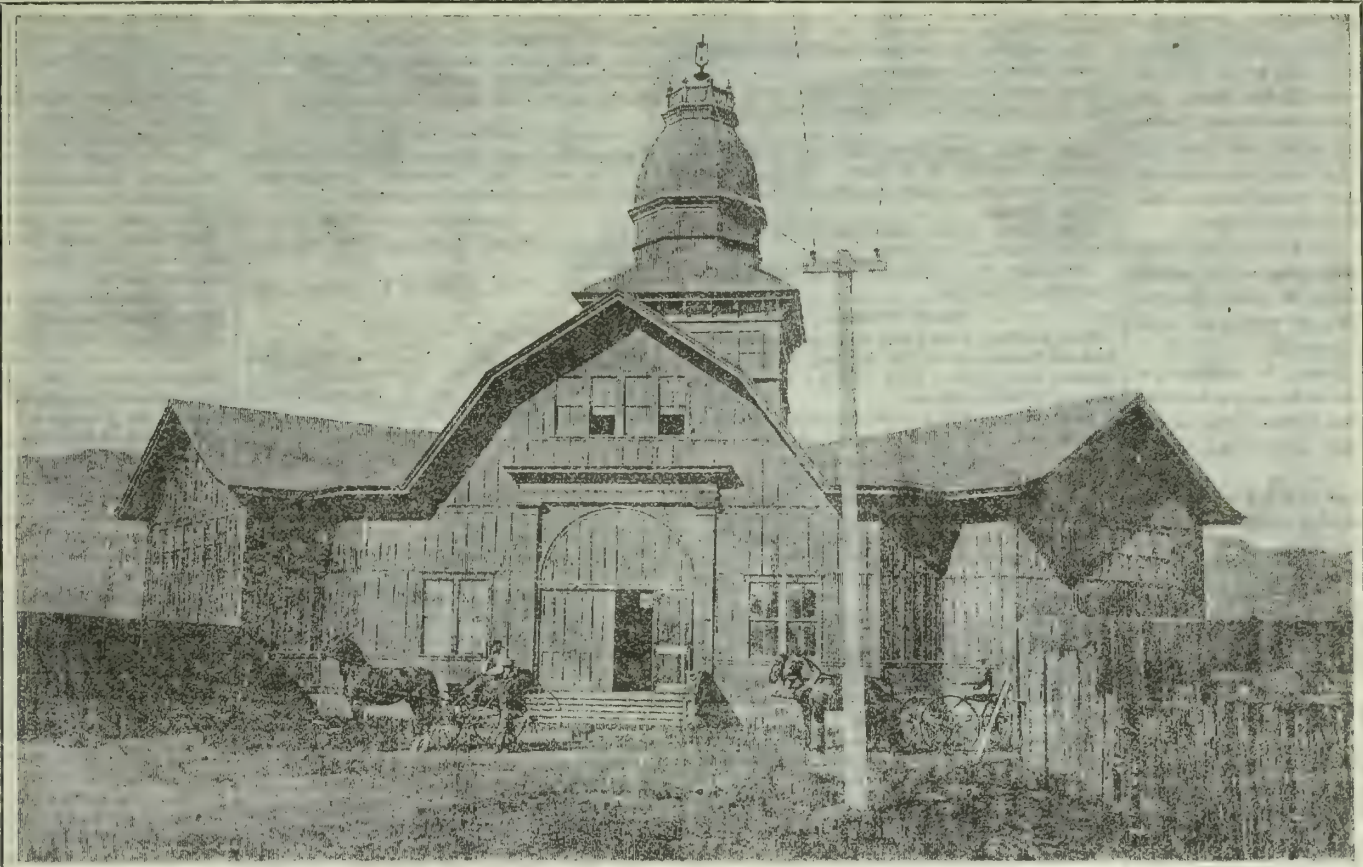
The Santa Barbara Fair was held last week and a brief notice of it appears upon another page. This year's fair was unusually fine, as seems to be the fashion with the fairs of 1887, and in Santa Barbara there was an exceptional blooming out of the fair enterprise because of the recent opening of railway connection, to which we have had several allusions in the columns of the RURAL.

We are glad to present to our readers an ex-

Manufacturing Enterprise in California.

Upward of 100 cities and towns throughout the West and Southwest are now holding out inducements, in the shape of bonuses of lands, power and money, with every facility for the location of foundries, machine shops, wagon and carriage shops, grist and sawmills, etc., for capitalists to come and invest money and build up local industries. This is a sensible policy for any community to pursue, and might be more generally introduced into California than

it has heretofore been. This State ought to produce many things for which she now depends upon the East. Every possible effort should be made, especially while the present tide of immigration is in progress, to make business for all new-comers and thereby induce others to follow, and fill up this great State. We must introduce more manufacturing enterprises, and thereby create a larger home market for our fruit and breadstuffs—a home market for a thousand cents of wheat, or a given quantity of fruit is worth more than a foreign market for ten or even 20 times as much. We have a State of immense possibilities, and just now is the time to prove it, while the attention of the whole civilized world is being turned in this direction, and studying the phases of an emigration movement which has never had a parallel except in the exodus hither of '49. Climate and other natural advantages will go a long way in keeping up the present influx of population; but it must be eventually supplemented by something else. Americans are an industrious people, and they must have employment to work off their surplus energy. There is no State in the Union where a mechanic can work so many days in the year as in California, and no place in the world where so much work can be done



AGRICULTURAL PAVILION AT SANTA BARBARA.



THE OLD MISSION CHURCH, SANTA BARBARA.

"job." Graders and track-layers, tunnel-men and bridge-builders are in steady demand by the railroad contractors at fair wages. The surplus Chinese labor seems to have all been called out. Thousands of Mongolians have left the city during the past two weeks for the grape-gathering and hop-picking districts. At the employment offices it is reported that the demand for nearly all classes of laborers is greater than the supply. Some of the railroad contractors could, they say, use twice as many men as they are now able to secure. These are busy times.

A FARMER drove into Charlotte, Mich., a few days ago, with a load of 20,160 eggs.

terior view of the Santa Barbara Fair pavilion. It was erected last year, and is somewhat of a departure from the conventional style of pavilion-building, as the engraving shows. The building is in the shape of a St. Andrew's cross, the extremity of each arm forming a large alcove, and the central floor being an octagon, with entrances on three sides, between the alcoves, and on the fourth an elevated platform for speakers, musicians, etc. The building is used for the annual rose fairs, citrus fairs, etc., as well as the regular fairs of the autumn-time. It is a very creditable structure.

WORK has begun on the San Jose electric road.

in the same number of hours, or with so little wear upon either the physical or mental constitution. These facts go far to equalize the results derived from the larger amount paid for labor here than at the East. It was for these reasons that Mr. Scott was able to bid lower than his Eastern competitors for the construction of the steamships which has recently been awarded to him by the Government at Washington. These are a part of our climatic advantages, which should be carefully considered by all employers.

THE track of the Oregon Pacific is now laid half a mile beyond the Santiam river.

THE FIELD.

State Fair Awards for 1887.

A List Worth Studying.

People may sometimes look upon the awards at leading fairs as mainly personal matters, but they can really be made to serve a much wider purpose. Though judging committees are very fallible and in some cases decide quite wrong, through lack of knowledge or through personal favoritism or prejudice, the list of awards must be regarded as the best available directory or index to the locality and ownership of the best products of the State. Thus a study of the premium list will put one on the track of those who have the best live-stock in the State. We would not advise our readers to blindly follow the awards of the first prizes, but note the names of all exhibitors and visit their herds and form their own opinions of which herd can furnish animals best suited to their purposes.

The awards too often give a clue to the home-seeker of the locality best adapted to certain crops which he may desire to grow. Let the list be scanned with this in view, and many valuable lessons can be learned.

The list should be filed away for reference, so that when questions arise as to who is breeding certain stock or producing certain crops, or selling certain machines, the answers are easy to find.

Owing to the length of the list we have selected in the main classes of exhibits most directly pertaining to agriculture.

Horses.

THOROUGHBREDS.

Best stallion, four years old and over, \$40, Joe Hooker; T. Winters, Sacramento.

Best stallion, two years old, \$20, Joe; L. U. Shippee, Stockton.

Best stallion, one year old, \$15, The Czar; T. Winters, Sacramento. Second best, \$7.50, Sureto; D. J. McCarty, San Francisco.

Best stallion, under one year, \$10, Norfolk-Marion colt; T. Winters, Sacramento. Second best, \$5, Hooker-Mattie Glenn colt; T. Winters, Sacramento.

Best mare, four years old and over, with colt, \$40, Marion and colt; T. Winters, Sacramento. Second best, \$20, Ballinette and colt; T. Winters, Sacramento.

Best mare, two years old, \$15, Verona; P. Siebenthaler, Sacramento.

Best mare, one year old, \$10, Isabella; C. Halveron, Routier's station.

Best mare, under one year, \$10, Norfolk-Ballinette colt; T. Winters, Sacramento. Second best, \$5, C. Halveron, Routier's station.

Best sire, with not less than five of his colts, \$50, Joe Hooker and colts; T. Winters, Sacramento.

Best mare, with not less than two of her colts, \$40, Marion and colts; T. Winters, Sacramento.

HORSES OF ALL WORK.

Best stallion, four years old and over, \$40, Maje; W. E. Comstock, Pleasant Grove. Second best, \$20, Echason; F. Skillman, Petaluma.

Best stallion, three years old, \$30, Leopard; Frank R. Shaw, Salina, Kansas. Second best, \$15, Francis; Frank R. Shaw, Salina, Kansas.

Best stallion, two years old, \$20, Jim Douglas colt; Frank Depoister, Sacramento. Second best, \$10, Mark Gibson; John Adams, Brook's Station.

Best stallion, one year old, \$15, Selim; P. Russell, Brighton. Second best, \$7.50, Johnnie Vernon; J. A. McCloud, Stockton.

Best stallion, under one year, \$10, Dennis; R. J. Merkley, Sacramento.

Best mare, four years old and over, with colt, \$40, Lucy Gray and colt; A. D. Miller, Walsh's Station. Second best, \$20, Fannie and colt; H. H. Wilson, Nicolaus.

Best mare, four years old and over, \$30, Dolly Douglas; W. E. Comstock, Pleasant Grove. Second best, \$15, Lena; W. Cole, Sacramento.

Best mare, two years old, \$15, Nellie Vernon; J. A. McCloud, Stockton. Second best, \$7.50, Flora Vandee; W. E. Comstock, Pleasant Grove.

Best mare, one year old, \$10, Topay; W. E. Comstock, Pleasant Grove.

Best mare under one year, \$10, Jessie; H. H. Wilson, Nicolaus. Second best, \$5, Maud; Jacob Heintz, Sacramento.

NORMANS.

Best stallion, four years old and over, \$40, Ernest Perriotti; F. Skillman, Petaluma. Second best, \$20, Hatchet; A. J. Ogden, Woodland.

Best stallion, one year old, \$15, Pixley; B. F. Chandler, Elmira.

Best stallion under one year, \$10, Shasta; B. F. Chandler, Elmira.

Best mare, four years old and over, with colt, Bisch and colt; B. F. Chandler, Elmira.

PERCHERONS.

Best stallion, four years old and over, \$40, Faisian; C. K. Bailey, Stockton. Second best, \$20, Hercules; F. Skillman, Petaluma.

Best stallion, three years old, \$30, Paradise;

F. Skillman, Petaluma. Second best, \$15, Black; C. K. Bailey, Stockton.

Best mare, four years old and over, with colt, \$40, St. Julia and colt; C. K. Bailey, Stockton.

Best mare, under one year, \$10, Carrie; C. K. Bailey, Stockton.

CLYDESDALES.

Best stallion, four years old and over, \$40, Duke; James Roberts, Irvington.

Best stallion, three years old and over, \$30, Lord Pollock 2d; Frank R. Shaw, Salina, Kansas. Second best, \$15, Sir Leonard; F. R. Shaw, Salina, Kansas.

Best stallion, two years old, \$20, Sir Francis; F. R. Shaw, Salina, Kansas.

Best stallion, one year old, \$15, Prince; James Roberts, Irvington.

Best stallion under one year, \$10, Jubilee; James Roberts, Irvington.

Best mare, four years old and over, with colt, \$40, Jule and colt; James Roberts, Irvington.

Best mare, four years old and over, \$30, Princess Beatrice; F. R. Shaw, Salina, Kansas. Second best, \$15, Lady Smith; F. R. Shaw, Salina, Kansas.

Best mare, three years old, \$25, Damsel; James Roberts, Irvington.

Best mare, two years old, \$20, Dolly; James Roberts, Irvington.

DRAFT HORSES.

Best stallion, four years old and over, \$40, Donald Dinie; H. S. Moddison, Sacramento. Second best, \$20, Earl Derby; R. G. McKenzie, Pleasant Grove.

Best stallion, three years old, \$30, Charley; Frank Cox, Elk Grove. Second best, \$15, Doctor; Frank R. Shaw, Salina, Kansas.

Best stallion, two years old, \$20, Vandee, Jr.; R. J. Merkley, Sacramento. Second best, \$10, French; A. J. Ogden, Woodland.

Best stallion, one year old, \$15, Dumas, Jr.; R. J. Merkley, Sacramento. Second best, \$7.50, Young Donald Dinie; James Coil, Sacramento.

Best stallion, under one year, \$10, Mack; R. J. Merkley, Sacramento.

Best mare, four years old and over, with colt, \$40, Nellie and colt; R. J. Merkley, Sacramento. Second best, \$20, Maggie and colt; H. S. Moddison, Sacramento.

Best mare, four years old and over, \$30, Fannie; R. J. Merkley, Sacramento. Second best, \$15, Belle; James Coil, Sacramento.

Best mare, three years old, \$20, Myrtle; H. H. Wilson, Nicolaus. Second best, \$12.50, Fannie; C. B. Harris, Nicolaus.

Best mare, two years old, \$20, Belle; H. H. Wilson, Nicolaus. Second best, \$10, Minnie; C. B. Harris, Nicolaus.

Best mare, under one year, \$10, R. J. Merkley, Sacramento. Second best, \$5, H. C. Moddison, Sacramento.

ROADSTERS.

Best four-year-old and over stallion, \$40, Ross S.; R. C. Sargent, Lodi. Second best, \$20, Privateer; Henry Klemp, Pleasant Grove.

Best three-year-old stallion, \$30, Don Marion; Frank Lowell, Sacramento. Second best, \$15, Kilmore; P. Fitzgerald, Woodland.

Best two-year-old stallion, \$20; Peerless; H. G. Casey, Sacramento. Second best, \$10, Tilton Almont, Jr.; Geo. A. Pierce, Woodland.

Best one-year-old stallion, \$15, General; George Woodward, Woodland. Second best, \$7.50, Privateer, Jr.; Henry Klemp, Pleasant Grove.

Best stallion under one year, \$10, Bookkeeper; L. Whitmore, Woodland. Second best, \$5, Archie; H. C. Howard, Brighton.

Best gelding, \$40, Bum; B. F. True, Chico. Second best, \$20, Orphan Boy; J. L. McCord, Sacramento.

Best mare, four years old and over, \$40, May Fly; John Batcher, Sacramento. Second best, \$20, Crescent; C. L. Pinkham, Sacramento.

Best mare, three years old, \$30, Nellie; J. H. Glide, Sacramento. Second best, \$15, Lute; L. Whitmore, Woodland.

Best mare, two years old, \$20, Beatrice; E. C. Morgan, Grass Valley. Second best, \$10, Yolo Maid; C. R. Hoppin, Woodland.

Best mare, one year old, \$15, Yolo; C. R. Hoppin, Woodland. Second best, \$7.50, Nora Vernon; J. A. McCloud, Stockton.

Best mare, under one year, \$10, Allie; J. J. McGrath, Marysville. Second best, \$5, Frances; Mrs. W. C. Stahl, Pleasant Grove.

CARRIAGE HORSES.

Best matched span carriage horses, \$50, Tom and Jerry; O. M. Corey, San Jose. Second best, \$25, Garland and Sister; E. M. Leitch, Sacramento.

The committee recommended that a special premium be awarded to the span of Shetland ponies—Goldsmith Maid and Lucy—owned by D. J. McCarthy, Jr. of San Francisco; and also a premium to Mr. Vaughn of Sacramento for his span of Welsh ponies.

ROADSTER TEAMS.

Best team of roadsters, \$40, Geo. Washington and Lady Washington; R. C. Sargent, Lodi. Second best, \$20, Lucy and Dolly Bloodstone; G. W. Griffin, Woodland.

STANDARD TROTTERS.

Best stallion, four years old and over, \$40, Clay Duke; J. W. Martin, Yolo Station. Second best, \$20, Fallie; F. P. Lowell, Sacramento.

Best stallion, three years old, \$30, Corsair; T. C. Snider, Sacramento. Second best, \$15, Shamrock; G. Valensin, Sacramento.

Best stallion, two years old, \$20, Creole; T.

C. Snider, Sacramento. Second best, \$10; Day-break; J. A. Grove, Fresno.

Best stallion, one year old, \$15; George V.; G. Valensin, Sacramento. Second best, \$7.50, Chuck; M. W. Hicks, Sacramento.

Best stallion, under one year, \$10, Billy Vernon; J. A. McCloud, Stockton.

Best mare, four years old and over, \$40, Tricks; Henry Pierce, San Francisco. Second best, \$20, Panay; W. F. Smith, Sacramento.

Best mare, three years old, \$30, Daisy; G. W. Hancock, Sacramento.

Best mare, two years old, \$20, brown filly by Hawthorne; L. U. Shippee, Stockton. Second best, \$10, Carrie Vernon; J. A. McCloud, Stockton.

Best mare, one year old, \$15, Effie; M. W. Hicks, Sacramento. Second best, \$7.50, Antonia; W. F. Smith, Sacramento.

Best mare, under one year, \$10; Lady Guy; G. W. Hancock, Sacramento. Second best, \$5, Lalla Rookh; M. W. Hicks, Sacramento.

SADDLE HORSES.

Best saddle horse, mare or gelding, \$20, Billy; D. J. McCarthy, San Francisco. Second best, \$10, B. W. Cavanaugh, Sacramento.

SWEEPSTAKES.

Best stallion, \$100, Joe Hooker; T. Winters, Sacramento.

Best mare, \$100, Marion; T. Winters, Sacramento.

JACKS, JENNIES, ETC.

Best jack, four years old and over, \$40, Black Warrior; Dr. H. P. Merritt, Woodland. Second best, \$20, Bradley; W. A. Munion, Dixon.

Best jack, one year old, \$15, Washington Eclipse, Jr.; Levi Carter, Ceres.

Best jenny, four years old and over, \$40; W. A. Munion, Dixon.

Best span of mules, three years old and over, \$40, H. H. Wilson, Nicolaus. Second best, \$20, R. McKenzie, Nicolaus.

Best mule, two years old, \$25, Bird; J. P. March, Yolo.

Best mule, one year old, \$20, Belle; J. P. March, Yolo.

Best suckling mule, \$15; Nellie; James Coil, Sacramento.

CATTLE.

DURHAMS.

Best bull, three years old and over, \$40, 5th Kirklevington of Forest Home; C. Younger & Son, San Jose. Second best, \$20, Oxford Duke 2d; R. M. Dunlap, Galesburg, Ill.

Best bull, two years old, \$30, Mugwump; Wilford Page, Penn's Grove. Second best, \$15, Counsellor; P. Peterson, Sites.

Best bull, one year old, \$20, Patay Carroll; Wilford Page, Penn's Grove. Second best, \$10, 23d Kirklevington of Forest Home; C. Younger & Son, San Jose.

Best bull calf, \$15, Occident; R. J. Merkley, Sacramento. Second best, \$7.50, Brown Frantic 7th; Robert Ashburner, Baden Station.

Best cow, three years old and over, \$40, Belle Medico; Wilford Page, Penn's Grove. Second best, \$20, Xylophia 6th; H. C. Moore, Visalia.

Best cow, two years old, \$30, Red Dolly 23d; C. Younger & Son, San Jose. Second best, \$15, Jessie Maynard 3d; C. Younger & Son, San Jose.

Best cow, one year old, \$20, Oxford Rose; C. Younger & Son, San Jose. Second best, \$10, Jessie Maynard 4th; C. Younger & Son, San Jose.

Best heifer calf, \$15, Oxford Belle; C. Younger & Son, San Jose. Second best, \$7.50, Violet; R. J. Merkley, Sacramento.

Best herd, two years old and over, \$60; C. Younger & Son, San Jose.

Best herd, under two years old, \$30; P. Peterson, Sites.

HIRFORDS.

Best bull, three years old and over, \$40, Novelist; James Kay, Sacramento. Second best, \$20, Horace 30th; H. M. LaRue, Sacramento.

Best bull, two years old, \$30, Samar; G. F. Morgan, Cheyenne. Second best, \$15, Storm King; G. F. Morgan, Cheyenne.

Best bull, one year old, \$20, Marsh; G. F. Morgan, Cheyenne. Second best, Duke of Hereford; James Kay, Sacramento.

Best bull calf, \$15, Monmouth; G. F. Morgan, Cheyenne. Second best, \$7.50, Mahmoud; G. F. Morgan, Cheyenne.

Best cow, three years old and over, \$40, Winona; George F. Morgan, Cheyenne. Second best, \$20, Turtle Dove; James Kay, Sacramento.

Best cow, two years old, \$30, Mermaid 3d; James Kay, Sacramento. Second best, \$15, Sylvan; G. F. Morgan, Cheyenne.

Best cow, one year old, \$20, Mabel; G. F. Morgan, Cheyenne. Second best, \$10, Bounce; James Kay, Sacramento.

Best heifer calf, \$15, Lucy; G. F. Morgan, Cheyenne. Second best, \$7.50, Moss Rose; G. F. Morgan, Cheyenne.

HOLSTEINS.

Best bull, three years old and over, \$40, Mahomet of Palo Alto; L. Stanford, Vina. Second best, \$20; Sedro; J. H. Burke, Menlo Park.

Best bull, two years old, \$30, Nadine Veehan; L. Stanford, Vina. Second best, \$15, Oro Blanco; J. H. White, Lakeville.

Best bull, one year old, \$20, Lauren; J. H. White, Lakeville. Second best, \$10, Shackelford; L. Stanford, Vina.

Best bull calf, \$15, Lomatas; J. H. White, Lakeville. Second best, \$7.50, Bonita Prince; L. Stanford, Vina.

Best cow, three years old and over, \$40, Pan-

syne; L. Stanford, Vina. Second best, \$20, Sylpha; J. H. Burke, Menlo Park.

Best cow, two years old, \$30, Aaggie Alpha 2d; L. Stanford, Vina. Second best, \$15, Georgie Truman; L. Stanford, Vina.

Best cow, one year old, \$20, Mozenia; L. Stanford, Vina. Second best, Laequita; J. H. White, Lakeville.

Best heifer calf, \$15, Bumble Bee; J. H. White, Lakeville. Second best, \$7.50, Mahomet Lass; L. Stanford, Vina.

JERSEYS AND GUERNSEYS.

Best bull, three years old and over, \$40, Vim of Yerba Buena; Henry Pierce, San Francisco. Second best, \$20, Keystone; W. E. Bowles, Brighton.

Best bull, two years old, \$30, Billy Ralston; P. C. Anderson, Oakland. Second best, \$15, Atlas of Yerba Buena; Henry Pierce, San Francisco.

Best bull, one year old, \$20, Prince of Oakland; P. C. Anderson, Oakland. Second best, \$10, Sir Walter; H. Pierce, San Francisco.

Best bull calf, \$15, McIntire; J. A. McIntire, Brighton. Second best, \$7.50, Livingstone; A. L. Nichols, Sacramento.

Best cow, three years old and over, \$40, Susan Titus; Henry Pierce, San Francisco. Second best, \$20, Irene of Straatsburg; W. C. Smith, Florin.

Best cow, two years old, \$30, Alimo; Henry Pierce, San Francisco. Second best, \$15, Princess of Sacramento; A. L. Nichols, Sacramento.

Best cow, one year old, \$20, Polyanthus of Yerba Buena; Henry Pierce, San Francisco. Second best, \$10, Bly of Yerba Buena; Henry Pierce, San Francisco.

Best cow, under one year, \$15, Martha of Florin; W. C. Smith, Florin. Second best, \$7.50, Ethel of Yerba Buena; Henry Pierce, San Francisco.

Best herd, over two years, \$60; Henry Pierce, San Francisco.

Best herd, under two years, \$30; Henry Pierce, San Francisco.

The committee decided that a herd (one bull and four cows) from the exhibit of Henry Pierce of San Francisco is entitled to the premium of \$100 offered by the American Jersey Cattle Club, whose office is in New York City. This prize is offered in every State in the Union.

AYRSHIRES.

All awards to George Bement & Son, Redwood City.

GRADED CATTLE.

Best cow, three years old and over, \$30, Music; Robert Ashburner, Baden Station.

Best cow, two years old, \$10, Daisy; Willie Tryon, Sacramento.

Best cow, one year old, \$5, Peach Blossom; Robert Ashburner, Baden Station.

Best heifer calf, \$5, Lulu; Leland Stanford, Vina.

HERDS.

Best Holstein herd, \$60; L. Stanford, Vina.

Best herd of thoroughbred Hereford cattle, \$80; James Kay, Sacramento.

SWEEPSTAKES.

Best bull, of any age, \$100, Third Kirklevington of Forest Home; C. Younger & Son, San Jose.

Best cow, of any age, \$100, Maits; Wilford Page, Penn's Grove.

Best bull and three of his calves, \$100, Counsellor calves; F. Peterson, Sites.

Best herd of beef cattle, \$100, Mugwump and four cows of Durham breed; Wilford Page, Penn's Grove.

Best herd milk cattle, \$100, San Miguel and four cows of Holstein breed; L. Stanford, Vina.

SHEEP.

SPANISH MERINOS.

Best ram, two years old and over, \$30, King George; F. Ballard, Woodland. Second best, \$15, Lott; Kirkpatrick & Whittaker, Knight's Landing.

All other awards to F. Ballard, Woodland.

FRENCH MERINOS.

All awards to James Roberts, Irvington.

SOUTHDOWNS.

All awards to George Bement & Son, Redwood City.

COTSWOLDS.

Best ram of any age, \$20, Faraway; C. Younger & Son, San Jose. Second best, \$10, Primps; F. H. Burke, Menlo Park.

Best pen of ewes, \$20; C. Younger & Son, San Jose.

Best ram and five of his lambs, \$20; C. Younger & Son, San Jose.

SHROPSHIRE.

Best ram, of any age, \$20, Royal Duke of California; Andrew Smith, Redwood City. Second best, \$10, Freeland; J. H. Glide, Sacramento.

Best pen of ewes, \$20; Andrew Smith, Redwood City.

Best ram and five of his lambs, \$20; Andrew Smith, Redwood City.

SWEETSTAKES.

Best ram of any age and five of his lambs, \$50; Bulger and five lambs; James Roberts, Irvington.

GOATS.

THOROUGHBREDS.

Best buck, two years old and over, \$25, T. H. Harlan, Williams. Second best, \$12.50, Julius Weyand, Colusa.

Best buck under two years, \$15, Julius Wey-

and, Colusa. Second best, \$7.50, T. H. Harlan, Williams.

Best pen, two years old and over, \$25, T. H. Harlan, Williams. Second best, \$12.50, Julius Weyand, Colusa.

Best pen, under two years, \$15, Julius Weyand, Colusa. Second best, \$7.50, T. H. Harlan, Williams.

GRADED.

Best pen, over two years, \$10, T. H. Harlan, Williams. Best pen, under two years, \$7.50, T. H. Harlan.

HERD.

Best herd, \$30, Julius Weyand, Colusa. Second best, \$15, T. H. Harlan, Williams.

Swine.

BERKSHIRE.

Best boar, two years old and over, \$20, Redwood Duke; Andrew Smith, Redwood City.

Best boar, one year old and under two, \$10, Falkland; Andrew Smith, Redwood City. Second best, \$15, William Corbitt; Thomas Waite, Perkins.

Best boar, six months and under one year, \$7.50, Redwood Duke 4th; Andrew Smith, Redwood City.

Best breeding sow, two years old and over, \$20, Redwood Sallie; Andrew Smith, Redwood City.

Best sow, one year old and under two, \$15, Redwood Sallie 21; Andrew Smith, Redwood City. Second best, \$7.50, Lady Smith; Thomas Waite, Perkins.

Best sow, six months and under one year, \$10, Redwood Sallie 31; Andrew Smith, Redwood City.

Best sow and six pigs, under three months, \$20, Redwood Princess; Andrew Smith, Redwood City.

Best pair of pigs under six months old, \$15, Dandy and Beauty; Andrew Smith, Redwood City.

ESSEX.

All awards to George Bement & Son, Redwood City.

POLAND CHINA.

All awards to Joseph Melvin, Davisville.

SWEEPSTAKES.

Best boar of any age, \$30, Redwood Duke; Andrew Smith, Redwood City.

Best sow of any age, \$30, Bertha's Best; Joseph Melvin, Davisville.

Best pen of pigs, under six months; Joseph Melvin, Davisville.

Best family, \$25; Andrew Smith, Redwood City.

Poultry.

Light Brahmas—Best cock and hen, \$ M. W. Parker, Biggs. Best cockerel and pullet, \$3, M. W. Parker, Biggs. Best breeding pen, \$10, M. W. Parker, Biggs.

Dark Brahmas—Best cock and hen, \$3, Thomas Waite, Perkins. Best cockerel and pullet, \$3, Thomas Waite, Perkins. Best breeding pen, \$10, Thomas Waite, Perkins.

Langshans—Best cock and hen, \$3, Thomas Waite, Perkins. Best cockerel and pullet, \$3, Thomas Waite, Perkins. Best breeding pen, \$10, Sam Katzenstein, Sacramento.

Buff Cochins—Best cock and hen, \$3, M. W. Parker, Biggs. Best cockerel and pullet, \$3, M. W. Parker, Biggs. Best breeding pen, \$10, M. W. Parker, Biggs.

Partridge Cochins—Best cock and hen, \$3, M. W. Parker, Biggs. Best cockerel and pullet, \$3, M. W. Parker, Biggs. Best breeding pen, \$10, M. W. Parker, Biggs.

Plymouth Rocks—Best cock and hen, \$3, Thomas Waite, Perkins. Best cockerel and pullet, \$3, Thomas Waite, Perkins. Best breeding pen, \$10, Thomas Waite, Perkins.

Brown Leghorns—Best cock and hen, \$3, A. L. Nichols, Sacramento. Best cockerel and pullet, \$3, Thomas Waite, Perkins. Best breeding pen, \$10, A. L. Nichols, Sacramento.

White Leghorns—Best cock and hen, \$3, A. L. Nichols, Sacramento. Best cockerel and pullet, \$3, A. L. Nichols, Sacramento. Best breeding pen, \$10, Thomas Waite, Perkins.

White-faced black Spanish—Best cock and hen, \$3; E. I. Robinson, Sacramento. Best cockerel and pullet, \$3; E. I. Robinson, Sacramento. Best breeding pen, \$10; E. I. Robinson, Sacramento.

Silver Spangled Hamburgs—Best cock and hen, \$3; Thomas Waite, Perkins. Best cockerel and pullet, \$3; Thomas Waite, Perkins. Best breeding pen, \$10; Thomas Waite, Perkins.

Polish—Best cock and hen, \$3; Thomas Waite, Perkins. Best cockerel and pullet, \$3; Thomas Waite, Perkins.

Wyandottes—Best cock and hen, \$3; Thomas Waite, Perkins. Best cockerel and pullet, \$3; Thomas Waite, Perkins. Best breeding pen, \$10; Thomas Waite, Perkins.

Black-breasted Red Game Bantams—Best cock and hen, \$3; Sam Katzenstein, Sacramento.

Pit Games—Best cock and hen, \$3; W. F. Smith, Sacramento. Best breeding pen, \$5; M. W. Parker, Biggs.

Bronze Turkeys—Best pair, \$10; Thomas Waite, Perkins.

Geese—Best Toulouse geese, \$5; Thomas Waite, Perkins. Second best, \$3; F. H. Burke, Menlo Park.

Ducks—Best Rouen ducks, \$5; Thomas Waite, Perkins. Best Pekin ducks, \$5; Thomas Waite, Perkins. Second best, \$3; F. H. Burke, Menlo Park.

Field Products.

FLOUR AND GRAIN.

C. McCreary & Co., Sacramento—Bakers' flour, \$20; whitest family flour, \$20.

Mrs. R. S. Lockett, Perkins—Garden seeds, California production, \$10.

B. N. Bugbey, Sacramento—Yellow corn, \$5; proper wheat, \$10; barley, \$5.

George Reuter, Sacramento—Australian wheat, \$10.

J. D. Huffman, Lodi—Display of grain in sheaf, \$40.

J. B. Wilty, Sacramento—Second premium on same, \$20.

VEGETABLES, ROOTS, ETC.

Isaac Lee, Florin—Licorice root, \$5.

P. M. Artz, Perkins—Pole beans, \$5.

R. S. Lockett, Perkins—Blood beets, \$3; sugar beets, \$3; crook-necked squash, \$3.

George Muddox, Sacramento—Cucumbers, \$3.

Mrs. R. S. Lockett—Cantaloupes, \$3; gerkin cucumbers, \$3.

B. N. Bugbey—Sweet potatoes, \$5; red onions, \$3; white potatoes, \$5; Hubbard squash, \$3; largest pumpkin, \$3.

E. F. Aiken, Sacramento—Tomatoes, \$3; peppers for pickling, \$3; marrow squash, \$3; watermelons, \$3.

Felice Gabrielle, Brighton—26 premiums for garden vegetables, \$113.

H. H. Wilson, Nicolaus—Sugar beets, \$3.

L. M. Boggs, Willows—Ranch red onions, \$3.

S. O. Waters, Clements—Pumpkins, special mention and \$3.

Orchard and Vineyard.

GREEN FRUITS.

Apples—W. O. Jennings, Red Bluff, first premium, \$25; W. D. Carpenter, Diamond Springs, second premium, \$20; Robt. McKay, El Dorado county, third premium, \$15; W. J. Belcher, Cosumnes, fourth premium, \$10; Mrs. James Lansing, Sacramento, fifth premium, \$5.

Pears—Neil McDavitt, Newcastle, first premium, \$25; Mrs. James Lansing, Sacramento, second premium, \$20; W. D. Carpenter, Diamond Springs, third premium, \$15; B. N. Bugbey, fourth premium, \$10; J. B. Welty, Sacramento, fifth premium, \$5.

Peaches—J. A. Robinson, Newcastle, first premium, \$25; P. W. Butler, Penryn, second premium, \$20; Geo. Perkins, Newcastle, third premium, \$15; Mrs. Mary E. Fox, Newcastle, fourth premium, \$10; W. D. Carpenter, Diamond Springs, fifth premium, \$5.

Plums—Mrs. Mary E. Fox, Newcastle, first premium, \$25; E. F. Aiken, Sacramento, second premium, \$20; Mrs. R. S. Lockett, third premium, \$15; P. W. Butler, Penryn, fourth premium, \$10.

Figs—Sam C. Waters, Clement's first premium, \$5; Mary E. Fox, Newcastle second premium, \$2.50.

Tropical Fruit—Mrs. Mary E. Fox, Newcastle, first premium, \$20; Isaac Lea, Florin, second premium, \$10.

Oranges—Mrs. William Karr, Marysville, first premium, \$10.

Lemons—W. G. Murphy, Marysville, first premium, \$10.

General Display—Mrs. James Lansing, Sacramento, first premium, \$40; Mrs. R. S. Lockett, Perkins, second premium, \$20.

DRIED AND PRESERVED FRUITS.

Mrs. Lockett, Perkins, best 10 pounds pears, \$5; best 10 pounds peaches, \$5; best 10 pounds plums, \$5; best 10 pounds prunes, \$10; best 10 pounds cherries, \$5; best 10 pounds blackberries, \$5; best 10 pounds strawberries, \$5; and best general display of dried fruits, \$20.

H. S. Jory, Stockton, best factory-dried fruit, \$20.

Weber & Co., Sacramento, second best dried fruit, \$10.

Mary E. Fox, Newcastle, best 10 pounds figs, \$10.

E. Booth, Roseville, best 10 pounds apples, \$5.

R. M. Craig, Winters, best 10 pounds apricots, \$5.

W. D. Carpenter, Diamond Springs, best 10 pounds nectarines, \$5; second best dried figs, \$10; second best general display, \$10.

Special premium for Wm. Pleasant and Geo. W. Thissell of Winters for exhibits of dried fruits.

GRAPES AND RAISINS.

Natoma Water and Mining Company, Natoma—Best general display of grapes by producer, \$25.

James Rutter, Florin—Second best general display of grapes by producer, \$15.

J. B. Whitcomb, Colfax—Best six varieties of wine grapes, \$15.

Mrs. Jas. Lansing, Sacramento—Second best display of six varieties of wine grapes, \$7.50.

BRANDIES AND RAISINS.

H. W. Crabb, Napa—General display of California brandies and wines, \$100.

John Kaiser, Loomis—Best grape brandy, one year old, \$20.

M. S. Nevis, Sacramento—Grape brandy, one year old, \$10.

Berringer Bros., San Francisco—White wine, \$20.

M. M. Estee, Napa—Claret, one year, \$10; claret, over one year, \$15.

H. W. Crabb—Sweet wine, \$20; California port, \$20.

M. S. Nevis, Sacramento—Sherry, \$20.

Fruit Products.

Mrs. R. S. Lockett, Perkins—Blackberry jam, \$3; display of jams and jellies in glass, \$5.

Weber & Co., Sacramento—Display of canned and preserved jams, jellies, etc., factory ware, \$10.

Mrs. H. E. Parker, Penryn—Strawberry jelly, blackberry jelly, \$3; raspberry jelly, \$3;

currant jelly, \$3; raspberry jam, \$3; display of jams and jellies in glass, by producer, \$10.

Mrs. Addie Carter—Display of fruit in glass, by other than factory, \$15; display of pickles, \$3; brandy peaches, \$3.

Mrs. Jas. Lansing, Sacramento—Quince jelly, \$3.

Sutter Canning Company, Yuba City—Display of canned and preserved fruits, jams, jellies, etc., by factory, \$20.

Dairy.

John Hanlon, Walsh's Station—Firkin of butter, \$15.

Andrew Smith, Redwood City—Display of butter in rolls, \$20.

Ed. Arthur, Sacramento—Best cheese, one year old and over, \$15; under one year, \$10; display of cheese \$15 and a diploma.

Flowers.

In this class the Bell Conservatory, which has such a magnificent display of flowers, rare plants, etc., and which has been so much the admiration of all visitors, received the following awards:

Largest collection of flowering plants in bloom, \$20; collection of ornamental foliage plants, \$20; display of cut flowers, \$20; collection of new and rare plants, \$15; display of Colen's distinct varieties, \$15; most varied exhibit of named varieties of dahlias, \$10; collection of roses in bloom, \$10; collection of fuchsias in bloom, \$10; collection of tuberoseas, \$10; collection of pinks, \$10; collection of ferns, \$15; display of bouquets, \$10; collection of plants suitable for greenhouse, conservatory and window culture, \$15; display of hanging baskets containing plants, etc., \$10.

Agricultural Machinery.

Stanton, Thomson & Co., Sacramento—Well-pump, \$10.

Root, Neilson & Co., Sacramento—Apparatus for raising water, \$20.

William Gutenberg, Sacramento—Model quartz-crusher, \$15.

San Francisco Tool Company, San Francisco—Steam engine, California manufacture, \$30.

California Fence Company, San Francisco—Machine for manufacturing field or garden fence, \$20.

A. & A. Heilbron, Sacramento—Hand corn-sheller, diploma; lawn-mower, diploma.

Stanton, Thomson & Co., Sacramento—Cider-mill and press, diploma.

Stockton Combined Agricultural Works, Stockton—Lightning hay-press, \$20.

Baker & Hamilton, Sacramento—Best display of agricultural machinery by any one house, California manufacture, \$50.

Baker & Hamilton, Sacramento—Thrashing machine, \$30; horse hay-rake, \$5; power corn-sheller, \$5.

G. G. Wickson & Co.—Hay and straw-cutter, diploma.

A. & A. Heilbron—Machine-knives, \$5; self-binding harvester, \$20; horse-hoe, diploma; double shovel-plow, diploma.

Stanton, Thomson & Co., Sacramento—Grain broadcast sowing-machine, \$10; hay-pitching machine, \$10.

Baker & Hamilton, Sacramento—Header, California manufacture, \$40; mowing-machine, \$10; combined reaper and mower, \$10; potato-planter, \$5.

Baker & Hamilton, Sacramento—Best harrow, \$10.

Wm. Gutenberg, Sacramento—Best field-roller and crusher, \$10.

W. B. Wilshire & Co., San Francisco—Best display of platform scales, diploma; best stock of scales for general purposes, diploma.

W. E. Mauldin, Sacramento—Best farm-gate, \$10.

Pacific Manufacturing Company, Sacramento—Best windmill, \$25.

Stockton Combined Harvester Manufacturing Company—Best grain-cleaner, \$10.

Baker & Hamilton, Sacramento—Best grain-cleaner attachment for thrasher, \$10.

J. H. Ritchy, Redwood City—Model farm-gate, special premium.

John Klees, Sacramento—Best fanning-mill, \$5.

G. G. Wickson & Co., San Francisco—Best farm feed-mill, \$10.

H. S. Jory, Stockton—Best fruit-drier, \$20.

Childs & Denny, Acampo—Farm-road scraper, recommend special premium.

A. & A. Heilbron, Sacramento—Best display of haying and harvesting tools, \$10.

Stanton, Thomson & Co., Sacramento—Best garden seed drill, \$2.

E. W. Malvin, Sacramento—Best washing machine, \$5; best clothes wringer, diploma.

A. S. Hopkins & Bro.—Best clothes horse, diploma.

Huntington, Hopkins & Co., Sacramento—Best cabbage cutter, \$2; best sausage cutter and stuffer, \$2; best pruning shears, \$2.50.

J. Kendrick, Willows—Gang plow, premium recommended.

James & W. Paterson, Stockton—Steam plow, California manufacture. The committee awarded this plow the premium. Mr. LaRue says it must be submitted to the Board of Directors before being paid.

A. & A. Heilbron, Sacramento—Best sulky plow, \$10; best sod plow, \$5; cast iron plow, \$5; one-horse plow, \$5, display butcher's tools and supplies.

Stanton, Thomson & Co.—Best dynamometer, \$5.

Baker & Hamilton, Sacramento—Belt gang plow, \$25; best stubble plow, \$5; best subsoil plow, \$5; best vineyard plow, \$5; sidehill plow,

\$5; chilled plow, \$5; plow for all purposes, Charles Ott—Best spring wagon, \$10.

Studebaker Bros.—Best pleasure cart, \$10; breaking cart, \$10.

A. Meister, Sacramento—Best open family carriage, diploma and \$25; best top buggy, diploma and \$25; best open buggy, \$10; best two-seated open wagon, \$15.

Wm. D. O'Kane, San Francisco—Best track sulky, \$5.

J. F. Hill, Sacramento—Open buggy, \$10; best business buggy, \$10; wagon or carriage brake, diploma; display of carriage wheels, diploma.

Mike Miller, Sacramento—Best closed family carriage, diploma and \$25.

Miscellaneous.

The following awards for agriculture articles are selected from the list of miscellaneous awards:

G. G. Wickson & Co., display of dairy machinery, diploma and \$15; W. R. Strong & Co., artistic display of fruits, vegetables, canned goods, etc.; J. D. Huffman, harvester designed in cereals; Charles & Denny, weed cutter; A. M. Craig, display of fruit, \$10; L. M. Boggs, general display of vegetables, etc., \$5; Miss Lansing, chestnuts, \$5; S. H. Gerish, banana plant, \$5; Mrs. M. Silvera, marrowfat squash, \$5; Mrs. S. M. Vaughn, jellies, \$3; H. M. Flint, hops, \$3; W. C. Curtis, sheaves of wheat, \$3; N. D. Carpenter, quinces, \$3; H. D. White, sweep horse-power, \$5; Parrie Bros., wine and cider press, \$5; Somney Bros., improved cylinder, \$10; R. F. Derrick, variable nozzle, \$3; J. H. Bowen, patent double harness, \$3; Daniel Best, cleaning attachment, \$10; Isaac Lea, chestnuts, \$3, licorice root, \$5; Harry Williamson, soft-shell almonds, \$3; Mrs. R. S. Lockett, strawberry wine, \$3; J. H. Hamilton, squash, \$3; E. F. Aiken, squash display, \$15; B. N. Bugbey, broom corn, \$5; Mrs. F. P. Lowell, jellies, \$5; R. J. Merkle, hops, \$5; Mrs. H. E. Parker, jellies, \$10; George F. Riels, cotton plant, \$3; Stanton, Thomson & Co., Zurtman road machine, \$10.

Gold Medals.

The full list of medal awards is as follows: For horses—To R. J. Merkle, for his exhibit of draft horses.

For live-stock other than horses—To Coleman Younger & Son of San Jose, for their herd of Durhams.

Second Department, agricultural machinery—Baker & Hamilton.

Third Department, textile fabrics—Mrs. A. Schirmer, Sacramento.

Fourth Department, mechanical products—Huntington, Hopkins & Co.

Fifth Department, agricultural products flowers, etc.—Bell Conservatory.

Sixth Department, green fruits—Mrs. R. S. Lockett, Brighton.

Seventh Department, fine arts—Edwin Deakin, oil painting; fine arts other than oil painting, Sacramento School of Design.

Ninth Department, miscellaneous—California Cotton Mills Co. of Oakland.

Most attractive display in the Pavilion—Weinstock & Lubin, for their miniature store.

Special gold medal awarded to Stockton Combined Harvester Manufacturing Company, for their Improved Houser Machine.

Special gold medal awarded to the Philadelphia Brewing Company of San Francisco.

Special gold medal to the Capital Soap Co., Sacramento, for their display of soap.

Special gold medal to D. Lubin for elod pulverizer.

Special premium of \$20 to J. E. Genung, Sacramento, for pipe organ manufactured by himself.

Special premium for steam plow to James and William Patterson, Stockton, \$100.

Special premium for ladies' phaeton to J. F. Hill, \$10.

Silver medals—B. N. Bugbey, display of farm products; Whittier, Fuller & Co.; T. S. Clark & Son, dressing case; Baker & Hamilton, traction engine; Van Horn, Mather & Frost, San Francisco, collection of maps, globes, etc.; George Muddox, Sacramento, best display of pottery of various kinds; Leak Glove Co., San Francisco, display of leather gloves and mittens; Mrs. Z. P. Brandon, Latrobe, natural history exhibit; R. W. Neely, Jr., Sacramento, display of boots and shoes; California Cotton Mills Co., East Oakland, display of cotton cordage.

AMERICAN TONNAGE IN SAN FRANCISCO.—

This city leads all the ports in the United States in the proportion of American tonnage used in its foreign trade. The last report of the Bureau of Statistics for the fiscal year ending June 30, 1886, gives the proportion entered at the following ports:

	American.	Foreign.
Baltimore.....	45,799	475,671
Boston.....	251,932	922,176
New Orleans.....	66,977	646,642
New York.....	947,256	4,611,632
Philadelphia.....	217,540	937,517
San Francisco.....	423,730	350,960

Hence San Francisco has about one and three-quarter times greater American tonnage than foreign, while all the rest have the foreign from over 4 to nearly 12 fold of the American. The reason of this preponderance is traceable in part to the large number of American steam vessels and the comparatively few foreign, something opposite to what is found on the Atlantic Coast.

J. P. STANLEY has prepared an exhibit of winter flowers grown in Santa Rosa gardens in open air, which will be shipped to the Boston Charitable Institute.

Notes on the Fairs.

The fair for the Seventeenth Agricultural District—Placer and Nevada counties—held at Grass Valley and Glenbrook Park from the 6th to the 10th ultimo inclusive, appears by all accounts to have been a highly successful display of grain, fruit and live-stock, which favorably impressed the throngs of visitors, and also paid well financially.

Glenbrook enjoys the repute of being one of the most beautiful places in the mountains. It is a large basin, which seems to have been dropped down there on purpose for a park, and Nevada county folk are very proud of it. From the list of awards, as published, we might guess that the entries of horses and cattle were excellent; and as a matter of fact it is reported that they were the finest ever made in the district, showing great improvement over former seasons. After the stock parade, the noted equestriennes, Misses A. and J. Kemler of Winemucca, gave an exhibition of their skill in horseback riding which greatly delighted the spectators.

The night-racing by electric lights was rather a failure. The lights were too few in number to illuminate the track, nor did the machinery work satisfactorily.

The pavilion exhibits, as a whole, were very highly spoken of, but we can specify only a few of those that received particular notice from local reporters.

H. B. Nichols, Grass Valley, showed Surprise oats, Mammoth Cuban Indian corn, Minnesota sweet corn, cultivated grasses, including Italian rye, red top, red clover, German millet, Hungarian millet, Johnson grass, alfalfa, timothy, common millet, wheat, mesquit; muskmelons, cabbages, Brussels sprouts, stock beets (three varieties), egg plants, California Mammoth squashes (six weeks' growth), summer crook-neck squashes, Black Mexican sweet corn, watermelons (grown in slickens) of the Cuban Queen, Gipsy, Scaly Bark, Black Spanish, and Black Imperial varieties. His buckwheat, grown without irrigation, attracted much attention, and men from Western States, where buckwheat is raised for profit, declared they never had seen better.

S. N. Stranahan of Nevada City made a handsome exhibit of sun-dried fruits, comprising apples, pears, prunes, peaches, purple and Golden Drop plums, all in prime condition. Of green fruit he also exhibited 30 varieties of apples, and eight varieties of pears. He had a Bartlett pear, one of the largest in the pavilion, which grew on a scion that was set out only a year ago.

Mr. Sutton, whose place is near Nevada City, also showed Bartlett pears from trees of one year's growth.

Fifteen seedling cling peaches, from Allison's orchard, averaged a pound each and filled a box.

G. S. S. Getchell of Nevada City had huge White Elephant potatoes, the seed of which was brought from Three Rivers, Michigan.

Mr. Thornton of Grass Valley made a fine display of vegetables, including cabbage, potatoes, beans, carrots, citrons, squashes, pumpkins and peppers.

Charles Barker had black and white walnuts, at which everybody took a look.

J. R. Balch of Rough and Ready showed superior squashes, cucumbers, watermelons and muskmelons.

The elegant display of fruits from Placer county occupied four tables, and consisted of apples, pears, quinces, plums and peaches in great variety; also Tokay, Rose of Peru, Muscat and Black Portugal, Purple Damascus and Zinfandel grapes. The exhibits were mainly from Newcastle.

J. R. Nickerson had mesquit grass, orchard grass, oats, sweet corn, Casaba melons, beans, tomatoes, potatoes, cabbage; and in grasses red top, Italian rye and French rye; and of seeds mesquit, rye and orchard. Also a sack of fine mohair from the Angora goat.

H. J. Baldwin's Bartlett pears had attached to them a card, stating that last year the tree bore worthless fruit. Two grafts were inserted in 1886, which are now 15 feet in length, and bore over 50 pears this season.

J. H. Nile of Pet Hill exhibited Japanese persimmons, three varieties of figs, eight varieties of grapes, strawberries, apples, pears, peaches and almonds. This was one of the collections that always had about it a crowd of admirers.

W. B. Stuart of Ophir Hill exhibited apples, peaches, and pears, raised on the red land without irrigation, and every one interested in fruit culture became enthusiastic on seeing such splendid fruit.

J. M. Hales, also of Ophir Hill, had a superb display of Hungarian prunes, Damson plums, nectarines, Siberian crab apples, blackberries and apples.

A plate of very small apples, scarcely any of them being as big as the end of one's thumb, was labeled "Pride of Chicago Park." Chicago Park is the name given to a town-site between Colfax and Grass Valley, and the tiny fruit, which makes a delicious preserve was found growing wild in that locality.

Obliged to forego further extracts from reports received, we can only refer again to the

list of premiums awarded, as indicating the varied wealth of produce on exhibition.

Shasta County—Redding.

The first fair ever held in Shasta county began at Redding on the 7th of September, and was kept running four days, during which the town was crowded with visitors and \$1300 worth of season tickets were sold. The opening exercises consisted of music by the Millville band, prayer by Rev. N. B. Klink, speeches by D. N. Honn and F. H. Deakin, "a very able address" by Judge C. C. Bush and a poem by Miss M. Tracie.

The fruits and vegetables shown in the pavilion were remarkable both for quality and quantity. W. W. Morley of Oak Ran had nine varieties of plums and prunes, apples, pears, peaches and almonds. F. W. Fish of Stillwater, 27 varieties of apples; pears, plums, peaches, grapes, almonds, raisins, wine, Dent corn, beets, egg plant, peppers, squash, pumpkins, onions, peas, beans, natural grasses, sunflowers, prunes and figs. J. N. Logan's display embraced beans, potatoes, cabbage, turnips, carrots, beets, barley, wheat, corn, squashes, cucumbers, pumpkins, muskmelons, canteloupes, watermelons, plums, prunes, peaches, grapes, figs, apples, pears, tomatoes, red nectarines and white nectarines, besides canned and dried fruit, jellies, pickles, etc. Dr. J. H. Miller, Redding, exhibited plums, apples, pears, quinces, almonds, peaches, banana leaf, oranges, Japanese persimmons and mulberry leaves. W. W. Williams, cotton plants, tobacco plants, squash, peppers, cucumbers, walnuts and rhubarb.

We have named a few prominent exhibitors, but 60 or 70 other persons made entries, more or less extensive, of the products of farm, orchard or vineyard.

The floral display, consisting of both bouquets and potted plants, was varied and lavish in its beauty. The mineral exhibit contained specimens of ores from nearly all the noted mines of Shasta county, and proved interesting even to those who knew little or nothing about mining. Needlework and pictures were not wanting, and the young band added to the visitor's enjoyment.

As to the live-stock on view at the park, we can only refer to the list of awards printed in last week's RURAL. The races were well attended, and the two grand stands fully occupied each day by ladies. According to a local paper, "pool-selling was lively and a great deal of betting on the outside took place. All kinds of chance games were permitted on the ground, and consequently the sporting men were in high glee." It is hoped that this last will be changed for the better another year, under the rules of the "Shasta County Agricultural and Mineral Association," which, on the strength of the signal and pleasing success of the recent fair, has already been organized.

Rohnerville—9th District.

The fair for the Ninth District—Del Norte and Humboldt counties—was held at Rohnerville, Sept. 27th to 30th. The entries of live-stock, up to 6 P. M. of the opening day, included about 80 horses, mostly draft and roadsters, with a sprinkling of all-work, thoroughbred and saddle animals; half a dozen mules; 40-odd cattle—Durham, Holstein, Jersey, Ayrshire, Hereford and graded, the first two predominating; 30 Cotswold and Merino sheep; and a single pair of Poland-China swine. There was also a small display of poultry.

The showing on parade was particularly creditable to the horse-breeders; indeed, it was pronounced better than at any fair before. A ladies' equestrian contest was among the events of the closing day, and although the mercury touched 90°, the spectators were then most numerous.

The display in the pavilion appears to have consisted mainly of fancy-work, drawings and paintings and preserves—the output of fruits, grains and vegetables not having come up to that of former years—a fact which may have been due to the lateness of the harvest. The Eureka Standard, however, gives great praise to the splendid exhibit made by Mr. Hansel of Camp Grant, which included 17 varieties of apples, 7 of peaches and 5 of pears, English and Eastern black walnuts, peanuts, 6 varieties of peppers, sun-dried French prunes, tomatoes, sweet potatoes weighing 2 and 2½ pounds, watermelons weighing 40 pounds, turnips, beets of second crop weighing eight pounds, table beets weighing 15 pounds—sweet, tender and good—and other vegetables in like proportion. Special notice was taken, also, of a side-hill plow, invented by J. H. Senteny of Blackburg, which differs from the ordinary patterns in that it consists of two plows instead of one double share, and is commended as simple and strong in its construction and every way handy.

Tenth District—Yreka.

EDITORS PRESS:—The eighth annual fair of the Mount Shasta district opened on the 28th, and will continue through the week. Union hall serves as a pavilion. There is a very creditable display from Little Shasta valley consisting of a very large watermelon, pease, tomatoes, peaches that would make some of the Lower California fruit blush, grapes, almonds, apples which for flavor cannot be beaten, chestnuts in the burr, potatoes a foot long, 140 pound squash—and all these raised at an elevation of from 2000 to 3000 feet, mostly on alkali soil.

There is not very much poultry on exhibi-

tion, but what there is is good—Bantams, Plymouth Rocks and a few others. A piece of poetry, composed by a child 13 years old, is worth repeating.

Climbing.

Not at a bound,
But round by round,
Up the ladder we're climbing,
Striving to aim at something higher,
Striving to win the heart's desire,
With nobler zeal the soul to inspire,
Up the ladder we're climbing.

Each step we count
The while we mount,
Up the ladder we're climbing,
Ladder of learning, ladder of fame,
Ladder of wealth, it's all the same—
Up the ladder we're climbing.

There is a nice display of Kensington, arasene, tinsel, embroidery and crazy quilts—some very pretty in their craziness.

I. S. Cowles shows what can be done in the portrait line, with pencil and brush. "Fong—Chiuaman" is the signature to an oil-painting of a stagecoach and railroad train.

John Lehnars has a nice display showing what can be done on White sewing machines.

Riley has an attractive show of fancy groceries. Looking from them to the jelly and wines and canned fruit on one side, and to the cakes and pastry on the other, makes one's mouth water. Marble is also among the exhibits, flour from Mt. Shasta mill and other things too numerous to mention.

The attendance is very large. The races are drawing well, and there will be a great crowd at the ball. The hotels are full—so full, in fact, that it is almost impossible to get anything fit to eat. No eggs are to be had; hens are all on the strike.

Taken altogether, the fair is a success.

Yreka, Sept. 30, 1887.

E. P. S.

Santa Barbara County Fair.

EDITORS PRESS:—It was a thing of beauty, if not strictly speaking, a joy forever. There were fair women and doubtless brave men, for Santa Barbarans are not noted for cowardice. There were beautiful flowers and shrubs and plants. There were immense squashes, one of which weighed 201 pounds; a watermelon of 75 pounds; beets longer than my cane; sunflowers as big as a cart-wheel—baby-cart wheel; tall corn and big ears; oranges the size of my double fist; grapes as large as moderate-sized lumps of chalk; fine-looking apples and peaches and blackberries and strawberries, and so forth, and so on, to the end of a very long chapter.

Fruit preserved by the new process looked extremely well and tempting, and indeed so did all the canned goods exhibited. Lompoc and Santa Maria were there with fine collections of fruit, etc. There was an old-fashioned spinning-wheel and a pair of cards, and I could see (in imagination) my good old mother still making the old wheel buzz. There were excellent displays of hardware and cutlery from Hawley & Co., Edwards & Boeseke and Roeder & Ott. Also, furniture and dry goods from various dealers, and many, very many, other attractions too numerous to mention or even remember. And then the band discoursed fine music occasionally—"discoursed," I think, is the right word; they never "play" nowadays, especially since we have got the railroad.

Going outside of the pavilion, we saw big and strong and fine horses; Durham, Devon and Holstein and Jersey cattle, a fine collection of swine, among which I especially noted an Essex sow and her big pigs. There were hens and ducks and pigeons and guinea-pigs, not to mention two little black bears, playful as kittens.

There was a small steam engine constantly working a mower, which did not progress at all, and did not cut any grain. It doubtless had its uses, but I failed to see them.

The race-course attracted much attention, but it had no charms for me, and I did not even go to the track. I did see four or five horsemen go by at great speed, but I did not note nor care who won. I wish this horse racing could be eliminated. It creates an excitement that is unhealthy—that is too near akin to gambling.

Fine and attractive as was the fair, it was hardly up to that of last year, in any one particular. It was not quite up to my expectations, and I came away a little disappointed. It might have been better. We certainly had the material in our county to have equaled, and I think surpassed, that of last year. When I came home I went into my orchard and saw apples larger and finer looking than any I observed at the fair, and yet I, alas, took nothing, thinking that this rather dry year I had nothing on the mesa worth exhibiting. Others, doubtless, thought and acted as I did. But I suspect the main trouble was, that we were all too busy reckoning up our gains by the big real estate boom to give our fair the attention to which it is justly entitled. We will do better next time. . . . I regret exceedingly to hear of the death of John Taylor. One by one the good, staunch writers for the indispensable RURAL PRESS pass over the silent river, to be succeeded, let us hope, by still better.

S. P. SNOW.

Santa Barbara, Sept. 30, 1887.

THERE is to be an irrigation ditch constructed to carry the waters from the flume on the McCloud to the desert and Squaw valley. This will be the means of opening up to settlement and cultivation land that will become valuable.

Fair Awards.

Grass Valley—17th District.

Following are awards at 17th District Fair for products of agricultural and allied industries:

Cattle.

JERSEYS.—Bulls—3 yrs. old, R. Noell's Jersey Duke, 1st; F. N. Wheeler's Judge Ward, 2d; 2 yrs. old, A. D. Sutton's Major, 1st; R. Noell's Glenbrook, 2d; 1 yr. old, F. N. Wheeler's St. Lambert Lad. Cows—R. Noell, all premiums for 3 yrs. old and 2 yrs. old; F. N. Wheeler's 1st and 2d, 1-yr-old Alma Gold Drop and Pogis Lady. Sweepstakes—R. Noell's Jersey Duke and 4 cows.

DURHAM.—Bulls—1 yr. old P. Hall's St. Peter. Calf—F. N. Wheeler's Gov. Garber. Cows—H. B. Nichols' 3-yr-old Forest Rose; P. Hall, 2-yr-old Edith and calf Moss Rose.

AYRSHIRES.—H. B. Nichols', all premiums and sweepstakes.

HOLSTEIN.—Bulls—H. B. Nichols' Tehama, 1st; Dr. W. C. Jones', Tickler, 2d; F. N. Wheeler's Alfred, 3d. Cows—H. B. Nichols', all premiums except F. N. Wheeler's 2-yr-old Nitze, 2d. Sweepstakes—H. B. Nichols' Tehama and 4 cows.

GRADED.—H. B. Nichols', all prizes except R. Noell's 1-yr-old Sally, Jersey, 1st, and C. H. Barker, calf ¾ Jersey, 1st.

Horses.

STANDARD TROTTERS.—Geo. Dickinson's Richard Scott.

ALI WORK.—R. J. Huston, 3-yr-old mare Kitt, 1st; E. Rabb, 3-yr-old mare Dolly, 2d, and gelding St. John, 2d.

ROADSTERS.—A. I. West, 3-yr-old stallion, Gen. Hamilton, 1st; W. Hashagen, 3-yr-old gelding, Duke, 2d; J. Frazer, 1-yr-old stallion, Thomas F., 1st; M. C. Hogan, 1-yr-old gelding, Duroc, 2d, and colt, Mike Wilks, 1st; C. E. Taber, 1-yr-old stallion, Prince, 2d. Mares—M. P. Peaslee, 3-yr-old Lizzie Mac, 1st; M. C. Hogan, 3-yr-old Belle, 2d; E. C. Morgan, 2-yr-old Beatrice, 1st; Dr. W. C. Jones, 1-yr-old Emma C, 1st; Aug. Combe, 1-yr-old Flora, 2d; C. E. Taber, 1-yr-old filly Cora.

DRAFT HORSES.—R. Noell, 4-yr-old mare Jane, 1st, and 2-yr-old Belle, 1st; W. Hashagen, 4-yr-old Napoleon, 1st; P. Hall, 4-yr-old Mollie, 2d, and 3-yr-old Ned, special; Jno. Bree, 3-yr-old Sally, special.

CARRIAGE HORSES.—A. B. MacRae, span Doc and Dan; B. A. Penhall, saddle horse Flora B.

SWEETSTAKES.—M. C. Hogan.

Jacks.

F. N. Wheeler, Black Hawk.

Thoroughbred Sheep.

M. P. Peaslee took all premiums.

Swine.

R. Noell, boar Billy and sow Jessie, 1st; Geo. Seville, boar, 2d; H. Hanson, sow and pigs.

Poultry.

C. Barker, Langshans; Frank Spencer, Brown Leghorns; M. P. Peaslee, Brahmas and Crested ducks; J. Gassaway, Bronze turkeys, Guinea fowls and Plymouth Rocks.

Grain, Vegetables, etc.

M. P. Peaslee, best half bu. barley and wheat. J. R. Nickerson, rye grass seed; C. R. Hill, half bu. oats, do rye, do sweet corn; Sperry & Co., best ex. flour; C. R. Hill, best and greatest var. by one person; H. B. Nichols, Indian corn on stalks, sweet corn, green, watermelons, muskmelons, egg plant, squash (Summer Crook) and cultured grasses; John Mill, onions, 2d, Winter squash; G. S. S. Getchell, 2d potatoes; T. F. Van Slyke, 2d Indian corn; J. H. Campbell, 1st potatoes, stock and table carrots, table beets, 2d greatest var. and 1st vegetables by one person; J. R. Nickerson, 2d muskmelons, 1st cabbage and tomatoes; H. Waters, 2d carrots and 2d stock beets; J. R. Balch, cucumbers and 2d watermelons; D. Bryan, 2d parsnips; M. Thornton, 1st parsnips, 2d stock, squash and display of var. vegetables, by one person; A. D. Sutton, 1st stock beets; H. Hansen, 2d cucumbers; A. F. Perrin, 2d table beets, peanuts and squash; T. R. Angove, Winter squash; L. Weeks, egg plant; D. Dedman, stock of Bamboo; G. Seville, sunflower; Dr. I. W. Hays, 1st hops, over 10 lbs.

Butter and Cheese.

J. R. Nickerson, jar of butter, over 20 lbs.; John Thorpe, 2d cheese; Mrs. H. L. Hatch, 1st cheese.

Fruit.

GREEN.—S. N. Stranahan, Nevada City, best display and largest var. apples and pears; James Greeley, Newcastle, 2d apples; F. R. Balch, Rough and Ready, 2d apples, 3d pears and 3d plums; P. Sutton, Nevada City, 3d apples; J. M. Hales, Grass Valley, 4th apples, best display and largest var. plums and nectarines; Mrs. Mary King, 5th apples and 4th plums; H. J. Baldwin, Grass Valley, 3d pears; W. B. Stuart, Grass Valley, 4th pears; J. L. Kitchie, Newcastle, 5th pears; G. Perkins, Newcastle, best display and largest var. peaches; G. L. Threlkel, Newcastle, 2d and 4th peaches; R. K. Dunstan, Grass Valley, 5th peaches; P. Drunzer, Colfax, 2d plums; Arthur Sims, 5th plums; R. N. Scott, Newcastle, best display and largest var. prunes; J. H. Nile, Pet Hill, 2d prunes and 1st figs; Mrs. T. H. Moore, Grass Valley, 3d prunes; Levi Fisher, strawberries; Dr. I. W. Hays, blackberries.

DRIED FRUITS.—S. N. Stranahan, best ex. dried apples, peaches, pears, plums, prunes, berries, and beans, display dried fruit; Excelsior orchard, Pet Hill, 2d ex. dried peaches.

NUTS.—Orange Ranch, Penryn, ex. almonds; W. C. Pope, ex. English walnuts; C. Barker, ex. California walnuts.

TABLE GRAPES.—J. H. Nile, best and largest var., not less than three bunches, and 2d ex. grapes, not less than three bunches each kind; Thos. N. Payne, Grass Valley, 2d var.; C. T. Adams, Newcastle, best ex. grapes, not less than three bunches each kind; G. D. Kellogg, Nevada City, 3d do; T. N. Paine, best one kind, and best and largest var. wine grapes.

PRESERVES, JELLIES, ETC.—Mrs. Chas. Barker, ex. hermetically sealed fruits and jellies.

WINES AND BRANDIES.—A. B. Driesbach, Indian Springs, all prizes except T. N. Paine, white wine.

AGRICULTURAL NOTES.

CALIFORNIA.

Contra Costa.

GRAPE CROP.—Concord *Sun*, Sept. 24: The yield will not be less than 25,000 tons, several of our vineyardists believing the season's crop will reach 30,000 tons.... The Martini vineyard of 50 acres will average 8 to 10 tons. The 120-acre vineyard of the Mt. Diablo Vineyard Company will average seven tons. Going through the Glen Terry vineyard, near Clayton, we were surprised at the heavily loaded vines on all sides. The pickers had just finished stripping 304 Chasselas Fontainebleau vines, the product weighing 7068 pounds. The vines are planted 7 feet apart, which will make the yield of this choice wine grape fully 8 tons to the acre. Of Burgers, Mr. Terry has 12 acres, which will yield an average of $7\frac{1}{2}$ tons. The vineyard comprises 79 acres, nearly all set with the choicest of wine and raisin grapes, of about 20 varieties.

Del Norte.

TIMBER-LAND BOOM.—Crescent City *Record*: Since the timber boom has struck this vicinity quite a rush has been made for timber claims, and parties can be seen going to the woods every day, map in hand, looking for vacant claims. Last week five applications were filed at the Land Office in Eureka, for the purchase of timber land, by residents of this place.

El Dorado.

DRIED FRUIT.—Placerville *Republican*, Sept. 28: Louis Landecker has been shipping large amounts of dried peaches, pears, plums, and nectarines from this city the past week. Three carloads have already been forwarded and nearly as much more is to be received. Most of the fruit comes from the neighborhood of Coloma.

A CANNERY FOR PLACERVILLE.—*Mountain Democrat*: James Blair, C. F. Irwin, F. F. Baras and Sam Alden have purchased from Judge Blanchard the brick buildings in Upper Town for a fruit cannery. They intend either to organize a company for canning fruits or to offer the property on favorable terms to those who will establish a first-class cannery. Whichever course is taken, we understand a cannery is to be established. The need of this method of handling fruits has been greatly felt this year, and every inducement and encouragement should be given for the successful inauguration of this enterprise.

Fresno.

DISGUSTED JACK-RABBITS.—Fresno *Republican*, Sept. 23: In some portions of this county the jack-rabbits have proven a serious pest the past season, and the damage done to newly planted orchards and vineyards outside the more densely settled localities has in some instances been a source of discouragement to the planters. We have heard of one person who has defeated the army of jacks and saved his tender vines and trees. Edward Roach of Washington Colony lives near the outskirts, and feeling that it would be a hopeless undertaking to try to kill all the rabbits which were swarming in from the uncultivated plains, he concluded to try to make his young vines and trees unpalatable to the hungry but fastidious rabbits. He procured 25 pounds of sulphur and 50 cents worth of asafetida, dissolved both in water, and sprinkled the mixture on the foliage of his newly planted 10-acre raisin vineyard. The result was all that could be desired. Not a leaf in that vineyard was nibbled after the sulphur and asafetida treatment. This simple recipe may be the means of saving many hundreds of dollars to the planters of new orchards and vineyards. Its cheapness makes its general use practicable.

Humboldt.

WOOL PROSPECTS.—Eureka *Standard*, Sept. 17: G. S. Kneeland, one of our largest wool-growers, who has a fine range adjoining Blocksburg, has been in Eureka for two days. He says the outlook for wool-growers is not favorable just now, but he intends to keep his fall clip for better prices. He sold his spring shearing of 18,000 pounds at 23 cents, and thinks he can afford to wait with his fall wool for a better price than is now obtainable. He sold 450 mutton sheep to Mr. Henry of Napa county last week, and got for them \$2.75 per head on the ranch. They were fine mutton and brought the top price.

PRACTICAL FARMING.—Humboldt *Standard*: Wm. Forbes, who resides upon, and owns 80 acres of land on, what is known as the "Island"—being the section of country between the Eel and Salt rivers—has most of his place down to clover. When it is all in grass he will be able to keep 60 cows and raise their increase. At the present time he has on the place 50 cows, 9 yearlings, 1 bull, 4 work horses, 3 colts and 15 hogs, and is raising 40 calves. He has five acres in root-crops—mostly carrots. He pulled and weighed one row, averaged the balance, and the estimate showed 100 tons to the acre. Mr. Forbes sold a two-year-old colt to Mr. Winslow of this city which weighed 1540 pounds. This colt was sired by W. H. E. Smith's horse, Val Jean, and is out of a St. Cloud mare. He took the first premium at the District Fair last year as the best yearling. Mr. Forbes has just put up a new barn. The main building is 40x30 feet, with a 22-foot shed on one side and a 16-foot shed on the other. The barn will be used to

house and feed his cows in winter. He milks his cows ten months in the year. We venture the assertion there is no place which can show better than this outside of California. In Humboldt county there is a large region of territory equally good for grass, and in much of the Eel River valley it is claimed a cow to the acre can be kept and the increase taken care of until a year old.

Inyo.

EASTERN SLOPE FAIR.—*Independent*, Oct. 1: The fair at Bishop Creek opened last Tuesday. The season is too far advanced for a display of fruits other than apples and grapes; out of these samples were shown that might be equalled but not excelled. The largest display of fruit was made by Mr. W. T. C. Elliott of Big Pine. In variety, extent and beauty it would attract attention anywhere. Mrs. Sneden showed two lots of peaches of different varieties that were fine, when the lateness of the season is considered. In vegetables and grain the display was equally creditable. In the neighborhood of Bishop Creek much care has been given to horse-raising, and for quality, if not for quantity, the display of horses was quite equal to anything that could be seen at any other fair in the State. The Norman horses shown by Mr. Rowan and the product from these fine animals, would take rank with the best of their kind anywhere. Mr. Sanger of Alvord showed a lot of draft mares hard to beat. He also showed a thoroughbred Hambletonian stallion that no doubt is one of the finest animals of that famous strain. Many others had fine mares and geldings on exhibition, but no complete list of animals exhibited has been provided.

Lassen.

A SNUG FARM.—*Lassen Mail*, Sept. 28: S. G. Alexander's ranch, four miles from Susanville, on the Alturas road, is nestled in a little valley, hemmed in by lofty mountains on the north and west, while a low bench of rocky hills bound on the south and east. His grain and fruit land contains about 100 acres, while adjoining he has considerable more which he uses for range for his horses and cattle. From 37 acres he has this season cut over 100 tons of hay, and from 33 acres he thrashed over 600 bushels of very fine wheat, oats and rye. The grain only received what water fell from the heavens. About 10 acres in the rear of the dwelling is planted in orchard and garden truck, half and half. Immense pumpkins and squashes lay around. A couple of acres are planted in corn, beets, cabbage, potatoes and sorghum. The juice of the latter Sam converts into vinegar, and he has invented a neat little machine with which he crushes the cane and squeezes out the liquid. He has beets which will weigh 26 lbs., carrots 18 lbs., turnips 24 lbs. He dug up and showed us potatoes as large as a man's head—the largest spuds we have ever seen. The garden is irrigated from living springs west of the house. Mr. Alexander has a thoroughbred Poland-China boar, a splendid specimen of hog flesh, that weighs in the neighborhood of 300 pounds. A couple of pigs sired by the big fellow were born about the middle of last May: the largest weighs 100 pounds. A large number of horses and cattle are now fattening on the stubble. Mr. Alexander has recently completed a cattle barn to be used in the winter for feeding stock and protecting them from the elements.

Los Angeles.

COLD STORAGE.—Los Angeles, Sept. 26: The Fullerton Cold Storage Pork Packing Company has incorporated for the purpose of conducting the business of cold storage, curing and packing meat, manufacturing ice, buying and selling the aforesaid merchandise, and transacting other business auxiliary to said purposes. The principal place of business is Fullerton, Los Angeles Co. The amount of capital stock is \$100,000, of which there has been actually subscribed \$40,000, as follows: H. G. Wilshire, \$12,500; G. H. Amerige, \$5000; W. B. Wilshire, \$12,500; W. H. Wagner, \$5000; E. C. Love, \$5000.

Mendocino.

EDITORS PRESS.—Not seeing much in your valuable paper from this lovely little city and beautiful valley, I write you a few lines. The grain crop in this valley is all thrashed and proves very good. Our fruit crop also is good. Hops are picked and baled; they turned out well, but the price is low. Sheep-shearing is in full blast now, and I hope wool will be in good demand at a fair price. I don't see what is to hinder our county from becoming one of the richest in the State, according to the population, when we have so much to sell. Mendocino's fine redwood, and her wool and hops, horses, cattle and hogs bring in a great deal of money; and the railroad will soon be here, and then we can send out our surplus of grain. We can grow almost anything here. We think we have the nicest climate in the State, and we have less wind in this valley than in any other place I have ever lived in. Since the railroad started for Ukiah, land has been selling for fair prices. There is no Government land in this county to take up, that a man can make a living on; so people need not come here to get homes unless they are ready to pay good prices for land. We have good schools, five or six churches and but few Chinamen.—J. F. Todd, Ukiah, Sept. 30.

HOPS.—*Dispatch and Democrat*, Sept. 30: Anderson valley can produce hops of a superior quality. We have on our table a sample from the yard of Wm. H. Cureton, dried by A. V.

Stanfield, which will be hard to beat. Mr. Cureton's 16 acres yielded nearly a ton to the acre. At the District Fair in Ukiah next month it is expected that every hop-grower will have samples on exhibition, and take a lively interest in showing how far this county excels in the production of the important lupuline plant.

Nevada.

DEER IN CLOVER.—*Grass Valley Tidings*: Many of our foothill farmers who raise clover are complaining about the depredations of deer. The animals go into the fields at night and feed on the clover heads, and have a real good time. At Dr. Jones' farm, Newtown, the deer seem to be very thick; but the Indians there have been successful in getting fresh venison. Deer fattened on clover blooms ought to make good eating when the meat gets the right kind of manipulation over a quick kitchen fire.

San Bernardino.

RAISIN PROSPECTS.—*Valley Echo*, Sept. 29: Mr. Kyle, manager for A. J. & D. C. Twogood, says that so far as reports have come in regarding the raisin crop for 1887, they are very favorable. Those who are now picking found their crop so much heavier than they expected that they had to send in orders for more trays. Etwanda will have an immense crop. They have already bought 6000 trays, and they expect to have 50,000 boxes. The quality of the grapes is all that could be desired.

PROFITABLE YOUNG PEACHES.—San Bernardino *Index*, Oct. 1: S. R. Utter, out in the Highland neighborhood, has $7\frac{1}{2}$ acres in peaches in the third year of their growth. They are not all of the best varieties, but they have furnished him over nine tons already, and there is still some fruit unpicked. He sold for \$30 per ton, not being so situated that he could dry them himself. This is an average of \$36 an acre, but there were some portions that yielded \$60 per acre. The soil is sufficiently damp to require little or no irrigation. Considering how young the trees are, this is a fine showing.

FRUIT YIELD.—*Index*: The peach crop of the East San Bernardino valley is at least 50 per cent more than the estimates, and the fruit is of the best quality. The Redlands, Lugonia and Crafton orange crop promises to be unusually large and exceedingly fine.

San Luis Obispo.

COUNTY FAIR.—Press dispatch, Sept. 24: The San Luis Obispo County Agricultural Association, No. 16, met this afternoon and perfected arrangements for holding a county fair for four days, beginning Oct. 11th. Entries for races close Oct. 8th. Three thousand dollars is offered in prizes. The pavilion is located in Blochman's hall, near the center of the city. One of the features of the fair week will be a polo contest between English and Mexican riders.

SAMPLE VEGETABLES.—S. L. O. *Tribune*, Sept. 23: Arroyo Grande shipped to the Mechanics' Fair a pumpkin grown by Geo. Taylor that weighed 152 pounds and measured seven feet six inches in circumference. This is a table pumpkin and not a squash. There were also six Gloria Mundi pears from J. M. Price's that weighed 53 pounds. J. D. Roberts has shipped two onions to W. H. Maule of Philadelphia, one weighing three pounds seven ounces, measuring 21 inches in circumference, the other weighing five pounds 2½ ounces, measuring 24 inches. He is competing for a \$500 prize.

Santa Clara.

A BIG BIRD BELLIGERENT.—San Jose *Chronicle*, Sept. 27: W. R. Pease, who lives near Mt. Hamilton, had his attention drawn by the cries of the cattle in his corral about five o'clock last Saturday evening, and on going to learn the cause, saw a large eagle trying to fly over the fence with a young calf in his talons. Mr. Pease seized a pitchfork and struck the bird, which let go the calf and attacked him, and he sustained a number of severe blows from the eagle's wings before he succeeded in impaling it on a pitchfork prong. The calf was so badly injured that it had to be killed.

UNUSED TO THUNDER-STORMS.—San Jose *Mercury*, Oct. 1: The thunder and lightning last week stampeded a band of horses on the Murphy ranch, lately purchased by Messrs. Lion & Buckley, and in running pell-mell into an arroyo four valuable horses had their necks broken, two had their legs broken, so that they had to be killed, and six more were seriously injured.

Santa Cruz.

PAYING POTATOES.—Santa Cruz *Sentinel*: A. H. Underwood of Pleasant Flat, above Soquel, raised the present year on one fifth of an acre of land 115 sacks of large potatoes, Burbank seedlings, and 12 sacks of small potatoes of the same variety, which he sold at \$1 per sack for the large and 35 cents for the small potatoes, thus realizing \$119.20. After paying for the seed and labor out of this he had \$99.30 left.

Sonoma.

CANNERY OUTPUT.—Santa Rosa *Cor. Call*, Sept. 29: During the past four months of the cannery's operations goods have been turned out as follows: Peaches, 400,000 cans; grapes, 60,000; blackberries, 80,000; pears, 200,000; plums, 30,000; raspberries, 24,000; apricots, 75,000; corn, 20,000; tomatoes, 80,000. While the establishment has been running the payroll has averaged \$1800 per week for help.

FINE PEARS.—Sonoma *Democrat*, Oct. 1:

Dr. A. F. White has brought to this office large pears of the Sheldon variety, grown in his orchard near this city. They average one pound in weight each. Beautiful specimens of four varieties of pears were shipped to the Mechanics' Fair by Col. M. L. McDonald Tuesday—Japanese Evergreen, Keiffer, Sheldon and Easter-Burre. Three of the Keiffer variety weighed three pounds and a half.

Solano.

A RIO VISTA COLT.—Dixon *Tribune*: Louie Ruble has, we think, the boss colt in Solano county. When he was put on the scales, last week, he tipped the beam at 1286 pounds. This colt was a year old last March. He is of the Norman stock by Ruble's Demollette. This is the kind of stock produced here in the hills. If any one knows of a finer yearling, we want to hear of it.

Sutter.

THE SEASON'S CANNING.—*Sutter Farmer*, Sept. 23: The cannery finished putting up fruit for the season after a very successful run during the entire summer. About 15 hands are still at work labeling, packing and shipping the canned goods. The following is the pack: Apricots received, 150 tons; put up, 6000 cases; peaches, 225 tons, and 10,000 cases; Bartlett pears, 20 tons and 1000 cases; tomatoes, 15 tons and 500 cases; miscellaneous fruits, 50 tons received and 2000 cases put up. The price paid at the cannery ranged from 1½ to 2 cts. per pound, according to the kind of fruit and its condition. The fruit was well graded and sold on its own merits.

DRIED PEACHES FOR CHICAGO.—*Appeal*, Sept. 29: A carload of dried peaches (22,000 pounds) was shipped from Abbott & Phillips' orchard, Sutter county, to Chicago yesterday. The fruit was bought by a member of a Chicago firm in advance of the drying season, and the price has since risen a good deal. Mr. Phillips says he could get 14 cts. per lb. for the lot now, at which rate the carload would be worth \$3080. The carload he sold was pronounced the best that the buyer had seen this year in any section of the State. It takes about seven pounds of fresh fruit to make one of dried. At 14 cts. per lb. for the dried fruit, the peach orchards of this section would yield fully \$100 an acre.

HOG CHOLERA.—What is supposed to be hog cholera has appeared in Sutter county. Animals attacked by the disease succumb in a few hours. If the malady be really hog cholera, stringent precautions should be taken against its spread. The dead bodies should be burned and sick hogs quarantined. The ground occupied by the diseased animals should be burned over, if possible, or at least plowed. A good preventive of hog cholera is said to be as follows: For a herd of 25 head give twice a week of bran about one peck; salt, one quart; wood ashes, one peck; soda, quarter of a pound, and about one tablespoonful of carbolic acid; all mixed well.

Stanislaus.

WALNUTS AND ORANGE TREES.—Modesto *News*, Sept. 23: A fine orange tree full of green fruit has been shipped to the Mechanics' Fair from Vogt's orchard at Knight's Ferry as a sample of what Stanislaus county can do in the orange business. W. H. Finley to-day sent a large sample of English walnuts raised upon his ranch near Modesto, to the Mechanics' Fair to be added to our exhibit. The trees upon which the nuts were grown are fully 10 inches in diameter and of hardy growth, showing that they can be raised here without trouble. Besides the above species, which is quite rare, Mr. Finley has a number of trees of American varieties of walnut, all of which are bearing.

FROM DIFFERENT ZONES.—Modesto *Herald*: R. E. Bangs brought into our office last week two products of his orchard, which flourish side by side in our wonderful climate, though they are natives of different climatic zones. One was a cluster of barberries, which naturally grow only in the colder parts of the North-eastern States and Canada; the other was a bunch of pods from the algarroba tree, a native of Southern Italy and Spain. The pods, when tender, are considered fine eating, and, when dry, are a valuable food for domestic animals. Cattle are very fond of, and fatten rapidly upon, them, owing to the great amount of saccharine matter they contain.

Tulare.

AILING CATTLE.—Visalia *Times*, Sept. 29: An unknown disease is prevalent among the cattle pastured along the borders and north of Tulare lake. It generally attacks the fattest animals, and in a majority of instances results in death. Ground flax-seed is said to be a specific, and sulphur in mild doses is beneficial. In some instances the cattle go blind. The stock can be saved from blindness by putting common table salt in the eye.

COUNTY ITEMS.—*Delta*: Tulare county will make more raisins this fall than during any two years previous. There is a large acreage of vine-lands just coming into bearing that will greatly increase the amount of raisins next year. Geese are coming south in immense flocks and Tulare lake and contiguous bodies of water are said to be alive with them, as well as with migratory ducks and other aquatic game birds. A large amount of alfalfa will be thrashed this year in Tulare county. A larger acreage was allowed to go to seed than had been calculated on, and in some instances the yield has been very heavy.

SELECT READING.

The New National Hymn.

[The following national ode, written by F. Marion Crawford and recited by Prof. Murdock with a chorus of 200 men's voices, was one of the impressive features of the Constitutional Centennial at Philadelphia, Sept. 17th.]

Hail! Freedom! Thy bright crest!
And gleaming shield thrice blest.
Mirror the glories of a world thine own;
Hail, Heaven-born peace! Our sight
Led by thy gentle light
Shows us thy paths with deathless flowers strown.
Peace, daughter of a strife sublime,
Abide with us till strife be lost in endless time.

Chorus—Thy sun is risen and shall not set
Upon the day divine!
Ages of unborn ages yet,
America, are thine!

Her one hand seals with gold
The portals of night's fold,
Her other the broad gates of dawn unbars;
O'er silent wastes of snows,
Crowning her lofty brows,
Gleams higher her diadem of Northern stars;
While clothed in garlands of warm flowers
'Round Freedom's feet the South her wealth of beauty
showers.

Chorus.

Sweet is the toil of peace!
Sweet the years rich increase
To loyal men who lived by Freedom's laws;
And in war's fierce alarms
God gives stout hearts and arms
To freemen sworn to save a rightful cause.
Fear none, trust God, maintain the right,
And triumph in unbroken Union's peerless night.

Chorus.

Welded in war's fierce flame,
Forged on the heart of fame,
The sacred Constitution was ordained;
Tried in the fire of time,
Tempered in woe sublime,
An age has passed and left it yet unstained.
God grant its glories still may shine
While ages fade forgotten in time's slow decline.

Chorus.

Honor the few who shared
Freedom's first fight and dared
To face war's desperate tide at the full flood;
Who fell on hard-won ground,
And into Freedom's wound
Poured the sweet balsam of their brave hearts'
blood.

They fell, but o'er their glorious grave
Floats free the banner they died to save.

Chorus.

In radiance heavenly fair
Floats on the peaceful air
That flag that never stooped from victory's pride;
Those stars that softly gleam,
Those stripes that o'er us stream,
In war's grand agony were sanctified;
A holy standard pure and free,
To light the home of peace or blaze in victory.

Chorus.

Father, whose mighty power
Shields us through life's short hour,
To Thee we pray; bless us and keep us free;
All that is past forgive,
Teach us henceforth to live
That through our country we may honor Thee,
And when this mortal life shall cease,
Take Thou at last our souls to Thine eternal peace.

Joaquin Miller's Open Letters.

[NUMBER 4.]

To the Editor of the New York Herald:

SIR:—In your paper of last week, which has reached me only to-day, you say, "they have something more than a land 'boom' in California; it is a land craze."

Do you think it quite right to say such a thing simply because a few thousand or maybe a few hundred thousand people prefer this kindly coast to the granite and the snows of New York? It is not right; it is a very cruel assertion, as I think I can easily show. Besides, it is far, and very far from the truth.

Let us go back over the ground of events for a few years. For more than a decade your paper and its contemporaries had been continually calling California "the earthquake State." We could not report either a rise or a fall in real estate without having something more than an insult thrown in our teeth about the "instability of our lands." Meantime New York City doubled, trebled, quadrupled in the price and value of realty. California suffered that New York might flourish. That lesser bay, that lesser land, that State which is less than one-third our own, not only in area but in all things that go to the building up of a great commonwealth, seemed to glory in the possible overthrow of its great rival by the Golden Gate.

Finally the earth began to tremble from Maine to Florida. Dishes and glasses knocked and rattled on the tables at Delmonico's, and then we began to hear less about "the terrible earthquakes of California."

After awhile came the awful calamity of Charleston. Half the South seemed shaken

loose; and the people began to land in Southern California as they had not landed since the days of gold.

And now, do you remember, Mr. Editor of the New York Herald, that you actually advised invalids to trust themselves to staid and established Southern Europe rather than to the Southern States? Well, you did, and with a dig in the ribs of this State at the same time. Then came the earthquake at Nice and all along the Italian border over against France!

And then it was that people who love the tranquil weather and warm sweet elements began to look about, and they began to look beyond the columns of a selfish press. A little serious inquiry revealed the truth that *there never had been, in comparison, a single earthquake in California.* The sinking islands off the coast of New Orleans, the sunken city of New Madrid up the Mississippi, the cyclones from Texas to Maine, the wreck of Charleston, the ruin of little cities all along the Mediterra-

this for us is going to go begging for buyers? Is such land high, comparatively? Land is at least ten times higher in England than here. Yet here we raise fruits and cereals at one-tenth the cost. Water seeks and finds its level, sooner or later. No, indeed, Mr. Editor of the New York Herald, there is no "craze" here. The only craze I can make out is the craze of your statement. Land is still dirt cheap here. Let us fancy for a moment that there was in the State of New York a single county where you could every day in the year pluck fruits and flowers and walk in the warm sun and be healthful and happy! Why, all the great and energetic architects of your giant city could not build houses half fast enough to accommodate the coming people. Well, with fine soil, five railroads pouring this way and flooding the land with people, you can easily fancy that they have found that haven of fruit and flowers, and are not going to be at all alarmed at your cry of "craze."



MISSSES' COSTUME.

nean sea—all these things stood up to testify that California was about the quietest place on the whole face of the earth.

And people kept coming and coming and coming; and they are going to continue to come right straight along for the next ten, twenty, thirty years.

Why? Why, because this is the cheapest, healthiest, pleasantest spot on this globe in which to live. I can to-day get a better dinner in San Francisco for 50 cents than I can possibly get in New York for five times that sum. I know New York City well. I have spent much of the last few years there; my family—to join me soon—lives there, and, as I pay the bills, I know exactly what I am saying.

And now let us see about this "craze"—this "land craze," of which you speak so emphatically and so unjustly. Let us see if land is really selling for one-half what it is worth in California at this hour. I think I can show clearly enough that land is still very cheap here, and that any man who buys and holds land in California will not only have a safe and pleasant home, but will more than quadruple his money.

I was dining with George Alfred Townsend, the greatest living correspondent, the other day, and he explained to me that, wishing to have something very nice for his little daughter, last month in London he bought a dish of fruit. And what did it cost? More than \$2! He asserted that a better plate of fruit could be had here in Oakland for ten cents.

Now do you imagine that a soil that can do

But back of all this lies the fact that man began life as a gardener. We have plenty of wealth in the world now. The island of England has gold enough on it to sink it. The great iron boxes of the United States are heaped up and bursting open with silver and gold. There are so many millionaires in America to-day that it is no longer either a distinction or any special recommendation to be reckoned a millionaire.

Well, as said before, man began life as a gardener; and his higher and finer instincts lead him back to some sort of Eden with a precision and a certainty that teaches me above all things the truth of the tender and piteous story of Paradise.

And so it is that with all this heaped-up wealth of the world there are to-day thousands upon thousands of people who are casting about for some sweet and tranquil spot whereon to build an earthly Eden.

It was the fashion for Englishmen for ages to go to Italy. In fact, England had been going for 1500 years right out of the fog of London into the bright sunlight of Italy, until by the help of her poets and her painters the world began to think there were no skies on earth but those of Italy.

Then came the Italian earthquakes. And now, and only now, the world begins to see the blue skies of California. And the world is coming this way. Craze? No, indeed. It is all laid down in the law of demand and supply with the precision of mathematics.

Finally, let us now approach a pretty truth, deal with it frankly, and accept it gladly and tenderly. There is a silent and holy religion over the civilized earth that is seeking expression in forms of beauty. Let us call it the religion of Beauty, for want of a better name.

Fifty years ago there was hardly a park with flowers in the whole world. To-day not a town in the land but has its parks, its public gardens, its outdoor temples, builded to the God of Beauty.

And this love of the beautiful has entered the threshold of every civilized land. It sits by the hearthstone of every perfect home. It is as sacred as the family altar.

Well, this worship of the beautiful, this Temple to Beauty, has here by this greatest sea its extreme devotees. What man of any place or position here in California but has his Garden of Eden at his door? Travel the world over and you will not see as many flowers and as beautiful ones as in this one great State of ours. The gentle and the refined have come here to rest, to see beauty, to get back into Eden so far as they may, to rear an altar under the trees, to silently adore in the old Druid way the serene God of the Beautiful. And so, I repeat, they come, and come, and will continue to come, simply because this is the one spot of the vast earth that offers so much for so little—because this is the cheapest, healthiest, happiest spot that man ever set his foot upon since the expulsion.

Craze? A land craze? Land is cheaper in California at this hour, I repeat again and again, than on any other part of the globe.

JOAQUIN MILLER.

Oakland, Cal., Oct. 3, 1887.

Misses' Costume.

A decidedly French color combination is achieved in this instance with crimson Bengaline silk and dark-green French serge. The four-gored skirt is entirely covered by the kilt, and consequently will usually be made of lining goods. The kilt is laid in uniform plates that are fashionably deep, and flare toward the lower edge, which is finished with a blind-sewed hem. On the back is a simple drapery that falls in two leaf-points nearly to the edge of the kilt; its draping is made by looping at the center, and is bouffant over the tournure. A band joins the plaited top of the drapery and is attached at each end to the belt of the skirt.

The basque has its fronts closed at the left side of the center above the bust, and is cut away so as to leave a wide space between the front edges below. To the cut-away edges are joined lapels of the silk, which curve gracefully at the waist-line, and are decorated with a row of three large ball buttons placed along the upper part of their back edges. A full vest of silk is visible between the cut-away edges, and droops in the picturesque Fedora fashion. Its top is gathered and joined to the lower edge of the overlapping part of the right front, and the vest is caught up on the outside of the front to conceal the seam. It is mounted on a wide front of lining that underlies the right front, the lining portion meeting a narrower front of lining arranged under the left front; and the closing of these parts is made with hooks and loops under the left front. This mode of construction renders permanent the picturesque effect and makes the basque easy to adjust. Single bust-darts taken in the fronts and lining portions, under-arm and side-back gores and a curving center-seam fit the basque, the center-seam being terminated at the top of an underfolded box-plait, which imparts a pretty effect over the tournure. The collar is in the high-standing style, and its ends meet at the throat. The sleeves, which are in coat style, have a long, narrow notch at the back of the wrists, and are finished with cuff facings of the silk.

Other colors in the same materials or any two fabrics preferred may be similarly combined. Frequently three varieties of goods will be associated, silk being used for the vest, velvet for the lapels, collar and cuff-facings, and wool goods for the rest of the costume. Woollens of all varieties are suited to the mode, nun's veiling, serge, cashmere, flannel, camel's-hair and cloth being preferred. Plaid, striped, shot, figured, embroidered or checked goods combine well with plain material, and even in such combinations velvet may be introduced. Braid, velvet or fancy ribbon, passementerie, pipings, cordings, or any simple decoration may be applied to the basque and kilt, if a plain finish be not desired.

Plumage and soft silk trim the jaunty hat of fancy straw.

DO JUSTICE TO YOUR WORKMEN.—The physical comfort of a man who, of his own accord, is industrious, the *Builder* and *Woodworker* says, is in every way a matter which has an actual money value. Those who are disinclined to keep steadily at work should be allowed no pretense of an excuse of unsuitable surroundings. The inference it adds is plain: Do justice to your workmen, and, as a rule, they will do justice to you; at any rate, an injustice done them will surely, sooner or later, be returned with interest.

"CALIFORNIA."—Among the productions of amateur artists, in the gallery at the Mechanics' Fair, we noticed a reduced copy in water colors of Cooper's famous "California," by Mrs. Laura McDonald, daughter of our valued contributor, Mallie Stafford, which betokens considerable skill in handling the pencil and no little painstaking effort.

W. R. Strong & Co.

While at the State Fair we found opportunity to call at the store of W. R. Strong & Co. of Sacramento, the well-known fruit-shippers, seed merchants and nurserymen. The store was a busy, bustling place, as might be expected at the headquarters of a firm which had up to September 17th, the date of our visit, shipped over 420 carloads of fruit and vegetables out of the State. We were interested to note something of the distribution of this fruit, and found that 412 cars, shipped up to September 13th, were distributed as follows:

Cars.	Cars.
Utah.....34	Montana.....17
Wyoming.....16	Colorado.....86
Nebraska.....77	St. Louis.....26
Kansas City.....6	Cincinnati.....4
Chicago.....25	Minneapolis.....42
St. Paul.....26	Boston.....20
New York.....21	Philadelphia.....3
Other points.....9	

We accepted an invitation from Robert Williamson to ride out with him to the Capital nurseries owned by W. R. Strong & Co. and situated on a fine piece of land in a commanding position adjoining the city. This place comprises 130 acres and is only one of several farms owned by the firm. They have, in fact, 250 acres of orchard and nursery in Sacramento and Placer counties, and propose to plant from 80 to 100 acres more this year. They have about 2,000,000 trees and plants, and set about 800,000 buds this year. The stock which will be available for planting this year will include about 180,000 peach and large quantities of other fruits. The trees we noticed in riding along the rows were exceptionally large and vigorous.

The pumping arrangements and the water supply at the Capital nurseries is notable. They have a cemented cistern 12x18 feet and 22 feet deep. From the bottom of this an 8-inch bore descends 116 feet. When the pump is stopped the water rises a certain distance in the cistern; when the pump is working the water sinks to about one foot below the bottom of the cistern, and all the pumping they can do does not lower it beyond that. To test the well for the satisfaction of the city authorities, they ran their engine and pumped for 60 hours continuously without lowering the water more than one foot. As the pump is a large centrifugal driven by a 14-horse power engine, and throws from 650 to 700 gallons per minute, one can see what a vast amount of water the well supplies.

Strong & Co. expect an active trade this winter in nursery stock, seeds, etc. The seed business is a great item with them. They have been in the business a long time and claim to do the largest shipping business in seeds in the State. We were much pleased with all we saw around the establishment as betokening thrift, energy and enterprise.

Japanese Tree Importing Company.

This firm had an exhibit of the Oonsiu orange trees in a prominent position on the main floor of the Pavilion during the State Fair. The trees were quite small but had blooms upon them, and young fruit had been shaken off during the transit. Mr. Baker, the secretary of the company, was very busy during the Fair explaining his exhibit, as people were attracted by the sight of such small trees in bloom. He told our reporter that he found a general disposition among people to plant the trees, and he was in negotiation with some parties who planned to plant largely.

We have received a letter from the president of the company, Mr. Amore, who has been in Japan during the summer selecting stock for shipment to this coast, saying that he expects to arrive in California during the latter part of the present month. He expects to bring with him a portion of a large importation of Oonsiu oranges which the firm will make this year. A considerable amount of the fruit is expected to reach San Francisco by the next steamer, and both trees and fruit can then be seen at the company's office, at 120 Sutter street, San Francisco. They will also have a full stock of bamboo, camellias, camphor and tea plants, peonias, lily bulbs, Japanese seeds, etc., and expect to do an active business during the coming planting season.

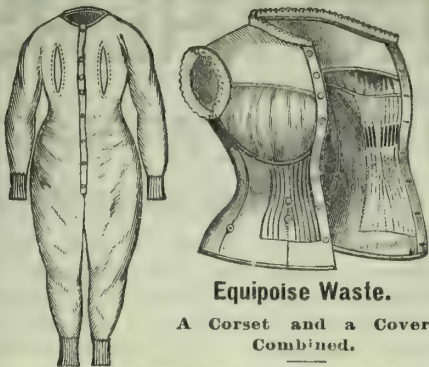
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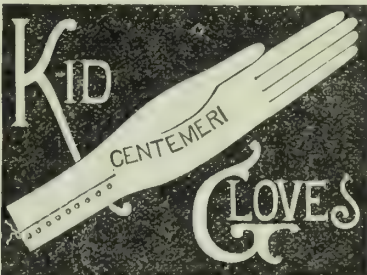
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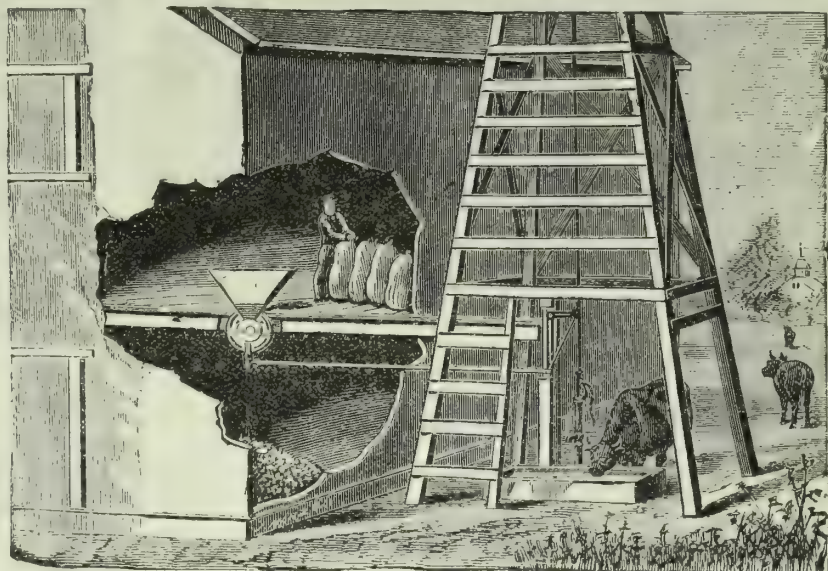
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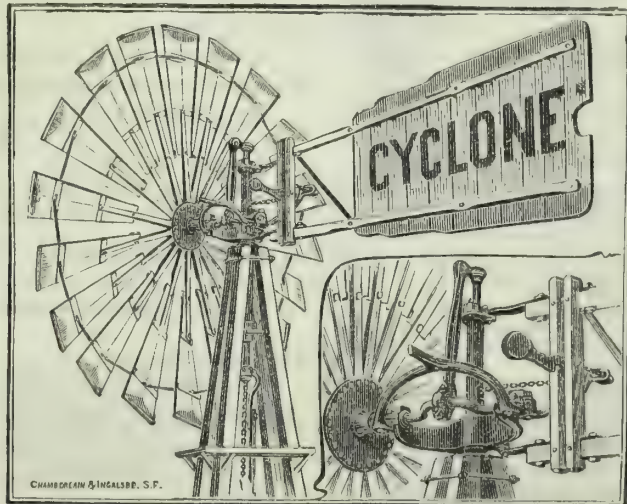
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Is better adapted to all kinds of work and conditions of soil than any other plow. Turns a square corner with ease and in fine shape, without raising out of the ground; and has proved itself equal to every emergency, and will do all claimed for it or that could be expected of a plow.

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The axles are adjustable, as well as the land, for which there is a special lever. The wheels are strong, with wide tires, and the beams are high, obviating all danger of choking.

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IT CAN BE REGULATED IN A MOMENT to sow any desired quantity per acre, with CERTAINTY of getting that quantity in the ground.

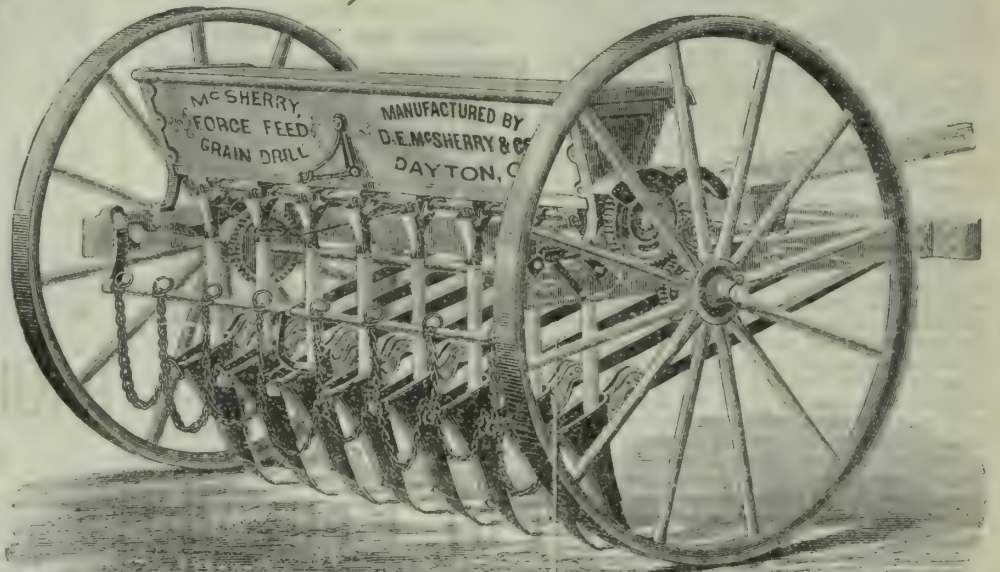
IT NEVER CHOKES UP in the feeding arrangement, as is the case with Drills regulated by rendering the discharge openings larger or smaller. It sows EQUALLY WELL ON ALL KINDS OF LAND, hilly or level, and it is immaterial whether the horses are driven fast or slow. This Drill must and does sow the same quantity of seed with each revolution of the feed wheels.

IT SOWS ALL THE GRAIN OUT OF THE HOPPER, and with the same evenness and regularity when the last grains are going out as when the hopper is full.

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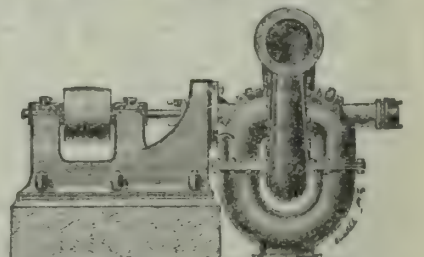
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County Exhibits at Mechanics' Fair.

Full Report of a Special Committee.

The following comprehensive report on county exhibits at the fair was presented Tuesday evening by the committee consisting of E. T. Crane, J. P. Hulme, W. J. Tilley, F. B. Norton, J. F. English, A. J. Gove and H. C. Somers:

To the Board of Trustees of the Mechanics' Institute Fair, San Francisco, Cal.—GENTLEMEN: The undersigned committee, appointed by you to examine and award premiums on county exhibits at the fair, now held under your auspices, would say that many of us, being pioneers, could not but contrast the California of to-day with that of '49 and '50, and indeed with many years succeeding those dates. Then the apparently barren and desolate valleys and hills in midsummer were thought to be utterly useless except for the range of wild cattle, and that this country could not nor would not be an agriculture State, and nothing could be successfully grown, unless in a few favored spots where the cereals, vegetables and fruit trees could be irrigated.

Then we had to depend for our flour upon Chili and the Atlantic States, and many of the early pioneers will recollect paying \$40 to \$50 per barrel for the staff of life. Then our Irish potatoes and onions came from New Zealand, and sweet potatoes from the Sandwich islands and other islands of the Pacific; and as to fruit, there was none here only a few trees and vines at the old missions, where the old padres deemed it necessary to constantly irrigate them to produce a crop. The indifferent varieties of pears, which were about the only kind of fruit produced, with the exception of grapes, brought almost fabulous prices.

The hardy pioneer thought of only remaining long enough to make "his pile," thinking that when the placer mining had given out the wild cattle, coyotes and grizzlies roaming over its apparently desolate hills and plains would no more be disturbed by the white man, and that San Francisco (or Yerba Buena) would soon recede to its normal condition of trading in hides and tallow with vessels which occasionally came along, as it had done in the past. But what a change do we witness now from those early days!

Result of Enterprise.

Yankee ingenuity and enterprise solved the problem. It was soon found that agricultural and horticultural ideas of the States east of the Rocky mountains were not adapted to this region. We found that by properly cultivating the soil, and at proper seasons, we needed no irrigation and no summer rains in a large proportion of the State. Indeed, either would be a positive detriment to bringing our crops to the greatest perfection, besides a great inconvenience at the time of the harvest.

California can be said to be less than a quarter of a century old in its agricultural and horticultural development, and it now ranks only second as to its wheat productions to any State in the Union and first in almost everything else in the way of agricultural and horticultural productions. Now there is not a day in the year but what there is a large fleet of vessels on the Pacific and Atlantic oceans laden with wheat and flour for the hungry mouths of Europe. And as to our horticultural productions, we can safely say that there is no part of the world that can compete with us in the growing of all the fruits of the temperate zone, as well as the semi-tropical fruits and all the varieties of vegetables needed for human sustenance. In fact, the fruits and vegetables now on exhibition here from 17 of the counties of the State, which we are called to pass upon and to award premiums, would seem marvelous to our friends east of the Rocky mountains. We will name only a few as specimens of what California soil will produce, and that, too, without irrigation. For instance, corn from Stanislaus and Kern counties, 18 to 20 feet high, with several ears to the stalk, of large size, from 12 to 14 feet from the ground; a sunflower from Contra Costa county nearly 20 feet high, surmounted by a head 54 inches in circumference, filled with plump seeds; a squash from San Luis Obispo county weighing over 200 pounds; an onion weighing nearly 4 pounds; a cabbage weighing 61 pounds; a beet 90 pounds, and sweet and Irish potatoes one of which would be sufficient for the meal of a small family.

California Products.

The redwood forest of Humboldt sending a large display of monstrosity wide lumber, several planks from five to seven feet wide, and one plank of the enormous width of 11 feet 5 inches. We also notice an enormous stick of sawed timber from Puget Sound that is 20 inches square and 151 feet long and as straight as an arrow.

The display of fruit from all the counties is meretricious for so late in the season. And we would particularly notice that each county made a creditable display of citrus fruits, consisting of oranges, lemons, limes, citrons, and also dates. This section of the State is generally known as Northern California, but the fact that the citrus fruit flourishes from San Luis Obispo on the south, to Humboldt on the north, and from San Mateo on the west to Placer and Nevada on the east, is proof conclusive that it is not a very rigorous climate.

Fruit Shipments.

As our fruit-productions are giving us a world-wide notoriety, we appealed to the Southern

Pacific railroad to get the amount shipped East the past season of green, dried and canned fruit, and also of the present season to date. We are sorry they could not furnish the statements to date this season.

East-Bound Through Freight.

At the request of E. T. Crane of San Lorenzo, the following figures of shipments of fruit (in pounds) during 1886 has been obtained:

From	Green Fruit, deciduous.	Dried Fruit.	Canned Fruits.
San Francisco..	525,290	3,269,460	15,233,450
Oakland	43,250	1,590	5,444,620
Los Angeles...	177,080	136,030	520,470
Colton		255,520	84,600
Sacramento...	19,545,480	161,270	2,333,510
San Jose	2,141,730	2,146,880	6,619,640
Stockton	265,350	3,640	22,540
Marysville	60,100	139,580	387,880

Totals.....22,758,080 6,113,070 30,636,710
Raisins—From San Francisco, 1,598,920; from Oakland, 100; from Los Angeles, 6,353,910; from Colton, 1,405,870; from Sacramento, 1,970,860; from Stockton, 1,547,470; from Marysville, 93,670. Total, 12,970,800.

Plain Figures.

Now, as a simple statement of figures showing the number of pounds does not give a full conception at a glance of the magnitude of the business, we will reduce it to carloads, allowing ten tons to each car, to show how long a train of cars was necessary to transport our fruit product from the State the past year.

There would be 1138 cars of green fruit, 305 cars of dried fruit, 648 cars of raisins, 1532 cars of canned fruit—all of which makes a train of almost 23 miles in length.

From information we get from the California Fruit Union and other shippers, we feel confident in saying that the present season will show a shipment of 1500 cars of deciduous fruits, of 20,000 pounds each.

We also append the statement of one of the largest shippers of dried fruit from this State:

SAN FRANCISCO, Sept. 27, 1887.

E. T. Crane, Esq., San Lorenzo, Cal.:—DEAR SIR: Replying to your verbal inquiry of to-day, we would state that the product of California dried fruit this year of all kinds will approximate 13,000,000 pounds, as against about 6,000,000 pounds last year. The output of California raisins this year we estimate at 20,000,000 pounds, as against 13,000,000 pounds last year. Yours truly,

G. W. MEADE, of G. W. Meade & Co.

As to canned fruit, we think it would be within bounds to place it at 50 per cent greater than last year. And this would give 1500 cars of green fruit, 650 cars of dried fruit, 1000 cars of raisins, 2297 cars of canned fruit, making a train 34½ miles in length.

During our apple season, every steamer that leaves this port for Australia, New Zealand, China, Japan and the Sandwich islands takes green apples besides canned fruit. A single steamer has taken over 10,000 boxes of a bushel each on a trip to Australia and New Zealand.

Having given you a brief summary of our fruit interests, we will add that in wine we shall soon stand ahead of all other wine-producing countries, as our wine interests are increasing faster than any other one interest in the State.

The Dried Fruit Trade.

And we would add that in dried fruit we have no competition in any portion of the United States, especially in prunes and apricots. The latter cannot be raised in but a limited portion of the civilized world, but it can here be grown in the greatest profusion, and its dried product, whenever known, will come in direct competition with peeled peaches, and the apricot can be grown as cheaply as peaches and dried at one-fourth of the expense. Although the citrus fruits are now and will continue to be a great source of wealth to this State, yet we believe that the apricot and prune will be a greater source of wealth in the near future.

In silk, from experiments made, and although the industry is yet in its infancy, it will, without doubt, in time be a large one in this State, as it has been proven that our climate and soil is particularly adapted to it.

Then the wool and lumber interests are second to none in the United States.

From the above brief summary of our agricultural interests, each of which has been sufficient to build up prosperous States east of the Rocky mountains, and when you add to this our mineral resources, which have given us notoriety throughout the world, it would seem that we have more of the elements of wealth combined in this State than in the same amount of territory anywhere known.

We have a climate devoid of the extremes of either heat or cold, and it is no wonder that people from all parts of the world are flocking here or are yearning to partake of nature's beneficence with us, and the only wonder is, to the early settlers, that they did not discover the fact sooner.

And now, gentlemen, the task you have delegated to us to decide and award premiums, as between counties and those which have made the best and largest exhibit, is a delicate one, and we cannot but exclaim, as the Kentuckian did when he was praising the great production of his State—whisky—"That it was all good, but some was better than others." And so with us. We find so much to commend in all the exhibits from the various counties that where some excel in some things others may be somewhat deficient, and we also recognize the fact that the exhibits of some of the counties do not, owing to the time of holding the

fair, show to as good advantage as they would under other circumstances, many of their best products being out of season.

The Awards Made.

But we finally came to the conclusion after a patient and careful examination that the district having the best and most varied exhibit, quality being equal, and which is entitled to the first premium, is Sonoma valley, in Sonoma county.

For general excellence and large display we award the second premium to Santa Clara county.

To Napa county we award the third premium. Although she has a display of wine, grapes, fruits, cereals and vegetables that would be deemed commendable to any State as a whole outside of California, we find that she was deficient in some things that the above-mentioned counties exhibited.

We award to Stanislaus county the premium for the fourth best display.

To Napa county the premium for the best display of wines by any county in the State.

To Sonoma county the premium for the best display of wheat in grain and sheaf, not less than three sheaves.

To Sonoma county the premium for the best display of barley in grain and sheaf, not less than three sheaves.

To Sonoma county the premium for the best display of oats in grain and sheaf, not less than three sheaves.

To Sonoma county the premium for the best display of rye in grain and sheaf, not less than three sheaves.

Stanislaus County.

To Stanislaus county the premium for the best display of corn in ear and stalk, excellence and variety considered.

To Sonoma county the premium for the best display of hops, not less than 25 pounds.

To A. Block of Santa Clara county, the premium for the best general display of fruit, by the producer.

To B. L. Watts of Sonoma valley, the premium for the second best general display of fruit, by the producer.

To Santa Clara county the premium for the best display and variety of apples.

To San Luis Obispo county the premium for the second best display and variety of apples.

To Santa Clara county the premium for the best display and variety of pears.

To Solano county the premium for the second best display and variety of pears.

To Placer county the premium for the best display and variety of peaches.

To Solano county the premium for the second best display and variety of peaches.

To Santa Clara county the premium for the best display and variety of plums.

To Santa Clara county the premium for the best display and variety of prunes.

To Placer county the premium for the second best display and variety of plums and prunes.

To Sonoma valley the premium for the best display of citrus fruits.

To Napa county the premium for the second best display and variety of citrus fruits.

To Sonoma valley the premium for the best display of table grapes, variety and excellence considered.

To Solano county the premium for the second best display of table grapes, variety and excellence considered.

To Napa county the premium for the best display and quality of wine grapes.

To Sonoma valley the premium for the second best display and quality of wine grapes.

Dried Fruits.

To George F. Fleming & Co. the premium for the best general display of dried fruits by the producer.

To C. N. Tharsing the premium for the sec-

ond best general display of dried fruits by the producer.

To Napa county the premium for the best display of cultivated nuts by the county, variety and quality considered.

To Solano county the premium for the second best display of cultivated nuts by the county, variety and quality considered.

To J. H. Flickinger of Santa Clara county, the premium for the best display of canned and preserved fruits and vegetables by the factory.

To the Petaluma Packing Company the premium for the second best display of canned and preserved fruits and vegetables at the factory.

We recommend that the board present the following ladies: Mrs. E. O. Smith, Mrs. Wm. Newhall, Mrs. L. J. Watkins, all of Santa Clara county, with silver medals for the variety and excellence of their exhibits of jellies in glass, home-made, as they are so nearly equal in quality and kind that it is impossible to give any preference.

To Mrs. Kate Warfield the premium for the best display of preserved fruits in glass, home-made.

To H. E. Boys of Sonoma valley the premium for the best assortment and quality of pickles, home-made.

Vegetables—To Sonoma valley, the premium for the best general display of vegetables, quality and variety considered.

Dairy produce—To San Mateo county the premium for the best display of cheese.

Honey—To Kern county the premium for the best display of honey.

Wools and Cotton—To Sonoma county the premium for the best display of wool, not less than four fleeces.

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To Santa Clara county the premium for the best display of mohair, not less than ten pounds.

Sonoma Valley Oils.

To George F. Hooper of Sonoma valley the premium for the best sample of olive oil by the producer.

To George F. Hooper of Sonoma valley the premium for the best samples of pickled olives.

We respectfully recommend that San Luis Obispo county have special recognition for the finest quality of apples, and that Mr. Leadham of the same county have a medal for the best quality of apples, although limited in quantity; that Humboldt county be given special recognition for a very fine display of native, polished, rough and manufactured redwood; that Solano, Kern, San Benito, Pajaro valley, Livermore valley, Contra Costa, Sonoma, San Luis Obispo, Humboldt, Placer and San Mateo counties be given special recognition for their very creditable exhibitions; that Nevada county be given special recognition for its fine display of minerals and ores; the same as to Shasta county; that J. H. Drummond and Kate T. Warfield have special recognition for the excellence and variety of their general individual exhibits.

Respectfully submitted, E. T. Crane (chairman), J. P. Hulme, W. J. Tilley, F. B. Norton, J. F. English, A. J. Gove, H. C. Somers, committee. Oct. 1, 1887.

PRINTERS' INK AND FRUIT-MARKETING.—When Mr. Martin began shipping apples from Ashland, the Tidings says, he had some neat labels printed which read thus: "Southern Oregon apples, from L. Martin, Ashland, Oregon." The apples were sent to Portland, whence some of them found their way to Montana. Almost immediately Mr. Martin began to receive inquiries from Montana about these Southern Oregon apples, and already has more orders from Montana than he can fill. Some Californian fruit-growers have had similar experiences, and others may find the hint a profitable one to follow.

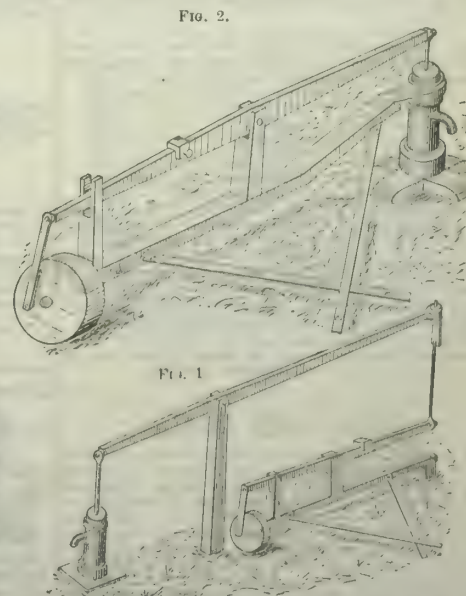
A Horse-Power Pumping Apparatus.

Harry D. White of Cottonwood, Shasta Co., has applied for a patent on a novel horse-power and pumping apparatus, cuts of which are shown on this page. A vertical post is placed in the ground and an arm or bar is connected with the post by a loosely turning band, and has journaled on the outer end a wheel, the periphery of which rests on the ground and supports the outer end of the arm. Upon the arm is fixed a post which is slotted on top to receive a lever which is centrally fulcrumed in it. One end of this lever is connected with a crank-pin on the wheel, and the other end with the long arm of an upper lever connected with the plunger of a pump.

On one side of the arm is attached shafts or means for attaching the horses, so that when they travel in a circle around the central post, the arm will turn about the post and the wheel will turn and operate the levers and pump.

Another form of the same appliance is shown in Fig. 2, where the pump itself takes the place of the upright post, and a single lever suffices to give the vertical reciprocating motion to the pump rod. A counter-balance is used which may be adjusted to any desired point upon the vibrating lever.

This device is quite simple both in construction and operation. It will be seen that the



rotary motion of the wheel is converted into a reciprocating motion, and this may be utilized by suitable appliances for any desired purpose. Mr. White, by being addressed Woodland, Yolo Co., Cal., will give any further information concerning this invention.

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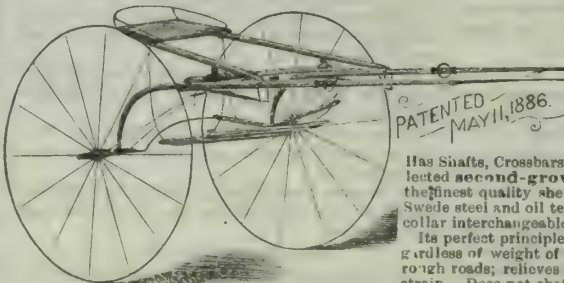
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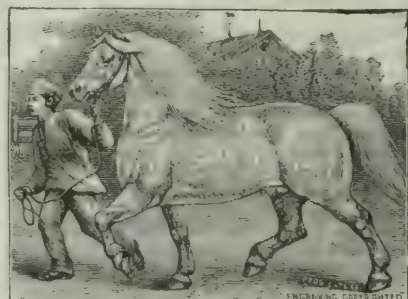
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A GOOD WORD.—The Lakeport *Avalanche* made a few remarks about us last week, thus: The PACIFIC RURAL PRESS is a friend to our farming community, and it never loses an opportunity to praise where it is deserved. To our farmer friends let us say: Take the RURAL PRESS; it is a farmers' paper adapted to our country, and every farmer in Lake county should have it in his family.

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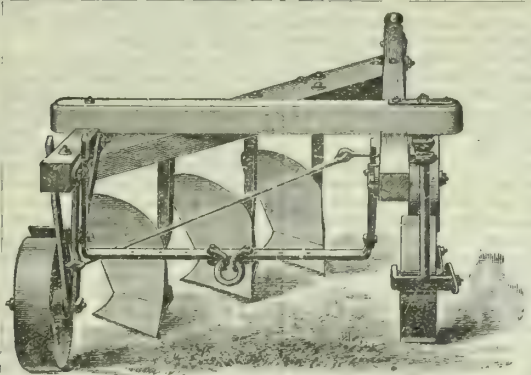
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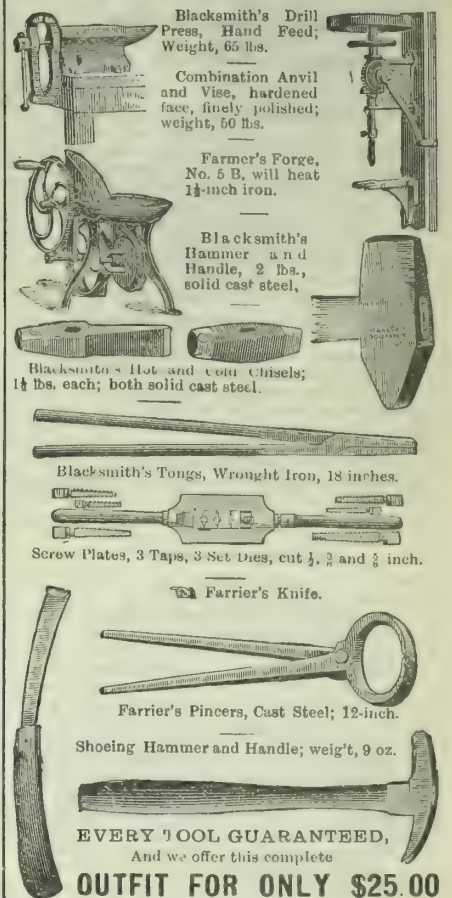
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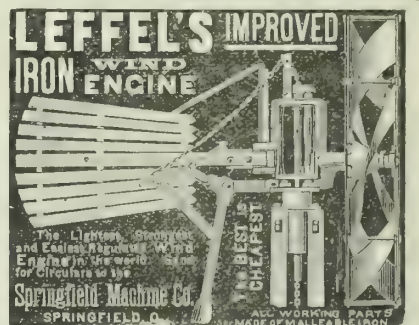
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S. H. MARKET REPORT

NOTE.—Our quotations are for Wednesday, not Saturday, the date the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Oct. 5, 1887.

Continued fine weather contributed no little in allowing horticulturists to secure their remaining fruits and also to the perfect curing of dried fruits. From all that can be ascertained, farmers are in the market for plows and other implements preparatory to the regular fall and winter work. So far a larger number of implements have been sold than for several years past. The week has been barren of anything of an exciting nature from Europe as regards the wheat markets, although they have been steadily gaining in strength. To-day's cable is as follows:

LIVERPOOL, Oct. 5.—Liverpool spot market, at opening, turn dealer; California wheat, No. 2, spring for prompt shipment, 27s 9d; do. Red Winter for prompt shipment, 28s 3d; cargoes off coast, steady; cargoes on passage, firm; Mark Lane, English and foreign wheat, steady; English and American flour, quiet; French country markets, quieter; wheat and flour in Paris, quiet; weather in England, fair; quantity wheat and flour on passage to U. K., 1,588,000 qrs.; wheat on passage to Continent, 245,000 qrs.

LIVERPOOL, 3:30 P. M.—Wheat—Holders offer freely.

Foreign Review.

LONDON, Oct. 3.—The *Mark Lane Express* in its review of the British grain during the past week says: The demand for seed wheat in the provinces caused an advance in the local markets of 6d to 1s, but only made the price in London firmer. Sales of English wheat for the past week were 75,502 quarters at 28s 5d per quarter, against 60,401 quarters at 30s 3d during the corresponding week last year. Flour was offered freely at low rates. Good Essex 21s per 280 lbs; foreign wheat slow; finest South Russian and American spring rather stronger. Flour is in favor of buyers. Corn is firmer. Linseed declined 3d. There have been 13 arrivals of wheat in cargo. Three cargoes were sold, three withdrawn and four remained. At to-day's market English wheat was steady. There were few transactions in South Russian and Indian at an advance of 6d. Flour is 6d dearer. Corn is against buyers. Barley is a fraction higher. Peas advanced 6d.

Eastern Wheat Markets

NEW YORK, Oct. 4.—82½¢ for cash; 80½¢ for Oct.; 81½¢@81¾¢ for Nov.; 83½¢@83¾¢ for Dec.; 84¾¢ for Jan.; 88½¢ for May.

CHICAGO, Oct. 4.—Wheat firm and higher; cash, 71 7-16¢; Dec., 73 3-16¢; May, 78½¢.

California Products at Chicago.

CHICAGO, Oct. 1.—In consequence of the large supplies of Concord grapes and other home-grown varieties on the market, prices are weak and lower. Tokays and Muscats in double crates being \$2.25 to \$2.50; fancy Natoma Tokays and Muscats \$3 to \$3.25; Emperors, \$2.75 to \$3, and Cornichon \$2.25 to \$2.75.

CHICAGO, Oct. 3.—Receipts of Cal. grapes are liberal and demand good. Tokays, double crts, choice, \$2.50@2.75; Muscats about same. There is a good demand for fall pears, though there is a temporary scarcity, which has prevailed for several days. A few cars have arrived in poor order, owing to the wet and close atmosphere. They bring \$1.75@2.00 per box; quinces, \$1.50@1.75.

Beans—Arrivals of new beans are yet small. Quotations are \$1.50@2.10 per bushel for California, according to condition; 4@4½¢ per lb. for Limas.

California dried fruits rule firm, and all lines are salable, but the market is quiet owing to the small supply. Apricots, sun-dried, bleached, choice, 17@17½¢; do., do., prime, 16@16½¢; Apricots, sun-dried, unbleached, 13@14¢; Peaches, peeled, evaporated, choice, 23½¢@25¢; do., do., good, 20@22¢; Peaches, unpeeled, evaporated, fancy 17@18¢; do., do., choice, 14@16¢; Peaches, unpeeled, sun-dried, 13½¢@15¢; Plums, pitted, new, 13@14¢.

Eastern Wool Markets.

NEW YORK, Oct. 2.—The situation remains unchanged, but holders believe that the lowest point has been reached for all kinds of wool. Among sales were 15,000 lbs. scoured Cal. at 53¢, 3000 lbs. Cal. at 22¢, 20,000 lbs. Territory at 20@25¢.

The tone of the Boston market has improved and holders show less disposition to press sales. Buyers are still more cautious. Among sales were 150,000 lbs. Cal. spring at 17@23¢; 10,000 lbs. Cal. fall at 13½¢; 58,500 lbs. Oregon at 17@18¢; 907,600 lbs. Territory at 15@25¢.

The Philadelphia market is very dull, manufacturers buying only for urgent wants. Territorial wools and fine fleeces are in good supply and move slowly. Among sales were 2000 lbs. Territory, black, at 20¢; 1500 lbs. Territory, bucks, at 11½¢; 4600 lbs. do at 13¢; 2500 lbs. Montana, medium, at 22@24¢; 70,000 lbs. Territory, fine and medium, at 14@24¢.

Eastern Hop Markets.

CHICAGO, Oct. 4.—There is nothing of importance doing. The new crops are coming forward slowly. Pacifics are ruling steady, and for small parcels former prices are obtained, and for Pacifics, new crop, choice, 20@22¢; Pacific, new crop, medium, 17@20¢; Pacifics, 1886, choice, 14@18¢; Pacifics, 1886, medium, 10@14¢; Pacifics, 1885, 5@8¢.

NEW YORK, Oct. 2.—Hops—There are signs of early improvement in the export trade, but prices remain unchanged.

Local Markets.

BARLEY—Continued heavy receipts and only a moderate demand cause a weak market to rule. Large operators are quietly buying, believing that a higher range of values will rule soon. On Call, trading has been free, but at low prices. To-day's sales on Call are as follows:

Morning Session: Buyer season—600 tons, \$1.02½; 300, \$1.02½; 200, \$1.03; 200, \$1.03½. Buyer 1887—100 tons 93¼¢; 100, 93¾¢; 100, 93¾¢; 100, 93¾¢. Afternoon Session: Buyer season—500 tons, \$1.03; 100, \$1.02½ per cbl.

CHEESE—The market is quiet, but very strong under small stocks.

BUTTER—Hot weather lessens the demand for rolls, but increases the call for firkin and pickled. While the former weakened, the latter strengthened.

EGGS—The market has weakened off under more liberal supplies and a strong selling pressure, owing to hot weather.

FLOUR—Retail dealers are slow in stocking up, but as wheat is gaining in strength millers are firmer for the better grades.

WHEAT—The market is stronger for all grades. On Call, trading has been freer in sympathy with an improving market abroad. Sales on Call to-day were as follows:

Morning Session: Buyer 1887—200 tons, \$1.35½. Buyer season—100 tons, \$1.45½; 200, \$1.45½; 500, \$1.45½; 400, \$1.46 per cbl. Afternoon Session: Buyer 1887—200 tons, \$1.35½; 100, \$1.36 per cbl.

[COMMUNICATED.]

Market Information.

Cereals.

The last estimate of the French wheat crop is that of the Paris *Bulletin des Halles*, which puts the total yield at 324,800,000 bu. against 292,000,000 bu. in 1886.

The barley crops of Moravia, Bohemia and Hungary are reported the finest for a good many years. In answer to a question by cable of a London house as to their opinion regarding the future of wheat, the answer was, "General opinion that prices will advance, though English wheat is cheap."

Quantity of barley on passage for the United Kingdom on Sept. 1st is reported at 1,140,000 bu., against 2,460,000 bu. last year.

Beerbohm says: In the United Kingdom the potato crop is estimated to be 25 per cent below an average; in France, 40 per cent; in Germany, 15 per cent; and in Austria-Hungary, 15 per cent. This represents an aggregate deficiency of 10,000,000 to 12,000,000 tons, or 373,000,000 to 444,000,000 bu. With a lessened potato production the consumption of wheat will be so much the greater.

The London *Times* gives the following: Now that the acreage has been ascertained, a statement of the production of the wheat crop may be ventured in figures—to be corrected, if need be, when the Government Produce Returns are published:

ACRES OF WHEAT IN 1887.	
Great Britain.....	2,317,362
Ireland.....	60,222
Islands—say.....	9,416

United Kingdom.....	2,398,000
ESTIMATED YIELD, 1887.	Bushels.
At 30 bu. per acre.....	71,700,000
Deduct 2½ bu. per acre for seed.....	5,842,250

Total.....	66,405,750
Imperial quarters.....	8,800,700

Harvest year.	Sept. 1 to consumption.	Aug. 31. Imp. quarter.	Imp. quarter.	Imp. quarter.
1882-3.....	10,248,000	19,953,000	30,186,000	
1883-4.....	8,124,000	15,816,000	23,940,000	
1884-5.....	9,540,000	18,001,000	27,541,000	
1885-6.....	9,175,000	15,498,000	24,398,000	
1886-7.....	7,266,000	17,395,000	24,651,800	
1887-8.....	8,300,700	17,700,000	26,000,000	

This gives our total growth of the year at 8,300,000 qrs., and if consumption be put at 26,000,000 qrs., seeing that there have been two years of less than the average supply, an importation of 17,750,000 qrs. may be required before the end of August, 1888.

Beerbohm just to hand contains the following: With regard to the figures for the ensuing season, the present indications give the following result:

	Probable requirements qrs.	Probable surplus qrs.
United States and Canada.....	15,000,000	
United Kingdom.....	17,000,000	
France.....	2,000,000	
Belgium.....	2,000,000	
Germany.....	1,000,000	
Holland.....	1,600,000	
Austria-Hungary.....	2,500,000	
Russia and Roumania.....	10,000,000	
Switzerland.....	1,500,000	
Italy.....	4,000,000	
Spain and Portugal.....	1,500,000	
India.....	4,000,000	
Australasia, Chili and Arg. Rep.....	1,500,000	
West Indies, China, etc.....	2,500,000	
Greece, etc.....	750,000	
Sundries.....	1,000,000	
Total.....	58,250,000	34,000,000
Equal in bu.....	226,000,000	272,000,000

The result of these figures is that the apparent aggregate surplus of the various countries is only about 750,000 qrs. beyond the requirements of the importing countries, and in connection with such figures this difference may well be called a mere *bagatelle*; for it is an incontrovertible fact that the reserve stocks of old wheat in Europe—say, in Russia, Hungary, Germany, France and England—are at an unusually low point. It is difficult to say what reduction in the reserve stocks in these countries is equal to, but in a vague way they may be estimated to be 10 to 15 million qrs. below those of an ordinary year.

The London *Times* gives the United Kingdom at 17,700,000 qrs., or 700,000 qrs. more than Beerbohm. The Produce Exchange reports stocks of grain in city warehouses in tons, October 1st, as follows: September: 1—Wheat, 56,321; barley, 27,761; oats, 701; corn, 788. October 1—Wheat, 54,760; barley, 38,618; oats, 855; corn, 274. Wheat in all Call Board warehouses, October 1st, 242,008 tons, an increase of 6687 tons in September.

Owing to heavy rains in the Northwest States, large quantities of wheat were damaged by rain to such an extent as to make it not desirable for either milling or exporting.

On this coast there is nothing of importance to note. In Oregon, the number of vessels taken for wheat loading is larger than last year at this time. In this State farmers are slow in offering on the market, and in the meanwhile trading is slow. The Rosenfeld and Dresbach contracts are being bought in, and it now looks as if their business will soon be satisfactorily arranged, after which more activity is looked for on Call. Millers are quietly taking all the

choice grades of wheat that is offered at \$1.40@1.45, although they bid less. The impression is that prices will go higher after this month.

Barley is slow, under heavy receipts. The consumption is very large, but the receipts are so heavy as to stifle all speculative movements. Until receipts fall away, prices are not apt to rally, but with a falling off in receipts for a few days, a decided movement for the better would ensue. The advance in bran and middlings has created more inquiry for roll barley.

Corn is firm, notwithstanding buyers trying to force prices down. The short crops at the West and large consumption are the leading causes in producing a better feeling.

Rye and buckwheat are steady, with a stronger tone noted.

Feedstuff.

Bran and middlings, under an increasing demand, are higher and strong at the advance. Roll and ground barley can be bought for less money. Owing to the advance in bran and middlings, there is a better demand.

Hay continues to rule very strong, with the more choice grades sold at a slight advance. Dealers talk the market down, but are compelled to pay well up for choice parcels.

Fruits.

Pears are in good supply, with the more choice fetching full figures.

In apples the market is oversupplied, with only the more choice fetching full figures. Common qualities move slow.

Plums and prunes from Oregon continue to come in, with the more choice fetching good prices.

Quinces continue in oversupply.

Grapes, if choice, good keepers in good demand for more distant orders. The market is oversupplied with poor keepers, for which no reasonable figure is refused, when cleaning up for the day. Canners are still taking Muscats and Tokays.

Wine grapes come in quite freely, but they find ready buyers. It is said that this year there is a decided increase in the consumption in this city, but even with this very heavy receipts are liable to create a glut and low prices.

New crop raisins are arriving, and prices are now so far established as to be quotable. We revise quotations for jobbing lots. The quality, as shown by G. W. Meade & Co., is good, better than the first receipts last year. The demand is free, but mostly from distant points, where supplies for the holidays have to be laid in early.

There is a revived inquiry for dried fruits, owing to the fact, probably, that the large purchasers in the Eastern States have resold. There is some excitement in prunes. The market is tending rapidly upward. Transactions in peaches, the past week, have been upon a larger scale, as there were, also, in other dried fruits. Some kinds, it now looks, are being rapidly concentrated.

Raw peaches have a wide range, with a growing scarcity noted.

Live-Stock.

Free offerings and hot weather have operated still more against beef cattle. The demand is of a hand-to-mouth character, and in selling pressure is met by low bids. In mutton sheep the same condition is reported. Hogs are strongly held, with packers bidding well up. The supply is claimed to be considerably less than last year. In horses there has been an increased inquiry for medium-sized work horses. The demand comes chiefly from the lower counties and is from new settlers. Prices, though, are reported to be unchanged.

BEEF—Extra, 7@7½¢; first grade, grass fed, 6½¢@6¾¢ per lb.; second grade, 5½¢@6¢; third grade, 4½¢@5½¢.

MUTTON—Ewes, 5½¢@6¢; wethers, 6@6½¢.

LAMB—Spring, 7@8¢.

VEAL—Large, 6@7¢; small, 6@8¢.

PORK—Live hogs, 4½¢@4¾¢ for heavy and medium; hard dressed, 6@6½¢ per lb; light, 4½¢@4¾¢; dressed, 6@6½¢; soft hogs, live, 3½¢@4¢. On foot, one-third less for grain or stall fed, and one-half less for stock running out.

Vegetables.

Onions have ruled fairly steady throughout the week, with an advance paid for choice goods for shipping to more distant points.

Potatoes are in liberal receipt, but then the demand continues good, which keeps prices fairly steady, although at times concessions are made to force a consignment on the market.

Beans are coming in very freely, but owing to the Eastern demands, prices are well maintained, with stocks not accumulated.

Cabbages are moving off quite freely, with choice consignments fetching good prices for the season, to fill distant orders.

Tomatoes, if choice, are freely taken by canners, but off qualities are hard to sell.

In string beans, summer-squash, peppers, etc., the market moves at about as heretofore reported.

Miscellaneous.

Poultry has ruled steady, with the more choice-conditioned placed at an advance on quotations. Game has come in liberally, and sold in buyers' favor, owing chiefly to the hot weather being against their keeping.

Hops have a stronger tone, although buyers are still talking them down. The crop at the East is not up to expectations, while in England and on the continent there is only half of a crop.

Wool is more strongly held, causing buyers to pay a slight advance for the more choice clips. The strength of the market is due to an improvement at the East.

Grass seeds are strongly held, with a better demand reported.

Broom corn, if choice, sells readily at 75¢, but poor is hard to place. The crop is fully up to last year, but at the West it is short about 20 per cent.

We note an improved inquiry for nuts, particularly for almonds, which are exciting attention under a better concentration of supplies. An advance is not at all improbable at an early day.

The tonnage movement compares with last year at this date as follows:

1887.	1886.
On the way.....	343,518
In port, disengaged.....	283,695
In port, engaged.....	74,035
In port, engaged.....	68,326
Totals.....	6489
	61,798

The above gives a carrying capacity as follows:

1887, 680,067 short tons; 1886, 662,126 short tons; showing an increase compared with last year of 17,941 tons.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, Oct. 5, 1887.

BEANS AND PEAS.		
Bayo, cbl.....	1 90	2 25
Butter.....	2 00	2 40
Peas.....	2 25	2 50
Red.....	1 40	1 55
Pink.....	1 50	1 70
Large White.....	2 10	2 40
Small White.....	2 25	2 50
Lima.....	2 25	2 75
Old Peas, bly eye 100.....	2 10	2 05
do green.....	1 00	1 12½
do Niles.....	1 25	—

BROOM CORN.		
South's per ton.....	50 00	75 00
North's per ton.....	50 00	75 00

CHICKEN.		
California.....	51 25	61 00
German.....	45 00	75 00

DAIRY PRODUCE, ETC.		
Cal. fresh roll, lb.....	35	40
do Fancy brds.....	45	40
Pickle roll.....	25	30
Fat new.....	24	36
Eastern.....	—	—

CHEESE.		
Chesse, Cal. B.....	12	15
Eastern style.....	14	16

Cal. ranch, doz.....	37½	—
do store.....	30	35
Ducks.....	—	—
Oregon.....	—	—
Eastern.....	19	21

FEED.		
Bran, ton.....	16 50	18 00
Jeromeal.....	28 00	—
Gr'd Barley ton.....	21 00	23 00
Nearb.....	10 00	16 50
Middlings.....	21 00	22 50
Oil Cake Meal.....	25 50	28 50
Straw, bale.....	35	50

GRAIN.		
Extra City Mills.....	4 50	5 00
do Country Mills.....	4 25	4 75
Superfine.....	3 75	4 10

GRAIN, ETC.		
Barley, feed, cbl.....	87½	95
do Brewing.....	1 00	1 25
do Chevalier.....	1 25	1 40
do Coast.....	—	—
Buckwheat.....	1 00	1 30
Corn, White.....	1 15	1 25
Yellow.....	1 15	1 25
Small Round.....	1 20	1 30
Nearb.....	1 07½	1 15
Oats, milling.....	50	—
Choice feed.....	1 40	1 45
do good.....	1 37½	1 40
do fair.....	1 30	1 30
do Oregon.....	—	—
do Black.....	—	—
Eye.....	1 25	1 50
Wheat, milling.....	1 42½	1 45
Gilt edged.....	1 40	—
do choice.....	1 40	—
do fair to good.....	1 35	—
Shipping choice.....	1 30	—
do good.....	1 25	1 27½
do fair.....	1 22½	1 25

HOES.		
Dry.....	14	16
Wet salted.....	7½	8½

HONEY.		
Boeswax, lb.....	20	22
Honey comb.....	12½	15
Honey in comb.....	16	18
do dark.....	6½	7½
do light.....	6½	7½

HOES.		
Oregon.....	17½	22
California.....	15	20

ONIONS.		
Pickling.....	50	75
Red.....	—	—
Silverskins.....	50	75

NUTS—JOBBER.		
Walnuts, Cal. B.....	12½	14
do Chile.....	8	10
Almonds, bly shls.....	5	7
Soft shell.....	14	15

Wool, ETC.		
Extra, City Mills.....	10½	11½
Heavy.....	11	12
Medium.....	11	12
Light.....	12	13
Extra Light.....	13	14
Lard.....	7½	11½
Cal. Smoked Beef.....	11½	12½
Cham, Cal.....	10	14
do Eastern.....	14	15

SEEDS.		
Alfalfa.....	8	9
Hay.....	34	41
Oleary rod.....	11	11</

C. W. Reed & Co.

While at the State Fair, we strolled across the river to Washington and called at the residence of C. W. Reed, the well-known fruit-grower and nurseryman. We found Mr. Reed suffering from temporary indisposition, which led us to be merciful and not interview him to the extent we would have liked, for Mr. Reed's knowledge extends over the whole rise and progress of the fruit interest of the State. He has been shipping fruit East during the season, outside of the Fruit Union, and has therefore paid higher freight rates on his shipments. He has shipped about 100 carloads, if we remember correctly. He maintains the opinion that what is needed in the fruit-shipping business is low freight rates and then a free field for shippers to conduct their own business as they deem best. He believes in united action to this extent and no further.

C. W. Reed & Co. will enter the nursery branch of their year's work this year with a larger stock of trees than usual, comprising about 200,000 trees of a general assortment of fruits, of which a catalogue will soon be issued. They have a number of new varieties now on trial, having obtained them from abroad, but will not distribute them until their merits are fully tested. They have, however, arranged for 100,000 choice budded orange and lemon trees from Florida, believing that the planting of these fruits in favorable situations in the northern portion of the State will prove a profitable industry.

Mr. Reed was not able to show us about his place, and we hope at another time to have opportunity for a look. He has trees planted in 1855 still in good bearing. He has done much progressive work in the reduction of pests in his orchard, and has succeeded well with the use of Paris green in spraying against the codlin moth. We hope to have data of these experiments later.

Inducements to Subscribers.

To favor subscribers to this paper, and to induce new patrons to try our publication, we will furnish, to those who pay fully one year in advance of date, if requested the following articles (while this notice continues), at the very greatly reduced figures named at the right:

- 1.—The Agricultural Features of California, by Prof. Hilgard, 138 large pages, illustrated, cloth, with colored maps (full price \$1). \$0.25
- 2.—World's Cyclopaedia, 794 pages, 1250 illustrations; (exceedingly valuable).50
- 3.—Dewey's Patent Elastic Binder (cloth cover), name of this paper stamped in gilt.50
- 4.—Niles' Stock and Poultry Book for Pacific Coast, pamphlet, 120 pages, illustrated.25
- 5.—Kendall's Treatise on the Horse and Diseases, 89 pages, instructive illustrations.05
- 6.—To New Subscribers, 12 select back Nos. of the RURAL PRESS, as new select. Free
- 7.—Any of Harper's, Frank Leslie's and most other first-class U. S. periodicals, 15 per cent. off regular rates.
- 8.—Pacific Coast and Eastern Dailies, Books and Periodicals, except special publications, we can usually give 10 to 15 per cent off advertised retail rates.
- 9.—March of Empire, by Mallie Stafford.25
- 10.—Life Among the Apaches, 322 pages, stiff cloth.25
- 11.—What Every One Should Know; a cyclopaedia of valuable information; 510 pp.; cloth; (full price \$1).50
- 12.—Knitting and Crochet, by Jennie June; 144 pp., 200 illustrations.25
- 13.—Needle Work, by Jennie June; 126 pp., 200 illustrations.25
- 14.—Ladies' Fancy Work, by Jennie June; 162 pp., 700 illustrations.25
- 15.—The Way to do Magic; illustrated, 60 pp.10
- 16.—The Taxidermist's Manual; illustrated, 64 pp.10
- 17.—Beautiful Poetic Review, entertaining and instructive; 35 pages (a handsome and pleasing present).25

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List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

- FOR WEEK ENDING SEPTEMBER 27, 1887.
- 370,591.—REFRIGERATOR—I. Allegretti, West Berkeley, Cal.
- 370,592.—VENTILATOR—I. Allegretti, West Berkeley, Cal.
- 370,525.—BOOK ATTACHMENT—A. Bieber, Bieber, Cal.
- 370,531.—RAILWAY SWITCH, ETC.—C. S. Drake, S. F.
- 370,391.—WASHING MACHINE—E. D. Hastings, Pataha, W. T.
- 370,625.—CONSTRUCTIONS, AREAS, FLOORS, ETC.—P. H. Jackson, S. F.
- 370,551.—CLEANING MARBLE—E. McCarthy, Sacramento.
- 370,498.—WATER-PROOF BOOT—L. Slessinger, S. F.
- 370,661.—SAW JOINTER—J. H. Sodex, Seattle, W. T.
- 370,512.—GRATE—E. W. Williams, S. F.

Fairs to Come.

- Portland Mechanics' Fair, Oct. 6 to 22.
- North Pacific Domestic and Fat-Stock Assoc., Portland, Or., Oct. 9 to 17.
- Fifth Dist.—Santa Clara and San Mateo—San Jose, Oct. 10 to 15.
- Fifteenth Dist.—Tulare and Kern—Visalia, Oct. 10 to 15.
- Eighteenth Dist.—Alpine, Inyo and Mono—Independence, Oct. 10 to 14.
- Third Dist.—Butte, Colusa and Tehama—Chico, Oct. 11 to 15.
- Twelfth Dist.—Lake and Mendocino—Ukiah, Oct. 11 to 15.
- Fourteenth Dist.—Santa Cruz, Oct. 12 to 15.
- Sixteenth Dist., San Luis Obispo, Oct. 12 to 15.
- Pajaro Valley, Watsonville, Oct. 20 to 22.
- San Diego Co. Horticultural and Agricultural, Oct. 28 to 30.

Wetmore Brothers.

Fruit-growers shipping to this market will be pleased to know that the well-known firm of commission men, Messrs. Wetmore Bros. of 524 and 526 Sansome street, have secured a favorable lease of the fine premises 413, 415 and 417 Washington street, near their old quarters, where they remove Oct. 1st. The location is one of the best in the fruit market; the stores extend through to Merchant street, giving them every facility for conducting their constantly increasing business to the best advantage. We predict for the firm a continuance of the success they have enjoyed in the past, and which their straightforward business methods deserve. We can confidently recommend Messrs. Wetmore Bros. to shippers of fruit, produce, etc., their long acquaintance with and thorough knowledge of their business enabling them to place consignments to the best possible advantage.

JERSEY FANCIERS, whose purses are not deep, but who would like to improve their stock with thoroughbred bulls, should not overlook E. H. Schaeffle's advertisement in another column.

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.]

DATE.	Portland.				Red Bluff.				Sacramento.				S. Francisco.				Los Angeles.				San Diego.			
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.
Sept. 30-Oct. 5.																								
Thursday....	.00	66	S	Cy.	.00	80	E	Fr.	.00	68	S	Cy.	.00	61	SW	Cy.	.00	76	W	Cl.	.00	68	NW	Cl.
Friday.....	.54	62	S	Ry.	.00	78	S	Cl.	.00	76	NW	Cl.	.00	62	W	Cl.	.00	76	SW	Fr.	.00	68	NW	Cl.
Saturday.....	.86	64	N	Cy.	.00	81	N	Cl.	.00	78	NW	Cl.	.00	72	W	Cl.	.00	74	W	Cl.	.00	66	SW	Cl.
Sunday.....	.00	64	SE	Cy.	.00	88	N	Cl.	.00	82	NW	Cl.	.00	78	S	Cl.	.00	71	SW	Cl.	.00	66	SW	Cy.
Monday.....	.00	66	S	Cy.	.00	88	S	Fr.	.00	86	SW	Cl.	.00	63	W	Cl.	.00	74	W	Cl.	.00	68	W	Cy.
Tuesday.....	.04	62	NW	Fr.	.00	86	NE	Fr.	.00	84	SW	Cl.	.00	64	NE	Cl.	.00	76	W	Cl.	.00	66	NW	Cl.
Wednesday....	.00	52	S	Cy.	.00	80	NE	Cy.	.00	80	S	Cy.	.00	61	W	Fr.	.00	76	W	Cl.	.00	64	NW	Cl.
Total.....	1.44				.00				.00				.00				.00				.00			

EXPLANATION.—Cl. for clear; Cy. cloudy; Fr. fair; Fy. foggy; — indicates too small to measure. Temperature. Wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

The Pacific Mutual Life Insurance Co.

OF CALIFORNIA. ORGANIZED 1867.

Paid to Policyholders and their representatives, more than \$3,500,000
Assets Exceed 1,600,000

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It is the only Life and Accident Insurance Company transacting business in the United States whose stockholders are by law made liable for the debts of the corporation, and whose directors are made responsible for the acts of its officers.

PROFIT. All profits go to its policyholders, none to stockholders, who are limited to the interest earned by the money paid in by them. The Company's investments earn the highest average rate of interest of any Company in the world, and its location is a guarantee that this will be perpetuated, thus assuring the greater dividends to policyholders.

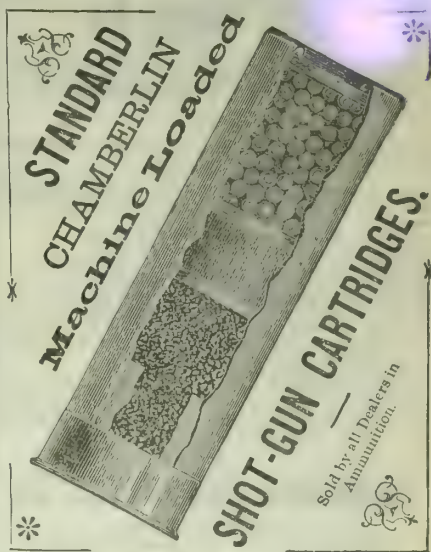
DEATH CLAIMS PAID DURING THE FIRST EIGHT MONTHS OF 1887.

Observe particularly the promptness with which payments follow proofs of deaths. On September 1, 1887, the Company had no unpaid claims on hand.

LIFE INSURANCE —ON— APPROVED PLANS. —ARE— POLICIES LIBERAL, EQUITABLE, World-Wide, Incontestable.

NAME.	Residence.	Amount.	Proofs Received.	Claim Paid.
Louis Lepetit	Oakland, Cal.	\$ 600	Jan. 24	Feb. 17
S. V. Wardrobe	Stockton, Cal.	7,308	Feb. 25	Feb. 25
W. H. Doyle	Shanghai, China.	10,000	Feb. 25	Feb. 26
W. E. Hughes	Fresno, Cal.	3,000	Feb. 24	Feb. 28
F. Wiedmayer	Ft. Dodge, Iowa.	125	Feb. 10	Mar. 2
Hassel Jewell	Fresno, Cal.	2,000	Mar. 2	Mar. 7
W. G. Shaffer	Tacoma, W. T.	1,000	Mar. 9	Mar. 9
J. W. Sowell	Wheatland, Cal.	4,000	Mar. 21	Mar. 25
J. L. Jones	San Francisco, Cal.	10,000	Mar. 10	Mar. 25
D. E. Norton	El Dorado, Cal.	1,000	Mar. 17	Mar. 30
Eli T. Stone	Modesto, Cal.	405	April 11	April 18
C. F. J. Kitchener	Traver, Cal.	5,000	April 19	April 21
T. D. Day	White River, W. T.	3,000	Mar. 23	April 23
Margaret Brooks	San Francisco, Cal.	1,031	April 30	April 30
Mrs. F. A. Shepherd	Georgetown, Cal.	5,000	April 29	May 3
Elizabeth G. Toy	Chico, Cal.	2,020	May 5	May 14
Justus Laux	Colusa, Cal.	2,255	May 7	May 16
J. J. Long	Missoula, M. T.	90	May 17	May 19
H. Van Huse	San Francisco, Cal.	800	April 29	May 21
T. D. Day	Stockton, Cal.	5,000	May 19	May 24
B. J. Guthrie	Davisville, Cal.	5,000	May 31	June 14
Edw. D. Silsby	San Francisco, Cal.	5,000	June 30	June 30
Lewis McMillan	White River, W. T.	2,090	July 7	July 7
Irene A. Blainigame	Dry Creek, Cal.	970	July 20	July 20
George Ohle	Empire City, Nev.	355	Aug. 10	Aug. 16
Andrew Jelby	Red Bluff, Cal.	1,100	Aug. 15	Aug. 29
Total.....		\$80,054		

ACCIDENT INSURANCE —BY THE— DAY, MONTH, YEAR. POLICIES ARE DEFINITE, Non-forfeitable. —AND— Free From Technicalities.



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Collections promptly made. Exchange bought and sold.

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PRODUCES THE
Finest Quality of Fruit at the Least
Cost.

Adapted to all kinds of Fruits and Raisins. Send for Catalogue.
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1838 POMONA NURSERIES, 1887

Parry, Lida and Bomba Strawberries,
Marlboro and Golden Queen Raspberries,
Wilson, Jr., Erie and Minnewaski Blackberries,
Niagara, Empire State & Moore's Early Grapes, Lawson, Kieffer and LeConte Pears, Wonderful and Globe Peach, Spaulding and Japan Plums, Delaware Winter and Red Cider Apples. All the worthy old and promising new varieties.
Catalogue free. WM. PARRY, Parry, N. J.

JERSEY BULLS.

PRINCE—Dropped Sept. 24, 1886; sire, Earl Marmaduke, No. 7087; A. J. C. C.; dam, Lilac's Last, No. 745, P. C. J. C. C., \$100.

JERSEY BOY—Dropped Aug. 12, 1887; sire, Prince Orlando, No. 16,942; A. J. C. C.; dam, Lilac's Last, No. 745, P. C. J. C. C., \$35.
Both exceptionally fine and very large.
E. H. SCHAEFFLE, Morphy's, Cal.

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Seeds, Plants, Etc.

NAPA VALLEY NURSERIES.

ESTABLISHED 1878.

Fruit Trees, Grapevines, Resistant Grapevine Stock.

And everything to be found in a first class Nursery; also the following new fruits, obtainable only at these Nurseries:

Clyman—Earliest and finest shipping Plum.
Ulatia—Earliest and finest shipping Peach.
California Advance—Earliest and best Cherry.
Purity—Most beautiful, white, canning Cherry.
Black Mastodon—Largest black Cherry known.
Centennial—The finest keeping and shipping, light-colored Cherry. (This variety is now cultivated throughout the State; to be safe, however, it is best to procure it from headquarters.)

Commercial—The largest Almond.
 Send for catalogue and price list. All stock unirrigated and free from disease. **LEONARD COATES**, Napa City, Cal. For County Rights for a new and valuable Fruit Drive, address as above.

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Trees, Plants, Bulbs and Seeds,
**UNSHIU SEEDLESS
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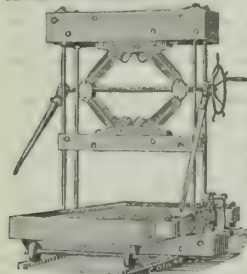
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PROSPECT HILL NURSERIES,
 Dansville, Livingston Co., N. Y.

Worth's Patent Combined Screw and Toggle Lever Wine and Cider Press.

First Premium awarded on Wine Press at Sonoma and Marin Agricultural Fair, Sonoma Agricultural Park Association, Santa Clara Valley Agricultural Society and Mechanics' Institute, S. F.



I desire to call the attention of wine and cider makers to my improved press. The following has a movement of 264 inches, the first revolution of the screw moves the follower 14 ins., the last revolution is but 1 1/2 of an inch, thereby the power increased in the same ratio as the resistance. The platform is 50 inches wide and 10 feet long; is run back and forth under the press on a railroad track.

Has two baskets, by which you can fill the second basket while the first one is under the press, thereby doing double the amount of work that can be done on any screw or lever press in the market that use only one basket, for this reason: While my press is working continuously the other kinds are doing nothing during the time they are emptying and filling their basket.

Printed Testimonials can be had on application of the following parties, who have bought my press: J. B. J. Portal, San Jose; Wm. Pfeiffer, Guberville; Joseph Walker, Windsor; Kate F. Warfield, Glen Ellen; Joseph Drummond, Glen Ellen; Isaac De Turk, Santa Rosa; John Hinkel, San Francisco; J. & F. Muller, Windsor; C. Schiller, Guberville; Lay Clark & Co., Santa Rosa; Yache Freres, Old San Bernardino; J. F. Crank, San Gabriel; James Finlayson, Healdsburg; P. & J. J. Gobbi, Healdsburg; Wm. Allen, San Gabriel; Wm. Metzger, Santa Rosa; J. Lawrence Watson, Glen Ellen; Walter Phillips, Santa Rosa; Geo. West, Stockton; Eli T. Shepard, Glen Ellen; Rancho Wine Co., Rancho, Los Angeles Co.; Downing Fruit & Wine Co., Downey; L. A. Beard, Centerville; Wm. Palmtag, Hollister; A. Burnham & Son, Santa Rosa; Paul O. Burns Wine Co., San Jose; E. Emil Meyer, Santa Cruz Mountains, Wright P. O.; Marshall & Hill, Laguna Station; R. J. Northam, Anaheim.

Also manufacture Worth's Patent Hand and Power Grape Stemmers. W. H. WORTH, Petaluma Foundry and Machine Works, Petaluma, Sonoma Co., Cal.

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lay (convenient) machinery. Can

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PUMPS. Mention this Paper. Send

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JAPANESE and CHINESE FRUIT TREES,

Ornamental Plants, Palms, Bamboos, Bulbs and Seeds,

True to name and free from insects.

Raised in our own Nurseries at Aynio and Yokohama, Japan, under supervision of an able Horticulturist, well known to the best Nurserymen of the U. S. We offer, free by mail, to any address, three choice new divers colored Japanese Chrysanthemums for \$1; five choice Japanese Lily Bulbs for \$1. One pound Japanese Chestnuts for 50 cents. Finely illustrated catalogue.

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 Proprietors **GEO. F. SILVESTER SEED HOUSE,** 315 and 317 Washington Street,
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JAPANESE SEEDLESS OONSHIU ORANGE TREES.

A large invoice of the **SEEDLESS OONSHIU ORANGE TREES** coming direct from Japan; also a large variety of all kinds of

Japanese Fruit and Ornamental Trees, Plants, Bulbs, Seeds, Etc.

Catalogue sent on application. Address, **JAPANESE TREE IMPORTING CO.,** Room 72, 120 Sutter Street, San Francisco, Cal.

Santa Rosa Nurseries

125,000 OLIVE TREES!

Nut Trees,

Apples,

Pears,

Plums,

Prunes,

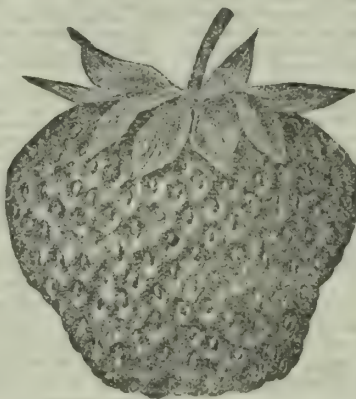
Cherries,

Peaches,

Apricots,

Nectarines,

Figs.



Quinces,

Loquats,

Guavas,

Medlars,

Persimmons,

Pomegranates,

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Small Fruits,

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Asparagus,

Ornamental Trees,

Roses, Etc.

Santa Rosa Nurseries are now and always have been **FREE FROM SCALE**, and the unusual care which has always been taken to have everything that leaves our nurseries true to name, and in the best possible condition to grow, has given them a reputation for reliability which has caused our sales to more than double each year. Send for prices.

LUTHER BURBANK, Santa Rosa, Sonoma Co., Cal.

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**POULTRY, CATTLE,
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Keep your Animals Free
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BY USING

**Ongerth's
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—AND—

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Which cures Chicken Diphtheritis, Roup, Mange of Animals, etc. It also heals all Scalds and Burns and other Sores and Wounds. It heals Stings of Mosquitoes, Bees, Wasps, Spiders, etc.

Recommended by the Agricultural Department of the University of California, and by other prominent parties.

Send your address for circulars.

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1887.

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Regular Warehouse for S. F. Produce Exchange Call Board.

Storage Capacity for 75,000 Tons of Grain.

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Stationary Engines and Boilers.

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IRON AND BRASS CASTINGS.

Machinery of all kinds furnished at shortest notice.

Heald's Patent Wine-making Machinery,
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Preliminary Drawings

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Specifications prepared

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Eddy Street, S. F.



Lands For Sale and To Let.

FARMS FOR SALE.

One Small Hop and Vegetable Farm. The annual yield of this place will equal 50 to 75 per cent of the purchase price.

One Fruit Farm of 50 acres. This year's crop will amount to nearly half the amount asked for the place.

120 Acres; all first-class Fruit Land; 70 acres planted to Fruit and just beginning to bear.

135 Acres; good Hop and Fruit Land near this city.

Also, several other Good Tracts, and 20 Good City Lots.

All these Tracts are intrinsically worth the money asked for them without the "Boom," and with it a handsome profit.

Terms easy. For further particulars call on or write to

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Real Estate,

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A large list of orchard and fruit lands and suburban homes in Santa Clara Valley, and rural retreats in the celebrated warm belt. Correspondence solicited

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REAL ESTATE AGENTS,

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Parties desiring to sell or purchase property are invited to call or correspond.

\$13,000—640 ACRES,

Seven miles from station; fare from San Francisco, \$2.50; 450 acres rich valley; balance grazing and timber; abundant running water; all fenced and cross-fenced; house of 7 rooms; barn, sheds, etc.; 500 bearing fruit trees; 4500 bearing vines; 6 horses, mower, header, plows, etc.; 40 tons of hay.

N. O. CARNALL,

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WEST COAST LAND CO.

TEMPLETON, SAN LUIS OBISPO CO., CAL.

Home of Wheat, Fruit, Wine and Olive; 15,000 acres sold in past 8 months to 220 settlers, representing a population of 1100; 49,000 acres—small subdivisions—average, \$22.50 an acre; cash, balance 8 years, 6 per cent. Catalogues and maps free. C. H. PHILLIPS, Manager.

A NEW COLONY

On the new extension of Southern Pacific Railroad, on the lands belonging to R. T. BUELL, Esq., near Los Alamos, Santa Barbara county, Cal. Parties desiring to visit the property now, can go via San Luis Obispo and take the cars from thence to Los Alamos, thence by stage to the Colony. 20,000 acres of the best lands in California, subdivided into 20, 40 and 80-acre farms; \$20 to \$30 per acre. INTERNATIONAL IMMIGRANT UNION, 401 California St., San Francisco

GOOD CROPS EVERY SEASON WITHOUT IRRIGATION.

Free by mail, specimen number of "The California Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of

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AMERICAN NEWSPAPER ANNUAL.—It is seven years since N. W. Ayer & Son of Philadelphia, in furtherance of their business as advertising agents, began to publish the American Newspaper Annual. The edition for 1887 was completed only in August, and a copy lies before us. Besides the carefully prepared lists of newspapers and other periodicals issued in the United States and Territories and in the Dominion of Canada, with their circulation, distinctive character, etc., so arranged that the publications of each town, each county, State and geographical section are easily found together, as may be desired, while class journals—agricultural, scientific, religious, medical, etc.—are also grouped by themselves, convenient for reference, this volume contains a surprising amount of compact information as to the natural features, products, population and industries of the States and districts within its scope. We have found previous editions very handy to keep beside us, and with the various tables it contains and the new features introduced into this year's issue, it is calculated to prove useful, not only to advertisers, publishers and editors, but to every one who has anything to do with periodicals beyond reading the local paper or the last magazine.

If Your Lungs are Destroyed
Do not expect that Dr. Pierce's "Golden Medical Discovery" will make new ones for you. It can do much, but not impossibilities. If, however, you have not yet reached the last stages of consumption, there is hope for you. But do not delay, lest you cross the fatal line where help is impossible. The Discovery has arrested the aggravating cough of thousands of consumptives, cured their night-sweats and hectic fevers, and restored them to health and happiness.

Thousands of cures follow the use of Dr. Sage's Catarrh Remedy. 50 cents.

"Close the door gently,
And bide the breath:
I've one of my headaches—
I'm sick unto death."
"Take 'Purgative Pellets,'
They're pleasant and sure;
I've none in my pocket
I'll warrant to cure."

Dr. Pierce's "Pleasant Purgative Pellets" are both preventive and curative.

THE GOTHENBURG SYSTEM, which takes its name from the place where it originated, is a good one. It has been adopted in Sweden and Norway, and no intoxicant can be sold except at a place where good food, coffee and other non-alcoholic drinks are also kept constantly on hand. The dealer is allowed to make a profit on these, but he is stringently prohibited from selling any liquor except at cost. The idea is that dealers will thus endeavor to promote the sale of edibles and non-intoxicating drinks, upon which he does make a profit, and discourage buyers from drinking liquors upon which he makes none. It is said to work like a charm. It would be well to adopt the Gothenburg system all over the land.—*Polly Larkin, in Pet. Courier.*

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

JARED C. HOAG—California.
G. W. INGALLS—Arizona.
Geo. McDOWELL—Santa Clara Co.
W. J. FREEMAN—Utah.
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R. G. HUSTON—Butte, Montana.
E. P. SMITH—Siskiyou Co.
SILAS PRUDEN—Colusa Co.
B. R. McPHERSON—Santa Barbara Co.

H. H. BERGER & Co. of this city, the well-known importers of Japanese nursery-stock, have issued their illustrated catalogue and price-list for the fall of 1887. The scene in a bamboo forest in Japan, which fills the first page of the cover, gives the pamphlet a unique and taking aspect. This firm has also bought out the Geo. F. Silvester seed-house, one of the oldest and most reliable on this coast, and will carry a large stock of seeds, native and foreign.

A HUMANE CONTRIVANCE.—The improved harness pad, patented and manufactured by W. R. Empey of San Jose, is specially adapted to the use of milkmen, draymen and others whose business requires a heavy vehicle. It throws the weight on either side of the horse's spine, thus preventing bruises and galls, and enabling sore backs to heal even while the animal keeps on working. The pad may be seen at the Mechanics' Fair in the Santa Clara exhibit. It is highly praised by those who have given it a trial.

Important to Tree Planters.

One hundred and twenty-five thousand Fruit Trees for sale at a bargain, consisting of Apple, Pear, Peach, Apricot, soft and hard-shell Walnuts; also 2000 Fan-Leaf Palms. Sales will be made in lots, or the Nursery and stock will be sold on the most liberal terms as to price and payments, or will be exchanged for real estate. Inquire of J. M. Hixson, Real Estate Agent, 75 N. Spring street, Los Angeles, or address the proprietor, Milton Thomas, P. O. Box 304, Los Angeles, Cal.

The King of Soaps.

With the King of Soaps the family washing can be done as easily as any other of the household duties.

THE GIANT POWDER COMPANY.

PATENT OWNERS OF

NOBEL'S DYNAMITE,
NOBEL'S EXPLOSIVE GELATINE,
NOBEL'S GELATINE-DYNAMITE,
Best and Strongest Explosives in the World.

As other makers IMITATE our Giant Powder, so do they Judson, by Manufacturing a second-grade, inferior to Judson.

BANDMANN, NIELSEN & CO, General Agents, San Francisco.

JUDSON POWDER,

The Only Reliable and Efficient Powder

For Stump and Bank Blasting. From 5 to 20 pounds blows any Stump, Tree or Root clear out of ground at less cost than grubbing. Railroaders and Farmers use no other.

Farmers and Viticulturists, Attention!

FERTILIZE! FERTILIZE!

NITROGENOUS SUPERPHOSPHATE.

UNIVERSITY OF CALIFORNIA, Nov. 3, 1886.

Dr. J. KOEBE—Dear Sir: I have analyzed your sample of "Nitrogenous Superphosphate," with the following result:

Soluble Phosphoric Acid.....	12.90 per cent
Reverted Phosphoric Acid.....	.95 "
Insoluble Phosphoric Acid.....	2.83 "
Potash.....	2.23 "
Ammonia.....	1.87 "
Nitric Acid.....	2.95 "

The above amount of Nitric Acid is equal to 0.85 per cent Ammonia, therefore, total of Nitrogen calculated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vineyards, orchards, gardens, farms, and I recommend its use by the cultivators of the soil generally, in California. Yours truly,
DR. E. A. SCHNEIDER.

University of California, College of Agriculture.

BERKELEY, Nov. 20, 1886.

Dr. J. KOEBE, San Francisco.—Dear Sir: I take pleasure in adding my testimony to that of Dr. Schneider as to the high quality of the "Nitrogenous Superphosphate" Fertilizer, analyzed by him at your request. It is a high-grade article, and as such returns the user a better money value than a low-grade

fertilizer. It is especially well adapted to use in California, on account of the predominance in it of Phosphoric Acid, which is generally in small supply in our soils. Yet it is desirable that "complete" fertilizers be used in our orchards and vineyards, and yours is of that character in furnishing Potash and Nitrogen as well. Very respectfully,
E. W. HILGARD.

The value of this Fertilizer consists in the large percentage it contains of Phosphoric Acid—the chief element of all plant food—in combination with the necessary quantities of Potash and Ammonia, and the ease and cheapness with which it can be applied.

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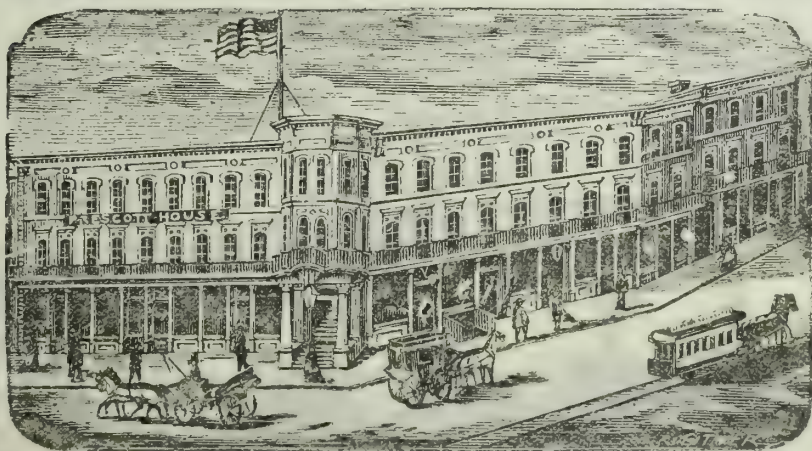
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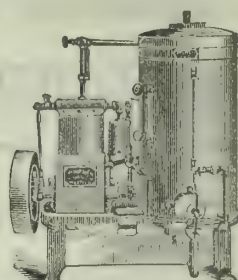
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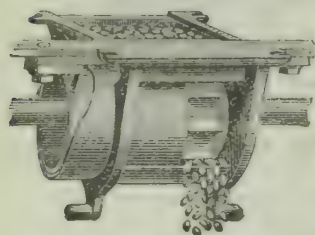
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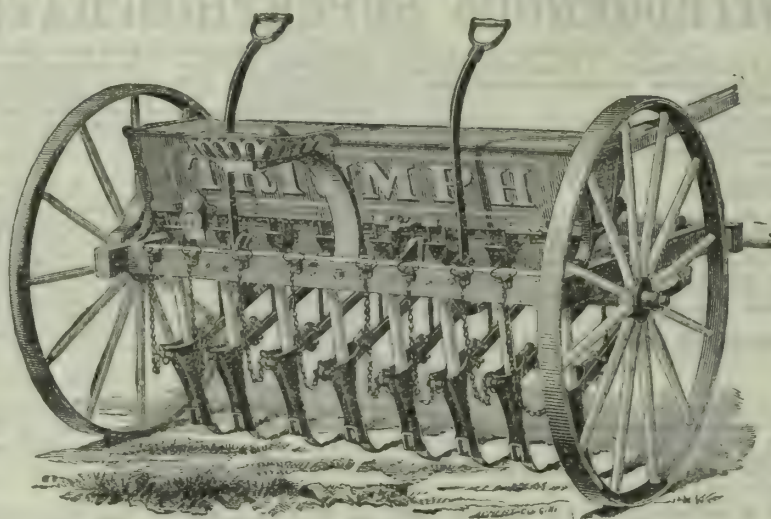
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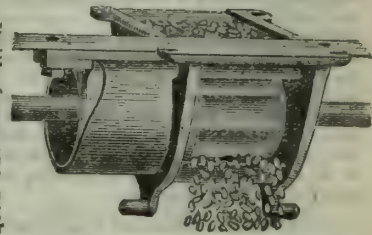
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3. It has but three gear wheels, all fastened permanently on the drill, outside of the frame, and covered with a neat cast-iron plate.
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WHY THE TRIUMPH IS THE BEST DRILL.

10. The feed-wheels always have the same position in the cups under the hopper; there is no getting out of order by moving the feed-wheels or changing the speed, as is the case with other drills.
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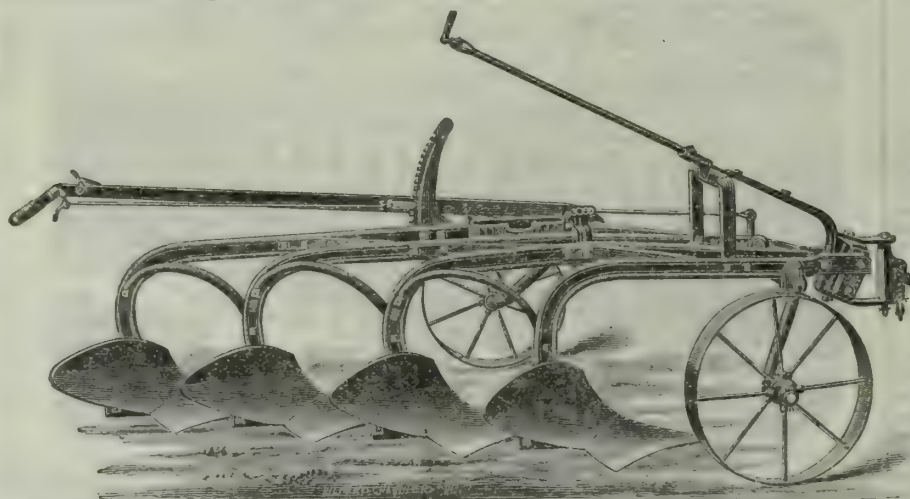
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Vol. XXXIV.—No. 16.

SAN FRANCISCO, SATURDAY, OCTOBER 15, 1887.

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Government Inquiry on Vine Diseases.

The fitness of a special division of the United States Department of Agriculture for the investigation of obscure diseases of plants, trees and vines, has long been recognized. With the classification and extension of the Government work which has been attained under Commissioner Colman's administration, this has been provided for, and one report relating to fungoid diseases of the vine has been published. This report has been thoroughly studied in this State, and much good has been accomplished in giving our vine-growers more definite ideas of the characteristic appearances of the recognized diseases of the vine. It is true that some, unused to observation of symptoms and indications, have found nearly every disease described in the report where none of them really existed, but in spite of such mistakes the result has been good, because they have been taught to observe. It is highly important that as good work be done toward the popularization of knowledge concerning fungoid diseases as has been accomplished with knowledge of insect pests, and we are glad to note the recent work of the Department of Agriculture as looking toward that end.

We especially refer to this matter this week because the Government expert in this department, Mr. F. Lamson Scribner, is now in this State, having come to study on the spot the mysterious disease which is playing such havoc in some of the vineyards in the neighborhood of Orange and Anaheim, Los Angeles county. We understand that Mr. Scribner could not discover the cause of the trouble from the specimens sent to Washington, and thus he has apparently approved the conclusions reached by Professor Hilgard and his assistants at Berkeley, that the vine, at least when it reached the laboratory, did not disclose any vegetable parasite competent to compass its destruction, but that the cause of the trouble was obscure, and probably existed in the environment. However, Mr. Scribner very properly determined to investigate the matter in the field and has come to California for that purpose. He will spend some time in the State, making examinations of vineyards. Accompanying him is Pierre Viala, Professor of Viticulture in the National School of Agriculture at Montpellier, France, who has been sent to this country by the French Government for the purpose of making a thorough examination of vines with a view to ascertaining what kinds are best adapted to resist phylloxera, and to their exportation to France.

He is also commissioned by his Government to examine and report minutely on the methods of preserving fruits in California. Messrs. Scribner and Viala stopped some time in Texas on their way here, examining vines, and will begin their labors here at once.

Poultry Fair in January.

The California Poultry Association held its regular fall meeting in San Francisco, October 5th. It was decided to have a poultry show

Terrible Fires.

The most disastrous fires in field and forest it has ever been our sorry task to note on the Pacific Coast have been, and up to Tuesday were still raging, in Napa and Sonoma counties. Day after day the atmosphere has been heavy and thick with smoke; night after night the conflagrations' glare has lighted up mountain and valley for miles. Bands of fire-fighters have been out battling strenuously with the advancing flames, but the loss of what patient toil had

The Sultana Grape.

The engraving on this page will serve a double purpose. It may be taken to signify the wonderful productiveness of California soil and to illustrate some of the characteristics of the Sultana grape, for such is the variety of the vine at which the photographer pointed his camera. The Sultana is the grape from which the famous Spanish Seedless Sultana raisins are made. If we remember correctly, it was first brought into prominent notice in this State by

W. B. West of Stockton, and we think Mr. West exhibited the first California Seedless Sultana raisins. One of the earliest to propagate the grape on a considerable scale was R. B. Blowers of Woodland. In his hands the vine demonstrated its immense bearing power. If our memory serves us correctly, some of Mr. Blowers' vines yielded at the rate of 17 tons per acre, though of course the average is much less. This fact, and the probable profit in the production of California Seedless Sultana raisins, led to wide planting of the variety in different parts of the State, so that now the Sultana vines are widely distributed. Perhaps not all the hopes which led to the great planting few years ago have not been realized. Such would seem to be the conclusion from the interesting essay by Executive Viticultural Officer J. H. Wheeler, which we published in



THE SEEDLESS SULTANA VINE IN FRUIT—SCENE IN VINEYARD OF J. F. ONSTOTT, NEAR YUBA CITY.

during or before January, 1888, but so few of the country members were present that the precise time and place were left to be determined at a special meeting called for Saturday evening, November 5th, 7:30 o'clock, at No. 10 Montgomery St., S. F.

The president appointed the following committee to ascertain what advantageous arrangements could be made for holding a show in their respective localities: Oakland—J. McFarling, J. N. Lund, H. R. Bowie. San Jose—O. T. Albee, H. G. Keesling, C. A. Pitkin. Santa Rosa—T. D. Morris of Sonoma.

FOREST TREE SEEDS.—It is announced that the State Board of Forestry is in receipt of seeds of the *Eucalyptus Globulus* (Manua gum) in one-half ounce packages, and the *Eucalyptus Corynocalyx* (sugar gum) in one-ounce packages, which will be distributed on application to Sands W. Forman, Secretary of the Board, at 42 Nevada block, San Francisco.

SHIPMENTS from Fresno now average from three to four carloads of raisins and one carload of dried fruit per day.

earned, if not indeed of human lives, has been past present estimate.

In Los Guilicos valley, near Santa Rosa, especially, the destruction not of timber, pasture and fences only, but of vineyards, barns and dwellings, has been lamentable. The high north wind, which was blowing for several days, at once dried vegetation into tinder and carried the flames over a vast extent of country.

Besides the disasters north of the bay, burnings only less devastating are reported in Santa Clara county, near Wright's, in the mountains west of Woodside, San Mateo county, and in Palomares canyon, near Haywards. In the case last named the fire swept over 15 miles of country and reached the neighborhood of Niles, leaving behind it charcoal and ashes in place of woodland, stubble, grain, buildings and farm utensils. Animals, wild and domestic, perished here and there.

We can only hope that those who have suffered so seriously will not lose courage, but bravely and cheerily set about retrieving their losses; and that these costly lessons will teach carefulness to all who are heedless how they kindle the small beginnings.

the *RURAL* of Aug. 27, 1887. The essay maintains, however, the outlook for Sultana raisins, if prepared as the market demands, and no doubt there will be renewed effort to secure this result.

The engraving shows a Sultana vine in full fruit, as growing in the vineyard of J. F. Onstott, three miles from Yuba City, in Sutter county. Such full fruitage, though characteristic of the Sultana variety, does not belong to it alone. Many of the other varieties also bear heavily and become almost a solid pyramid of fruit. Thus the illustration is characteristically Californian.

The Yosemite commissioners, who went to the valley for the purpose of inspecting the Stoneman house and formally accepting it from the contractor, have returned. They found that the contract had not been fully complied with, and until this is done—which may be November 1st—they will not accept the building in behalf of the people of California.

Work on the Stanford University is progressing rapidly.

THE VETERINARIAN.

Contagious Pleuro-Pneumonia, Etc.

EDITORS PRESS:—Inoculation for pleuro-pneumonia contagiosa—contagious inflammation of the lungs and pleura—has not yet produced positive results. In fact, there are many eminent authorities who state that the ordinary method of inoculation for pleuro-pneumonia contagiosa does not produce the disease. The method consists of taking a piece of diseased lung, and, after having prepared the lymph in the usual manner, this is applied with some friction to the abraded skin of the tail. Judging from a most peculiar letter which I noticed in *Gazette and Stockman*, Alturas, Cal., Sept. 7th, one would suppose that inoculation was the *sine qua non*, and that all we need do to banish diseases from this globe is to inoculate every animal (man included) with the specific virus of each ailment. To speak fearlessly and honestly, the statements made in the above-mentioned letter are wrong and ridiculous. He says: "In this State, however, this fearful disease (pleuro-pneumonia) is not so prevalent as in various other countries." I presume he means "States," as when a man speaks of a country one imagines he refers to a larger expanse. The editor of the *Gazette and Stockman*, in a criticism of its subscriber, says that it "has yet to learn of a single case of pleuro-pneumonia contagiosa ever existing in this portion of the footstool."

I agree with the *Gazette and Stockman* I have never heard of a single case of that disease in the State of California. There are, of course, a very large number of cases of pleuro-pneumonia, i. e., a simple but not contagious inflammation of the lungs and pleura. In other words, ordinary lung fever, complicated with an inflammation of that external glistening membrane of the lungs, termed the pleura. I always do my utmost to avoid strong statements, and seldom allow myself to get excited, but really I must say—if I did not I would be a hypocrite—that this writer in the paper before mentioned knows nothing of the subject at issue. I hope Mr. O'Neil, for that is the name of the gentleman referred to, will not be offended. He must remember that I am not acting on the principle of the Irishman, when asked for whom he would vote, on landing at New York. "Agin the Government, anyway," answered Patrick. I am simply stating facts. Post-mortem appearances of pleuro-pneumonia contagiosa are characterized by patches of inflamed tissue in the lungs, and they have a characteristic marbled appearance, totally different from the appearance of the ordinary inflamed-lung appearance. But this, like so many other matters, cannot be well explained by pen and ink, but must be seen and seen often to be understood. An ounce of practice is worth a pound of theory. Upon applying the ear to the sides of an animal affected with this disease, the "sounds" are diagnostic to a practiced ear. One lung is generally affected much more than the other. It is extremely difficult to explain upon paper the general diagnosis of this contagious inflammation of the lungs and pleura.

Let the Poor Brute Lie Down.

Every particular lameness in a horse has a characteristic gait. Every disease, in all animals, shows particular and peculiar symptoms. And there can be no greater mistake than to suppose, as does a writer in the *Calistogian*, that "in every case the afflicted animals act in a similar way." When the poor animal is suffering intense pain, nature will indicate the easiest and most comfortable position in which to lie. No one but an unthinking person would use mechanical appliances rather than allow him to lie down. Suppose yourself suffering pain from colic, how would you like to be put in stocks to prevent rolling and lying on the stomach? I have seen some people whip a poor horse with colic to prevent him lying down, supposing that he was sure to die if he once was allowed to lie down, even on a comfortable bed of straw. In very many ailments of that most noble animal—the horse—we should do our utmost to encourage him to lie down. Laminitis or fever in the feet—to wit—if he will not lie down on his own account I frequently pull all his legs together, and quietly lay him down on a good bed, thereby much relieving the pain by removing the pressure. He soon finds that this is the easiest posture, and will lie down of his own accord. The general opinion with the public is that the first thing to be done in treating a sick horse is to "keep him on his feet." It is a very good rule to remember that the medical treatment with horses and human beings does not differ much. And if no veterinary surgeon is at hand, let the owner ask himself if my wife or child were suffering from pain and no medical aid at hand, what would I do? And allow me to add, that contact with well-bred sick horses for many years has taught me that horses and dogs possess appreciative powers superior, yes, superior to many human beings.

Progress in the Healing Art.

"For cancer the head of a mad dog, burned and then turned to ashes, and thereon applied, casteth all the venom and the foulness and healeth the maddening bites," so writes a medical authority in Britain, 1712. A Brahman reverentially swallows as medicine a little of

the excrement of the sacred cow. Comparing these ideas of therapeutics and the following letter, which was taken from the *Independent*, we must come to the conclusion that the science of the physician—I mean the properly qualified physician—has acted on the policy of progress onward and upward:

"The progress of the last 50 years has wholly changed the position of the science and the art of the physician. His very name meant nature, and he was so called because his subject for study was the highest one in nature, the study of man. But there was little material for that kind of study which deserves the name of science, and there was so much demand for some one who could relieve human pain and disease that it is not wonderful that the art made attempts even when it had no science to fall back upon. It did come to have observation and experience, and so far as it availed itself of these it had a right to exist. But as an art it had to be empirical just because it had not enough orderly facts out of which to make a science. Now the situation is greatly changed. Almost every department of natural science in its modern accumulations has had much to hand over to the physician. The medical mind became aroused, and soon saw that it too had a body of science within itself waiting for the search of the scalpel and the microscope and capable of being utilized for the purposes of art. It is not all troublesome that this more precise knowledge has narrowed the sphere of drugs and widened that of natural relief and cure. It is the highest of human mechanism and of human skill so to run a machine that is self-repairative that it may have the very best chance to repair itself. That is what the true physician of the present day is studying with potential energy. He does not ignore drugs. He knows that there are limitations as to the degree to which the human organism when out of repair can mend itself; hence there was a time when the physician, finding such a condition, pushed his drugs and other appliances more vigorously. He has more accurately discovered their place and their power, and so when he must employ them, does it all the more effectually. But he has also seen that the occasions for their use are the rare exceptions. The great study now is to know what are the precise preservative and curative powers of the human system, and of each particular person, and how far and in what way they are most available. Also how they can be aided by natural methods, such as by air, food, water, exercise, etc. Hence it is that hygiene is no longer a thing to be patronized. It is radical and essential to the practice of medicine. Many a practitioner past 50 years of age has become a poor practitioner, because he practices just as he was taught, and knows more about *materia medica* than he does about *materia natura*. The profoundest questions now before the medical mind are those of nutrition, of tissue repair, of preservation or renovation by natural processes. Flint and Cross signalized their latest works by insisting upon the charge. Weir Mitchell opens his institution for restorative treatment, mostly along the line of sanitary and dietetic methods. Sargent attempts both prevention and cure by resort to the legitimate ways of body building, as nature conducts it. These are but specimens of hundreds who have caught the advancing light. They know how important and yet how narrow a sphere drugs have on one hand, and also how superficial on the other are many of the plans of alimentation, through pepsin, baby-foods, etc. Sir William Gull does not feel his profession compromised when he states that the Prince of Wales, when sick with typhoid fever, took only two doses of medicine, because he knows there is greater skill in conducting the other lines of treatment in all that relates to the temperature, rest, food, etc., than there can be in mere medication.

"The greatest mortification and embarrassment of the hygienist of the present day is that so many think that sanitation means skill in finding a nuisance rather than deep knowledge of causes which prevent their occurrence. He is the modern physician who, finding results in the form of sickness, knows how to deal with them in full knowledge of the curative resources of the sanitary or real medical art. The time has really come when every family that can afford it should put itself under the care of the physician, with the expectation that he will guide the life in particulars in which every one cannot be expected to have knowledge and so secure vigor and ward off disease. It is now more practicable to get more service out of your medical adviser by his investigations of states of health and means of vigor, than it is merely to depend upon him when sickness has arrived. It is thus that the average of human health can be decidedly raised and so benefit accrue to the family and to the nation. He who thus values his physician, as a consultant, not with the view of a dose, but as one capable of preventing disease, or of one dealing with it, mostly through natural processes, will not fail to secure the greatest advantages of this great art."

ROBERT J. DAWSON,
Veterinary Surgeon.

225 Geary St., S. F., Oct. 4, 1887.

SUCCESS OF ENGLISH CO-OPERATION.—The English co-operatives have a bank whose transactions amount to \$80,000,000 a year. They have 1400 stores and a business of \$150,000,000 a year. Their 900,000 members receive an annual profit of \$15,000,000. Their profits during the past 24 years have been \$50,000,000.

HORTICULTURE.

State Horticultural Society.

The regular monthly meeting was held in the rooms of the State Board of Horticulture, No. 220 Sutter street, on Sept. 30th, President Hilgard in the chair.

Mrs. H. H. Berger of San Francisco was elected a regular member. C. W. Hathaway, San Leandro, was proposed for membership, election to take place next month.

Mr. Lelong, of the committee appointed to draft resolutions concerning the death of Matthew Cooke, reported as follows:

To the Officers and Members of the State Horticultural Society:

We, the committee appointed at the last meeting to draft suitable resolutions in respect to the memory of Matthew Cooke, late member of this society, beg leave to submit the following, and most respectfully recommend their adoption:

WHEREAS, It has pleased Almighty God to remove from our midst a worthy and estimable member; therefore be it

Resolved, That in the death of Matthew Cooke the State Horticultural Society of California has lost a true friend, a faithful member, and a public benefactor.

Resolved, That these resolutions be spread upon the minutes of this society, that a copy be sent to the bereaved family, and that when this meeting shall adjourn it do so out of respect to the memory of the late Matthew Cooke.

W. G. KLEE,
B. M. LELONG,
LEONARD COATES,
Committee.

The resolutions were unanimously adopted.

The Kelsey Plum.

A letter was read from H. E. Van Deman, Chief of the Division of Pomology, U. S. Department of Agriculture, to Prof. Hilgard, in which he spoke very highly of specimens of the Kelsey Japan plum which had been sent to him. They arrived in perfect condition, though sent in a close box by mail.

Mr. Lelong also reported from the Committee on Tariff on Fruits that the committee had no recommendations to make, and referred the subject back to the society for its consideration. Several members thought that the proper time and place for the discussion of the tariff question as relates to our fruit products would be the annual Fruit-Growers' Convention, which will be held in Santa Rosa November 8th, and, on motion of Mr. Lieb of San Jose, the subject was postponed until that occasion. Enough was said, however, by Mr. Moulton of Colusa and others to show the importance of fruit-growers acting together for the protection of their industry from foreign importations.

Mr. Lelong reported that the fruit which had been treated by Mr. Allegretti, and shown at the meeting a month before, had kept in good condition for several days after being exposed to ordinary temperature in his office. Judge Blackwood remarked that some pears which he sent to Mr. Allegretti on the 28th of August, and kept in store for three weeks, did not sell when sent to market in San Francisco. (Mr. Allegretti desires to state in this connection that the fruit which he received was not of marketable quality when it was sent to him.) Mr. Lieb of San Jose said that he had kept cherries for two months, providing they were in good condition when they were put into the storehouse; but fruit that was bruised or over-ripe did not keep so well. He believes that the Allegretti process will be perfectly successful when we understand what fruit to subject to it and how to pick it. Prof. Hilgard spoke of a preservative fluid which he had recommended for specimens to be kept for exhibition at fairs. Some fruit kept well in this liquid; others kept very poorly. It may be in these matters we have much to learn about methods of application and preparation of the fruit.

Calaveras County Fruit.

Mr. J. S. Shearman exhibited to the society a collection of grapes, pomegranates, peaches, apples, etc., which he had brought with him from Calaveras county, desiring to show them because reports had appeared in some of the papers that Calaveras county was not fitted for the production of good fruit. The fruit shown by Mr. Shearman was a sufficient refutation of such statements, for it was specially excellent both in size and quality.

Seedling Apple.

The secretary exhibited a specimen of red apple received from T. Cowles, referred to in the following letter:

Horticultural Society:—I send you a box of apples which I would like to have your opinion upon. They are from a seedling (the seeds were planted by myself six years ago). The tree is quite thorny, but a vigorous grower. The branches droop and are entirely destitute of sharp forks or crotches. It is a prolific, constant bearer, resembling the Red June, but fully two weeks later. The tree is symmetrical and presents a fine appearance when loaded with fruit. Full as it is, not a limb has ever broken. I do not know what kind of an apple the seeds were from. Mrs. Cowles ate it and gave me the seeds to plant. She is dead, and this is her legacy to me, which will explain my interest in its identity. Some of the fruitmen here say that it is the Red June, others that it is not.—T. COWLES, Watsonville.

The fruit was referred to Jas. Shinn and W. W. Smith as a committee for identification, and after examination they reported that it was un-

doubtedly a seedling, and in all probability a seedling of the Red June.

A sample of walnuts was received from John Crofton of Walnut Grove, interesting because they were borne upon English walnut grafts which had been set in California black walnut stock.

Discussion of the stated subject of the day being taken up, the following letter from Felix Gillet of Nevada City was read:

Notes on Nuts.

Edward J. Wickson, Secretary State Horticultural Society.—DEAR SIR: Having found through this year's experience some new and rather important facts concerning the culture of nut trees and the successful raising of nuts of all kinds in this State, and one of the subjects to be discussed at the next meeting of the society being nuts, induced me to lay before the society these notes on the aforesaid subject.

The Walnut.

This year, with its repeated late frosts in the spring, has been a trying one for the walnut, at least in this part of the State. The kind that behaved the worst was the Los Angeles or California common walnut. About this locality it was injured by frost three successive times last spring, while the hardier kinds stood it better, not having put forth so early as the above variety. Up here in the mountains of Nevada county we had two black frosts in the spring, the first one on the 10th of April and the second one on the 11th of May. I must say that it is very unusual to have such heavy frosts so late in the season as we had this year. The frost on the 10th of April did hurt somewhat the *Præparuriens* and other sorts of walnuts that put forth about that time, but the worst of the two frosts was that on the 11th of May, which finished up what had been begun a month before. Those kinds of walnuts that escaped scot free were the following ones, viz., *Franquette*, *Mayette*, *Parisienne* and *Chaberte*, so extensively planted in Europe nowadays in districts where late frosts in the spring are quite frequent; and, of course, the *June Præparuriens*, that does not put forth before the 20th of June. I had the *Franquette*, *Mayette* and *Parisienne* out in full bloom early in June, they having suffered nothing whatever from the frost. This is so much more important from the fact that those three kinds grow very large and beautiful nuts, and it shows, besides, that their culture can be carried on successfully still higher up in the mountains or in districts subject to late frosts in the spring, and the business made a most remunerative one.

About half a mile from my place, which is a little too close to the creek to be entirely safe from frost, and in what may be termed the warm belt that encircles the town of Nevada on the north and west sides, and at a greater elevation, nut trees were not hurt at all by frost. At Mr. Allison's ranch, which lies in that warm belt, and is as fine a spot as can be found in our mountains for the raising of fruit and nuts, large *Languedoc* almonds were perfectly loaded, persimmons breaking down, and two ten-year-old second-generation *Præparuriens* pretty full for their age. Mr. Allison, when he purchased those two trees, five years ago, said that he only wanted to make an experiment and compare this new kind with other ones already planted on his place, but that if he was not so old, he would plant a 30-acre tract above his orchard into such walnuts. Now with those very two trees well loaded with nuts, and in a year that frost proved so dangerous all around, Mr. Allison thinks that he made quite a mistake five years ago in thinking that he was too old to plant that tract of land into walnuts. This may be regarded as an answer to the often put question: How soon will the walnut bear and be remunerative?

The following is an interesting illustration of the action of frost on the walnut in the spring. Mr. George Victor, at North Bloomfield, 13 miles above this city, has on his place a ten-year-old *Præparuriens* walnut which was just putting forth at the time of the frost on the 10th of April. Being absent from home on the night of that frost, Dr. I. Manson, a neighbor, and who thought a great deal of the walnut, got up before sunrise, and, with the aid of a hose and sprinkler, sprayed the tree all up with water. It was then very cold, the water freezing on the tree, from whose limbs hung down long icicles, and when the sun rose bright and warm, the tree had all over it a thick mantle of ice. Well, not a leaf, not a catkin, nothing whatever was hurt by frost, and subsequently the tree bloomed splendidly, having on lots of male and female blossoms (last year that tree, young as it was, yielded a nice little crop of nuts). But May came in with a vengeance, and on the 11th of that month the nuts that were just out in bloom were killed, nobody having had any idea that the frost would be severe enough to do any damage. A propos, I will state here that the walnut proper is very hardy, and is pretty well safe as soon as it attains the size of a good-sized filbert; but if in full bloom at the time of a heavy frost, it will, of course, succumb, like the blossoms of other trees.

Grafting the Walnut.

I have had occasion before this to describe the various ways of grafting the walnut. The mode of grafting that I last described and recommended as highly successful was "sap grafting," and it gave all around the best results. Right in this town on Mr. George Cooper's place, I have had a 30-years-old Los An-

geles walnut barren as could be, grafted into hardier and more prolific kinds by this method, and not a graft missed. As grafting the walnut is being much resorted to in Central and Northern California, both on the black and Los Angeles sorts, I will herein give a brief description of that mode of grafting. I must say that grafting is more apt to succeed on a large walnut tree than on a small one. I had limbs as big as the leg successfully grafted. They should be at least as large as the wrist. The stock should never be split through the center, but sideways, the cleft forming the chord of a segment. On account of the cleft being made to run altogether through the sap, that mode of grafting is called "sap grafting." If it is a large limb, two or even three such clefts are run on two or three sides of the stock, and one to two grafts inserted at the end of each cleft. But in preparing the cion and cutting wedge-like the end to be inserted into the cleft, the pith should never be exposed except on one side. This is almost a condition *sine qua non* of success. The stock should be well ligatured or bound tight with a band of cloth and waxed. The grafts have to be watched through the summer, and either be pinched back or tied up to stakes made fast to the stock itself; if not, their great weight is liable to make them break off. Cions for grafting purposes should be put away in the cellar, the butt in sand, before spring.

Frost Effects and Borers.

A curious effect of the frost on the 11th of May was to make the "borer" (another pest to bother the nurseryman) throw itself like a fury on the walnut. For 17 years that I have been propagating walnut trees, and I have propagated thousands of them, I do not think that I have had a dozen trees during that long period ever attacked by borers; so I was greatly surprised to find this year 50 per cent of the trees infested by that pest, and to tell the truth they did fare badly in the strong sap of the walnut. This is the way I account for that sudden attack of the borer on the walnut: The borer (or flat-headed apple tree borer, to call it by its American name) as it is well known, lays its eggs in preference on the side of trees where sap has been checked or interfered with in some manner; and as that frost on the 11th of May killed the new growth on most all the walnuts, it checked the sap thoroughly, and as just at that time the borer was emerging a perfect insect, it went to work blindly on the walnut, and in doing so made a sad mistake, for I do not think that five per cent of the worms would ever have come out in the perfect state in the spring, if let alone.

The Chestnut.

The chestnut is a very hardy tree, most admirably adapted to this altitude, 2600 feet above the level of the sea. I am informed that the frost on the 11th of May killed all the large chestnuts at Chico, right in the Sacramento valley. Here, in the mountains of Nevada county, chestnuts were not touched at all by the frost, and the trees are well loaded with nuts. This again shows the superiority of mountain land over valley land for chestnut planting. A seedling generally goes to bearing before a grafted tree, but the nuts are not so large. The chestnut degenerates fast from the seed, hence the reason why the finest varieties are solely propagated by grafting. Wherever summers are short and cool, certain varieties will not mature their nuts; in such districts none but precocious kinds should be planted. The kinds best suited to our climate are Combale, Nouzillard and Precoce. The renowned Marron de Lyon I find much inferior to the three above varieties, because it does not bear well, although bearing large nuts when it does bear. A grafted tree does not grow to such large dimensions as a seedling, and is greatly better adapted to orchard form. In one respect a grafted chestnut is similar to the *Præparuriens* walnut, that is, in having a great tendency to spread out instead of shooting up, and having the lower limbs bear very profusely. As to the American chestnut, it does not seem to do well in California. Here large trees of that kind are completely unproductive, while French chestnuts bear very well. Most all the chestnut trees planted in our mountains are seedlings of the French Marron type, the nuts being pronounced as bitter ones. This is a mistake, for the nuts are not bitter, but, unfortunately, almost tasteless; if, however, any of the inner skin which has that bitter principle in it is eaten with the nut, it will make the latter taste bitter. Boiled or roasted the nuts taste well enough, though lacking in sweetness and flavor. This is another advantage in favor of grafted kinds, which are very sweet, besides being uniformly large.

When planting chestnuts in orchard form, the trees should be set out 40 feet apart. Chestnuts do well in cordons around vineyards or orchards, the same as the walnut; in that case they may be set only 30 feet apart.

Pruning the chestnut is perfectly useless and rather injurious to the tree. Like the walnut, it has to be let alone. Nut trees in general require but very little pruning.

When picked right fresh, the chestnut is far from being so sweet as after it has been put for a certain length of time to sweat. Those large French chestnuts or "Marrons" make a splendid stuffing for geese and turkeys, and they come right in good time for the great American Thanksgiving Day. "Turkey and chestnuts" is a dish not to be despised at all. The chestnut should be planted more largely

in the mountains of California, where large tracts of land are so well adapted to its culture.

The Almond.

Two kinds of almonds seem to do well in California, and particularly so in our mountains, viz.: The hard-shell and Languedoc or common soft-shell. As to the Princess or paper-shell, it is a very delicate kind, which does poorly all over the State. I would not advise any one to propagate the almond from the seed, for, like all sorts of nuts, it is too apt to degenerate from the seed, no good results being thus obtained. We see in Europe the crop from seedlings always inferior and fetching less than that of grafted kinds. The most hardy of soft-shell varieties is undoubtedly the Languedoc; it is the best one for our mountains, where every year breaks out the gum among stone fruit trees, including almonds. An immense advantage of the Languedoc over almost all other kinds is that it blooms so much later, quite an important item. I have had always a crop on my Languedocs. This year, while the crop of the Paper-shell was destroyed by frost on the 10th of April, that of the Languedoc came out all right, to be nipped a month later, on the 11th of May. The Languedoc is less subject to gum than the Paper-shell, and it comes in bloom at a much more favorable period. The best almond variety, be it Languedoc or anything else, is that which blooms the latest, the very main requisite, whose nuts separate well from the hull, and which are the largest and whitest; all these requisites in one kind would constitute it the *ne plus ultra* among the almond family. The Languedoc has something else in its favor; it is long-lived, and certainly more so than the Paper-shell and other soft-shell kinds. In Europe, the late-blooming varieties are the only ones planted now, at least in districts subject to frosts, or, worse yet, not sheltered enough against the disastrous and blighting effects of north winds which usually prevail in the latter part of the winter, just when the almond trees are out in bloom. It would be more prudent in California to plant also none but late-blooming kinds.

As a rule, the almond tree cares less about the nature of the soil than it does for a good exposure, well sheltered from the north winds. The hard-shell is more hardy and bears larger crops than soft-shell sorts. In cold soil and where the almond root would not do well or even root, but where the plum root does well, the almond should be grafted on plum stock; otherwise the common hard-shell almond is the best stock for the almond. Sulphur-bleaching gives a bad taste to the almond and injures its keeping qualities.

The Filbert.

Every year confirms my former statement about the Avelines, as being the best kinds of filberts adapted to our soil and climate and being good and regular bearers, if cultivated and trained right; the nut, besides, being delicious. How much is it to be regretted that in our large vineyards, and orchards, too, long rows of filberts, set widely apart, were not made to intersperse grapevines and fruit trees. With grapes cheap as dirt, wine at ruinous prices, and fruit a drug, long rows of filberts and cordons of walnuts all around large vineyards and orchards, would considerably help, with but little outlay, to materially increase, and in some cases double, the revenue of the land.

Filberts to bear well should have plenty air about them, hence the rows should be wide apart, say 100 to 200 feet, with rows of grapevines or fruit trees between. The filbert should be trained as a low standard, branching out at 2½ to 3 feet from the ground. It is easy enough to train a filbert as low standard, but suckers or sprouts, so apt to grow from the foot of the tree, have to be mercilessly taken out, and as soon as the tree has attained a good size they quit growing so thick and fast as when the tree was young. In Arragon in Spain, they utilize irrigation ditches by planting filberts alongside of them; this is a hint to ditch-owners in a State like California, where irrigation ditches or canals are getting to intersperse the country in all directions.

Filberts require a moist soil, and if too dry it should be absolutely irrigated, as early as May and till July. They prefer also a light soil and rather deep; in a clayish, compact, cold soil, they do not do so well, and bear badly. In too poor soil the tree just lives and that's all. Under a too cold climate the nut is apt not to fill. A temperate climate is the best adapted to that pretty little member of the great nut family. The filbert has a kind of predilection for an exposure not too much visited by the sun's rays. The nuts drop off on the ground in the first half of September, perfectly ripe. The best time for planting filberts is the fall or early in the winter.

In some parts of Provence, in France, where filberts have to be irrigated to bear well, strawberries and violets are raised between the rows of filberts, and shipped to the Paris market, 600 miles away. In such land 50 to 60 filberts are planted to the acre. Trees generally come into bearing on the fifth year. Pruning is very little resorted to with filberts and they are long-lived trees if only moderately irrigated. The best mode for propagating the filbert is from layering, suckering and dividing of bushes. From the seed only 70 to 80 per cent may come true. It may very well be grafted on the common hazel of our woods or filbert seedlings. From five to six limbs are sufficient to constitute the top frame of a filbert tree made to

branch out at 30 to 36 inches from the ground. I have upon my own grounds several filbert trees trained as standards, and which branch out fan-like; they are, when so trained, highly ornamental. Filberts should be planted at least 15 feet apart in the row, and the rows from 20 to 25 feet apart; better still, as suggested throughout this paper, as intermediary rows in vineyards and orchards.—FELIX GILLET, Nevada City, Cal.

Discussion.

There was some dissent expressed from Mr. Gillet's remarks, especially in the matter of almonds, although Mr. Gillet was credited with correctness in speaking for his locality. It was the general opinion that there are a great many varieties better than the Languedoc for general cultivation in California. Mr. Coates remarked that in his opinion the simple fact of late blooming does not avail much, because frost does not always come at the same date, and thus blossoms are apt to be cut off successively during the spring. The matter of "gumming" he thought depended largely upon soil. Mr. Gillet's condemnation of seedlings cannot be approved if he intended to cover the idea of selected seedlings, because it is beyond question that the almonds which are succeeding best in most parts of the State at the present time are seedling almonds, originating here. Mr. Wilcox of San Jose said that seedlings which suit the different localities are undoubtedly the best for the California grower. Mr. Shinn expressed himself in a similar way. Concerning filberts, Mr. Coates claimed that they did not bear well with him, and Mr. Shinn stated that the trees did not bear well nor were the nuts as large as those that he had planted.

There was some discussion concerning the origin of the Languedoc variety of almond, and whether the Languedoc spoken of by Mr. Gillet was the same as usually called the Languedoc in this State. Mr. Hatch, who saw Mr. Gillet's Languedocs at the Sacramento Citrus Fair last January, considered them identical. He said that he had been told by the late Mr. G. G. Briggs that the Languedoc in California was a seedling of the real Languedoc, and Mr. Smith and Mr. Shinn claimed that the original Languedoc trees (from which buds have been used in this State) were imported from Prince of Long Island as early as 1857, and were undoubtedly from imported stock. Mr. Hatch, in answer to a question, stated that his seedlings which he is planting so largely do not gum. He also gave an outline of his experience in originating his famous varieties and how their produce compares in amount and in market value with the Languedoc. A similar statement was printed in the RURAL PRESS of April 9, 1887, to which the reader is referred.

Seedling Fruits in California.

Speaking of seedling almonds, the discussion naturally drifted to the consideration of seedling fruits in general for California. Mr. Smith recommended that still more work should be done toward the obtaining of still better seedlings of different kinds of fruit. He thought possibly even better almonds could be obtained than those which Mr. Hatch had succeeded in raising from his seeds. He thought in this work of raising seedlings we could probably make much progress and continually get better and better fruits, and those specially adapted to California conditions. He was trying to secure a good yellow peach; a good yellow, free-stone peach, which would ripen just before the Early Crawford. He has used the St. John pits crossed with the Early Crawfords. The St. John ripens at just the right time, but is too small. Mr. Shinn also spoke in favor of California seedlings, especially of peaches. For seedling cling peaches he had settled upon three which seemed to him very satisfactory—the Sellers cling, Nichols cling and the McKevitt cling. Discussion followed on other varieties of peaches. Mr. Smith recommended Reeve's Favorite as ripening just before the Susquehanna, but Mr. Shinn said in his locality it curled badly. Mary's Choice was recommended as ripening immediately after the Early Crawford and the Foster. The Henrietta or Levi's Late was exhibited by Mr. Shinn and it was stated that this peach had sold in Chicago this year as high as \$3.50 per box.

White Adriatic Figs.

W. C. West of Fancher Creek Nursery, Fresno, exhibited a sample box of White Adriatic figs, nicely dried and packed. The sample was very large and handsome, and was generally admired. Mr. West stated that he had dried them without dipping or any preparation. He says they must be picked at the right time—that is, when the fig drops over on the stem—and then is sun-dried for a day or two, and finally put into the sweat-boxes. Sweating the figs makes the skin tender. Mr. West stated that he had secured, by personal visit to Smyrna, the true Smyrna fig of commerce, and now has a number of trees growing in Fresno. He did not desire to say anything more about them till he could show the fruit, and then he would be ready to state all that he had learned during his five months' visit on the Mediterranean.

Nomination of Officers.

As the next meeting will be the annual meeting, according to the constitution, nominations for officers had to be made at the September meeting. Upon motion, the officers during the past year were renominated, as follows: President, E. W. Hilgard; vice-president, A. T. Hatch; secretary, E. J. Wickson; treasurer, R.

J. Trumbull. Directors—I. A. Wilcox, Leonard Coates, F. C. De Long, W. C. Blackwood and D. Lubin.

Subject for Next Meeting.

As the time did not suffice for the discussion of table grapes, that subject was laid over until the October meeting. Also, so much interest was manifested in seedling fruits for California that that subject was also appointed for the October meeting. Upon motion, the society adjourned.

THE STOCK YARD.

Animal Secretions Affected by Food, Etc.

EDITORS PRESS:—The quality and character of milk, manufactured or secreted by all animals, of course, depends altogether upon the food supplied. If dairymen feed grains to their cows and very little grass, the result must necessarily be that the milk lacks its natural peculiarities. An excess of soft food produces milk in great quantity but of poor quality. This is well known to all practical men. The fact that all animal secretions and excretions are materially affected by the material taken into the stomach is well shown—if necessary to prove so evident a statement—by the flavor the meat of turkeys derives by these birds having been supplied with walnuts a short time prior to killing; also the eggs of birds are influenced in flavor in accordance with the aliment supplied, personally. I can always tell whether a certain egg was laid by a fowl fed upon the natural country food, or kept in a cooped-up pen and not allowed to follow its natural instincts. It is noteworthy in treating of this subject to call attention to the matter of all animals possessing a characteristic odor in their secretions. How very different in smell is the milk of the cow and the mare! A man well versed in these details can at once recognize each excretion. As a practical instance of the effect of food upon the flavor of milk may be cited: The turnip flavor produced in that secretion of cows during the early part of the season for those roots. Also, any medicine that an animal may be taking can be readily recognized in the milk, and it is very necessary to remember this matter, as in giving an ordinary dose of aloes, for instance, the young animal may be so much affected, *through the milk*, as to cause its death by diarrhea. Medical men are well alive to this, as is shown by their recommending consumptive mothers not to suckle their offspring, but to feed them, either by means of the ordinary feeding-bottle or a foster mother.

Some people think that so long as milk is not watered, after it leaves the cow, all is well; but I guess it will be clearly seen, by what has been said, that adulteration may take place prior to this. One good method of testing the quality of milk is by means of that instrument which shows, by a properly arranged chart, the specific gravity of the fluid. It must be evident that the less the specific gravity the poorer is the quality. Cows transmit to their offspring their ability to give milk in quantity and quality, hence the benefit which comes from breeding only from such animals as produce it in abundance and of good quality.

ROBERT J. DAWSON,
Veterinary Surgeon.

225 Geary St., S. F., Oct. 3, 1887.

Consolidated Cattle-Growers' Association.

EDITORS PRESS:—The basis of representation at the forthcoming annual meeting of the Consolidated Cattle-Growers' Association, to be held at the Gillis Opera-house, Kansas City, Mo., beginning its sessions at 2 P. M., Monday, October 31st next, will be the same as heretofore, viz.: All associations holding membership in the consolidated organization will be entitled to send one delegate for every 10 of their members, paid for at the rate of \$5 for each delegate so sent. All general live-stock or cattle-growers' associations not holding membership, the Governors of all States and Territories, all State boards of agriculture and State live-stock sanitary boards are entitled to send two delegates each without payment. All agricultural colleges and agricultural experiment stations and all live-stock and agricultural publications are entitled to send one delegate each without payment. Invitations have been sent out to all parties entitled to send delegates under this plan, so far as it has been possible to obtain proper postoffice addresses, and it is believed that the field has been quite thoroughly covered. However, lest some may not have been reached in this manner, you are respectfully requested to publish the basis of representation as set forth above, with the request that all associations or other parties entitled to representation in the convention who may not have received formal invitations, appoint delegates without further notice, sending their representatives to the meeting with properly certified credentials.

You will also please accept this as an invitation to your own journal as per plan above outlined. Trusting that we shall have your hearty co-operation in endeavoring to make this meeting a successful and profitable one, we have the honor to remain—D. W. SMITH, President; ALVIN H. SANDERS, Secretary.

Chicago, Oct. 1st.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

The State Grange.

(Continued from our last.)

The session of the State Grange opened promptly on Tuesday morning, an unusually large number of representatives and visiting members being present. Most of the officers were in attendance, and work commenced at once.

The hall provided by the Santa Rosa Grange was commodious and most handsomely furnished and tastefully decorated, the word "Welcome" appearing in evergreens upon the left, and the significant motto on the right, "We Work in Unity." The latter words were beautifully wrought and observed in Faith, Hope and Charity with fidelity throughout the session. A handsome orange tree, fronting the altar, filled the hall with its grateful perfume. A Grange plow, made of choice roses and rare flowers, and placed upon the wall by Sister Cannon, attracted much attention and remained to delight the eye during the session. Potted plants and many other ingenious decorations abounded in the hall, all worthy of special mention.

Tuesday evening the hall was crowded with Patrons, much interest being taken in the delivery of the address of welcome by Worthy Steward E. W. Davis, Master of Santa Rosa Grange. His address was able and eloquent, and we regret that no report of it was secured.

Brother Davis was followed by Brother W. W. Greer, Worthy Master of Sacramento Grange, who gave the following response:

Response to Address of Welcome.

Worthy Master, Officers and Members of the California State Grange: To me has been assigned a pleasant duty—that of responding to this generous welcome from the members of Santa Rosa Grange through their able and eloquent representative, Bro. Davis.

But, Worthy Master, fully appreciating the honor you have conferred upon me, I feel that this is a privilege that should have fallen on some more eloquent and talented member than myself—some one whose conspicuous ability would have reflected more credit upon your good judgment; some one who could have done justice to this occasion. For it is hard for me to transport myself in a few short hours from the haunts of business and its corresponding cares to the rostrum, and address so active and intelligent a body as the Patrons of California here assembled.

On behalf of the Patrons of Husbandry of the California State Grange, I desire to express to you, Bro. Davis, our sincerest thanks and heartfelt gratitude for these glowing words of welcome.

We appreciate your welcome because we know it comes from the bottom of a Granger's heart. We know that you voice the sentiment common to every member in your Grange, and, brothers and sisters of Santa Rosa Grange, we feel that we are welcome in your midst; we feel that our stay in your beautiful city of roses will be a delightful one.

This is the second time the State Grange has convened within the confines of Santa Rosa; the second time we have enjoyed the hospitalities of Santa Rosa Grange. From present appearances, this will be a session productive of much good, and one long to be remembered in the annals of our Order, and when the end of the week draws nigh and the time for adjourning is at hand, there is not a member within the sound of my voice to-night but who will say that his stay has been a delightful one, and who will go away feeling benefited and improved by the session's work.

As I stand here this evening and glance around this hall over this assemblage of people coming here from all portions of the State, representing the culture and refinement of the great commonwealth, I feel prouder than ever that I am a Granger, prouder than ever that my name stands enrolled as a member of the Patrons of Husbandry of California, an Order having for its object the advancement and improvement of the agricultural classes; and it brings more forcibly to my mind the fact that agriculture is no longer in the hands of the lowly and uneducated, but in the hands of a cultured and refined class. Agriculture is fast rising in dignity and importance. We have lived to see the day when there is more learning in agriculture than any of the so-called learned professions. We have lived to see a day when it required no persuasion to have men follow these pursuits and make them see their beauty and their charms.

One word more and I will close. During the past year our Grange ship has been well manned. She has been skillfully guided over the rough billows and brought safely into port. Under the paternal guidance of Worthy Master William Johnston we have finished a season of fruitfulness for our Order. Nobly he performed his part, faithfully has he kept every promise made to us. He has served us ably and well, and when he comes to lay down the mantle of his office so nobly worn for the past two years well may we apply to him that welcome plaudit, "Well done, good and faithful servant."

And now, brothers and sisters, as we have an Order that we all love, that we all respect, that

we are all proud of, let us do all that we can for its advancement and improvement.

Let us make the next two years a season of work. Let us put forth an energy, determination and will never before displayed in our Order. Let us unite as one individual and pray that our Order may be strengthened and enlarged, that we may become a power in the land. May the doctrines of our Order be introduced into our politics, and may members from our midst continue to be called upon to grace the legislative halls of our Capitol and be invited to wield the executive and judicial powers of our State.

And to you especially, the gray-haired and venerable sons of our Order, you who were the founders of our Order in this State, you who have ever watched over us with a father's protecting care, I appeal to you especially, to forever stand by our glorious organization, and by your superior knowledge and by your presence give dignity and weight to our meetings.

And to you, mothers, you who have done so much for our Order, you who have influenced your sons and daughters to become members, on your responsibility depends greatly our success or failure. I appeal to you as mothers to extend to us a guiding and helping hand. Encourage us by your watchfulness, for he whose mother's eye is upon him is scarcely liable to go astray.

And to you, the younger sisters and brothers of my own age, you who are to become the future matrons and sires of our Order, I appeal to you to ever honor us with your presence, and by your beauty, intelligence and wit make bright our fireside, that many may be attracted within our circle. Introduce into every household in the land the noble precepts of our Order, and cease not your untiring efforts until you have succeeded in establishing as sentinels an unbroken line of Granges from San Diego to Siskiyou and from the Sierras to the sea.

Brother Greer is one of the youngest Masters in the State, and his address was very ably delivered and received with much applause; his effort, as well as that of Brother Davis, being highly commended. The Worthy Master then pronounced his Annual Address in a very clear and impressive manner. He was frequently interrupted with great applause.

The most interesting and demonstrative occasion during the session was the discussion of the woman-suffrage resolutions which were introduced by Brother A. P. Roache of Watsonville Grange, being similar to those he offered at a previous session. Each speaker was confined to five minutes; all were very earnest, and seemed to be able to express a great deal of fervent argument on their side of the question in the short space of time allowed. Brother Caples championed the negative side of the question, and we believe few Patrons, if any, will live long enough to forget the spectacle presented by him in his extraordinary efforts on his side of the question. The sisters seemed to be slow to commence the discussion on their part—Mrs. N. A. Sanders of San Jose being the first of their number to speak, and she delivered her remarks in a plain, quiet and impressive manner. The sisters were no less eloquent in their own cause than the brothers who spoke upon both sides during the debate. Sister Cross, Worthy Ceres, was strongly argumentative in her remarks. Sister Merrill of Stockton gave one of the most eloquent, strong and ringing speeches that it has ever been our fortune to listen to, and it would have done credit to any man or woman in the most able of assemblages of this or any other country. Nearly every speaker did remarkably well.

The ayes and noes were called and all the delegates seemed pleased to put their names on record, for or against the resolutions. It proved about the most unanimous vote of importance that ever passed the State Grange. The discussion of itself was of so animated, eloquent and interesting a character that few who heard it would have missed it on any account. The expressions and occurrences evidenced that the Patrons of Husbandry are a liberal-minded, progressive spirited and noble hearted body. We have no doubt that many felt well paid on this occasion for their attendance at the State Grange.

A good deal of interest was manifested in the proposition to raise the per capita dues of the Subordinate Granges to the State Grange from 10 cents to 20 cents per quarter, which, after thorough discussion, was carried. This will cause the Subordinate Granges to pay the small sum of 40 cents per member per annum in addition to the former dues. They in most cases will not regret the raising of the dues in the Subordinate Granges. We understand the amendment will not take effect until the 1st of January, and therefore will be in force but nine months before the next annual session, after which a change can be made according to the practical experience of the membership throughout the jurisdiction.

Another question which elicited a good deal of interest was the vote adopting an amendment to the Constitution submitted by the National Grange, providing for a representation of Pomona Granges in the State Grange on the same terms and conditions as Subordinate Granges, and a subsequent vote providing that Pomona Granges in the State Grange of California should be so represented, both of which propositions were adopted.

The new officers were installed in an able manner by Past Master Wm. Johnston, assisted by District Lecturer J. D. Huffman of Lodi, on Saturday afternoon, just previous to the close of the session. Able and appropriate

addresses were made by each Patron, when called upon in turn. At the close of these exercises, the most touching and affecting remarks were made upon the assuming by Worthy Master Overhiser of his responsible position as guardian over the high interests of the State Grange for the two ensuing years, and the retiring of his predecessor, Worthy Master Johnston. There were very few eyes and hearts present that were not kindly and deeply affected.

Past Master Steele then addressed the following words of welcome to Brother Johnston on the occasion of his vacating the Master's chair, and entering the honored ranks of the Past Masters of the State Grange of California:

Brother Johnston:—You were elected to the highest position in the gift of the State Grange, and have filled the position with dignity and honor. You have surrendered the authority confided to you at the close of the term, retaining the confidence that elevated you to that position. This entitles you to a place in the sacred circle of Past Masters of the State Grange of California—a circle made sacred by the fraternal affection that unites them—and by an unfaltering determination to live the principles of our Order.

Brother Johnston, I bid you a hearty welcome to our Circle.

Brother Johnston responded as follows:

Worthy Past Masters: I thank you for this very kind reception. It is second only to the very flattering manner in which I was elected Master of this Grange two years ago. I am very thankful to be by you considered worthy of being received into the grandest body of Past Masters in the United States, and I pledge to you all the ability I have to at all times and under all circumstances to guide, cultivate, foster and advance the interests of the tillers of the soil and Worthy Master. As one of the Past Masters I join in pledging our support in carrying out and putting in practice all the principles of our noble Order.

Worthy Past Master Steele then advanced and addressed Worthy Master Overhiser as follows:

Worthy Master, Brother Overhiser:—I rejoice to see you occupying the highest position in the gift of Patrons of Husbandry in California. We know you have received this high official position as a reward of merit. We have labored with you and have noted your devotion to our cause. We have confidence in you, and you can rely upon the cordial support of the Past Masters which you have so feelingly invoked.

Bro. Overhiser feelingly responded. He entered the ranks as a charter member of Stockton Grange in 1873. He held the honorable position of Overseer and Master of that Grange, being its second Master. His first position in the State Grange was the responsible one of Gatekeeper, and as he expressed it, "unaccountably to myself I have been advanced to the honorable positions of Lecturer, Overseer and finally Master."

"The last-named position I accept with many misgivings, and were it not for the assurance I feel of the kindly and able assistance of the Worthy Past Masters who have preceded me, should feel loath to assume its great responsibilities, and, in those oft-repeated words, beg you not to view me with a critic's eye, but pass my imperfections by."

Brother Flint, Worthy State Lecturer, also spoke heartily welcome to Brother Johnston, and also to Worthy Master Overhiser. His words, like the soul that uttered them, were noble and strong, and eloquently expressed. After he had taken his seat, Brother S. T. Coulter, Past Master, approached Brother Johnston, and clasping his hand, said:

My Brother: I, too (the youngest Past Master of this State Grange), welcome you to the sacred circle of Past Masters.

When, two years ago, it was my high pleasure to install you into the exalted office of Master of this State Grange, I reminded you that there was not a dollar in it for you, but that it afforded you an opportunity to win for yourself imperishable honor, by the pursuit of the course which I then believed you would pursue. And now, it gives me great pleasure to tender you my most hearty congratulations on the use you have made of that opportunity.

Brother Coulter then turned to the Master, and, grasping his hand, said:

Worthy Master: It gives me abundant pleasure to greet you by that title, in this exalted office, and to reassure you that you will have the undivided and hearty support and assistance of the Past Masters during your term of office in every noble and laudable effort.

Brother Johnston, the youngest Past Master, pledged Bro. Overhiser his hearty support in well-timed words. These scenes of congratulation on the part of the loved and revered Past Masters have always formed some of the grandest moments of the entire sessions of our State Grange gatherings.

Worthy Master Overhiser is well known as one of the most sincere and enthusiastic workers in the American Grange cause. He is well supported in his work by Sister Overhiser and a corps of officers of well-tried fidelity and ability.

Thursday evening proved one of the rare meetings of the session. The question of locating the next meeting of the State Grange came up first, a cordial invitation to visit Oakland in 1888 being extended by the Master of Temescal Grange. This was followed by equally cordial invitations to visit Santa Rosa, Tulare, Lodi, Fresno, Beckwith valley, Placerville and several other localities. The discussion proved a very lively one, bringing out much good-natured argument. When the balloting commenced, and had proceeded in a measure, Oakland seemed destined to be the winner by a large majority, until Tulare, with a good deal of hilarity, became the popular competitor of Oakland, and on the second ballot carried off the prize with a great deal of hearty good-will in its favor. Quite a number afterward expressed

some forebodings as to the wisdom of going to so extreme a point on the outer circle of the Grange field. This caused a more thorough discussion, and we afterward heard hints of an extra railroad to be completed to Tulare before the next meeting. Among the possible attractions may be an excursion to Tulare lake, the largest body of fresh water in the State of California, situated seven or eight miles west of Tulare; also, upon returning, an excursion to Fresno to visit that wonderfully progressive city and its beautiful environments, including several of the most successful fruit colonies in the State. Tulare is a large and rapidly-growing town, and seems destined soon to become next to Fresno in population and importance in Central Southern California.

The quartet choir of Sebastopol Grange, so well and favorably known in Sonoma county, were present for the first time on this occasion. Their soul-inspiring music became at once a notable feature of the evening. Too much cannot be said in their favor.

Memorial resolutions of respect were presented upon the death of D. Wyatt Aiken of the National Grange from South Carolina, whose death occurred during the last year. Brother Past Master Steele gave a glowing tribute to his memory. He was followed by all the other Past Masters present who had met Brother Aiken, and had felt his warm and hearty greetings at the National Grange. This was followed by the adoption of the memorial resolutions on the death of A. D. Nelson, one of the most earnest, honest, kindly, great and noble-hearted Patrons that ever valiantly served in forwarding the great cause of our noble Order in this State. No Patron has lived and moved among us who was more sincerely loved and honored for his great devotion and sincerity as the admirer and lover of the Patrons of Husbandry and the lowly and noble of all humanity. Peace be to his ashes! His influence remains with the State Grange, and with every brother and sister who has met him, and none can doubt that the spirit and good influence of Brother Nelson will long be felt in the future good works of our Order. Resolutions of respect were also adopted to the memory of Mrs. G. H. Ashley of Woodbridge Grange, Sister Heller, charter member and Past Matron of Eden Grange, O. S. Claves of Merced Grange. These ceremonies embraced the most eloquent of tributes from several brothers.

The resolutions were adopted by a rising vote of all the members present, and the silence and stillness of great earnestness were exceedingly impressive. No "Lodge of Sorrow" ever held could have been more spiritual or more deeply felt. Appropriate hymns and other music were performed by the Sebastopol choir, which added greatly to the impressiveness of the occasion.

The Feast of Pomona was one of the most bountifully supplied, handsomely decorated and well conducted that has ever been held. This feature of the State Grange sessions of California, we are inclined to think, surpasses those of all other States. Pomona and her court were stationed upon an elevated platform overlooking the immense rows of tables loaded with the handsome and luscious fruits of the Sonoma valley. Pomona, among other decorations, wore a sash formed of rare, highly colored and beautiful specimens of Pomona's gift, in imitation of the badge of the Order. Her coronet was made of different kinds of fine small fruits, grapes, cherries, etc., all combined harmoniously. Her wand was ornamented with the richest clusters of delicious grapes, both beautiful, substantial and graceful in appearance. Flora was similarly decorated with chaste and lovely flowers. Ceres wore specimens of our rich and golden grains. A very eloquent and original appeal for equal rights for the sexes was, by request, delivered by Worthy Pomona, who in her commanding position led the exercises of the occasion in a remarkably graceful and able manner. Worthy Master Johnston's address to the Patrons and their guests, of the beautiful City of Roses and Valley of Sonoma, was very appropriate. The brass band which accompanied the procession from the hall to the pavilion afforded excellent music for the young dancers, who made the occasion a happy one to themselves and the observing multitude present who participated upon this remarkable occasion. Probably over a thousand Patrons and invited guests were present at the pavilion.

This State Grange was undoubtedly the most generally harmonious of any yet held, and marks a very promising step in advance in the workings of the Order in this Western Grange field. The work of the session was carried on with greater precision and better progress than often happens in our large assemblies, and the generous praise elicited by Worthy Master Johnston for his promptness, ability and impartiality in ruling was well merited, and, we believe, highly appreciated by all present.

The literary exercises, all in all, were very creditable to the actors who so kindly and generously gave their time, talent and attention to the entertainment of their guests. The literary exercises were well supported by the musical efforts of the Sebastopol choir. Sister Roxy Dennis, Brother Hancock and others well assisted in the singing. The literary contributions will appear in our columns hereafter. Lieut. Maxfield's article on the "Causes and Distribution of Ruins, and the Meteorological Features of this Coast," was able and well received. Its publication, with the other valuable contributions of the session, will enrich the final published report of the annual session,

which it is safe to predict will prove one of the most valuable and interesting publications of the kind which has ever emanated from any State Grange.

The universal praise passed upon Santa Rosa Grange, which was assisted by Bennett Valley and Sebastopol Granges, and its untiring Master, officers and members during the session, was richly deserved. The quiet and unostentatious work of the brothers and sisters was noticeable upon every hand during the entire session.

On Friday Bro. Geo. W. Hack called upon Bros. Toomey and Krull of Enterprise Grange, Sacramento, to give the signal of distress for Bro. Geo. Wilson, P. M. of that Grange, and his wife, both of whom have been sick and disabled for some time. Their story was a brief one, which ended in a three-minute recess, during which a purse of \$64.08 was made up for them from willing hearts and hands present. During this praiseworthy exercise, and under the spur of the moment, Bro. Chas. Wood, secretary of the California Grangers' Business Association, and P. M. of Danville Grange, gave a happy account of a surprise picnic which occurred at his delightful home over a year ago, which he had, in his native modesty, so long kept from notice in the Grange press. We now have final promise of the data for mentioning this characteristic and unique Grange gathering.

It is a pleasure to state that although there were no days set apart for excursions, or any sessions devoted otherwise than to the work of the Order, three sessions a day being held, from Tuesday morning at 10 o'clock until 3 o'clock on Saturday afternoon, there was no cessation of interest or entertainment in the proceedings, and this grand gathering of 1887 will long be remembered with profit and pleasure by those present. Among the greatest regrets of the occasion was the absence of those who could not be present and participate. The absence of Brother Past Master Spilman, who was absent from illness of himself and wife; of Brother Past Master Webster, who was detained by official business in connection with a newly organized society of San Luis Obispo Co., and wife, and others equally well known, was often remarked. These absent members will read the reports of this session with unfeigned interest, and we hope they will be moved to write their thoughts and yet give to the Patrons throughout the State some of the good things which might have been enjoyed from their noble and faithful minds had they been present. All will long to hear from them, and hope to greet them, with many other Patrons, at our next session, who were so much missed at this one. There is a strong hope that before another year rolls around, the roll-call of the Patrons of Husbandry of California will be greatly increased. The brothers and sisters of the Order departed from the altar of the State Grange with more earnest feelings and with stronger determination to go forward with their righteous work and to labor with a will that knows no defeat, to accomplish the grand work that fills their noble hearts, and ready and willing hands to perform. Patrons, let us all be true to ourselves, to our cause and to the welfare of those who must follow in our footsteps.

In Future Issues,

We shall continue the report of the proceedings, as we have opportunity to prepare them, our time the present week having been much occupied in other duties consequent upon changes in the Patron and State Secretary's office. We hope to receive correspondence and interesting items from many of the able representatives and visitors present, who can thus greatly favor those unable to attend the session. We invite all hands to begin work at once for the future, and especially for a still larger and better gathering at Tulare, and make your paper one of the most ready and useful instruments for insuring so desirable an object.

A Sensible Address.

Toward the close of his address at the opening of the Santa Barbara Fair, Mr. C. P. Low, president of the Agricultural Association, said:

"The day of jubilee has come and gone, real estate has been laid so low by the rain of last week. I had almost forgotten the boom. At one time it looked as though agriculture had received its doom and that the whole of this portion of the State would be laid out in town sites and cut up into corner lots. Most of the summer real estate has been too high for comfort. We have snuffed it into our nostrils; looked at it with tears in our eyes; carried it home on our clothing, and the good housewives have had to sweep it out of their houses by the bushel. It was fortunate that the rain came before a norther.

"I cannot say anything good of the boom. I believe it has set us back in the agricultural advance. Farmers have been expecting to sell their lands and become suddenly rich, and have given more thought to speculation and less to raising that which is necessary for the real wealth of the State. I think the fair shows it in the small display of vegetables and fruit.

"The directors have endeavored to have all things work smoothly and have given the refreshment table to the ladies of the W. O. T. U. to manage. They have forbidden the sale of intoxicating liquors on the grounds, and if there is any one seen intoxicated they must remember that we have not the power to search people, and we cannot prevent some from carrying it

with them any more than the W. C. T. U. can prevent the numerous saloons that have been established the past year on our streets.

"We also prohibited pool-selling, but circumstances under which the directors were powerless, prevented us from carrying out our rules before another six months are out. Trusting that the people will be satisfied with this and give us credit for the will to do what is right and proper, I declare the sixth annual fair opened in due order."

During the delivery of the address the speaker was attentively listened to and frequently applauded, and at the conclusion the applause was hearty and long continued.

Grange Work and Progress.

[Prepared Weekly by M. WHITEHEAD, National Lecturer.]

The position of Henry George and his followers is that of communist, who begin by making the land common property, taking it also without compensation, which is but the first step toward taking every other kind of property. A few weeks since, at the political convention that nominated this communist for a high political office in the State, not a single American flag was seen in the decorations of the hall, while the red flag of the commune was conspicuous on all sides. A few items showing how his doctrines are received by others, will perhaps throw more light upon this old enemy in a new guise.

THE FARMER who can now sell his property, in case he desires to move, for \$10,000 would then be able to command only from \$1200 to \$2000, the State having confiscated from 80 to 90 per cent of the capital value of his land. Remaining on his land, under the new system he would be burdened with town and city taxes, and be made a renter on his own property after being deprived of eight-tenths or more of its value. Cottage and shop-owners in the cities and towns would not fare much better. In Cook county, for instance, there are 25,000 or 30,000 wage-working families that own cottages and lots on which they pay taxes of from \$20 to \$50, but under the rental-value single-tax system they would be assessed from \$60 to \$200. Permitted to retain their houses on condition of paying three or four times the present tax, they would be deprived entirely of the capital value of their lots; and if they desired to move these families would find from \$1000 to \$3000 worth of their property confiscated by the State. Nothing short of war will ever compel either city or country real-estate owners to submit to the George scheme. — *Chicago Tribune*.

HENRY GEORGE is trying to persuade the Socialists not to insist on admission to the new labor party, as he desires to throw out a bait for the farmers. He fears that the presence of Socialists in the new organization will frighten the horny-handed agriculturists, leaving it without followers in the country districts. Mr. George need not lie awake nights devising means to keep the followers of Most out of his new party in order to induce the farmers to join it. His own land doctrines will slam the doors in the face of the farmers more effectually than the presence of a dozen Mosts. The farmers believe in the righteousness of private ownership in land, and they are not anxious to assume the entire burden of taxation, either. Mr. George will have to bait his hook with something more attractive than his cranky land doctrines if he expects to catch the farmers. — *Philadelphia Times*.

PROF. DWIGHT, of Columbia College, N. Y., says of Henry George's theory: "Without private property in land no man can have an assured birth-place or burial-place. No tree can be planted that he can call his own, nor can any dwelling be erected that will give him assured shelter."

It will be possible to find hundreds, yes, thousands, of city workers who are willing to blindly follow any glib-tongued leader who can offer a plausible cure for poverty. Let this leader go before men who have property interests to represent the results of frugality, temperance and industry, and he strikes an entirely new class of hearers. They will take nothing for granted, and they have something to do besides worshipping a brilliant leader. This is a poor country for a one-man party.

"In most places, where Granges have existed, impartial critics are ready to give testimony in its favor. No one can object to its social and educational features, and its business features, which caused so much trouble, are so simplified that but little, if any, friction is observed. What, then, is there to hinder the reorganization of the Grange? Practically nothing. A little personal effort, some instructions, and, perhaps, some visits from the Deputies or Master of the State Grange, and the harness is on, ready for work." — *A. Messer*.

"When a deed is done for freedom, through the broad earth's aching breast
Runs a thrill of joy prophetic, trembling on from east to west."

Officers of the State Grange.

The following are the officers of the California State Grange elected at Santa Rosa, Oct. 6th, to serve for the next two years:

W. L. Overhiser of Stockton, Worthy Master.
E. W. Davis of Santa Rosa, Overseer.
Daniel Flint of Sacramento, Lecturer.
Rev. Simon Goodenough of Santa Clara, Chaplain.
A. P. Roache of Watsonville, Steward.
W. W. Greer of Sacramento, Assistant Steward.
C. A. Hull of Sacramento, Gatekeeper.
A. T. Dewey of Oakland, Secretary.
I. C. Steele of Pescadero, Treasurer.
Miss M. B. Johnston of Richland, Pomona.
Miss R. Newkom of Yuba City, Flora.
Miss Mary J. Carter of Fresno, Ceres.
Miss Frankie Stevens of Sacramento, Lady Assistant Steward.
William Johnston of Richland, member of Executive Committee.

Exhibits for the National Grange.

Worthy Master Overhiser wishes us to state that specimens of all agricultural products suitable for exhibition at the National Grange are solicited for that purpose, the National Grange having provided space for exhibits from all parts of the Union.

Pomona and subordinate Granges, boards of trade and all firms and individuals are solicited to send on as fine and complete samples as possible, such as vegetables, nuts, dried and preserved fruits, etc., and other products of the soil. Pamphlets and other printed matter suitable for free circulation on such occasions will be received and well cared for.

Send by express, addressed W. L. Overhiser, care National Grange, Lansing, Michigan, in time to be received by the 15th of November. Give full description in letter by mail. Also be particular to give proper description and the name and address of the contributor, and *prepay* all charges.

A TRIBUTE FROM AN OUTSIDER.—Portland *Rural Spirit*, Sept. 30: The editor of this journal is not a member of any Grange. This matters not; we recognize the fact that co-operation is the basis of all successful business. The business of the agriculturist is paramount to all others. Therefore, co-operation is essentially necessary, and we know of no way whereby the agricultural can so easily unite as through the Grange organization.

BRO. JOHN DURLEY, a valued member of North Butte Grange, has died recently. His late associates, in their resolutions of respect and sympathy, speak of him as one of upright, honorable life and unassuming ways and a true Patron.

Probable Shortage of Lemons.

The cholera in its ravages in the Mediterranean region is seriously injuring the export traffic in semi-tropical fruits. Last year the raisin industry was affected, and it is now telegraphed from New York that the usual supply of Sicily lemons may be cut off. The report is that advices from Sicily state that the cities of Palermo and Messina are depopulated in consequence of the cholera, and as vessels coming from there would probably undergo long quarantine, there is likely to be a suspension of traffic between Sicily and other ports. The new crop usually comes to hand the last of October, but there are some in the trade who predict no fruit from Sicily will be shipped until toward the close of the year. In the mean time trade will be forced to operate only in Malaga goods, but the quantity of these is so small that an early disappearance of stock is predicted. The crop usually runs to about 100,000 boxes. To-day there are afloat for this country 24,000 boxes, thus leaving only 76,000 boxes as the supply to meet the entire wants of Europe and America.

These facts may affect the value of our improved lemons by increasing their value here. Our product is too small to cut much of a figure in shipment, but if the cutting off of the Sicily fruit will teach Californians that it is affectation for them to purchase Sicily fruit, it will produce a good effect and encourage our growers to give more attention to the several good varieties which are now to be had here. We have not begun to do as much as we can in this State in lemon-growing.

FORESTRY CONGRESS.—We have received a "preliminary newspaper report" of the meetings of the Forestry Congress held in Springfield, Ill., September 14th and following days. The report contains the essays read at the Congress and brief outlines of the discussions. There is also a draft of a bill to be introduced at the next session of Congress, to be entitled "A Bill for the Protection and Administration of the Forests on the Public Domain." It is quite a long document, and, after regulating the entry and occupation of timber lands, provides for sales of Government timber in lots of 25,000 acres at a time by sealed bids. It provides for the appointment of a Forestry Commissioner and four assistant commissioners, and appropriates \$500,000 to carry the law into effect. The report contains also Mr. Joaquin Miller's paper, which was published in the *RURAL*. Mr. Miller's contribution was received with marks of appreciation, and a resolution was adopted regretting that Mr. Miller was not able to attend in person, and thanking him for his essay and for his interest in forestry.

THE Chico *Enterprise* opposes the holding of a citrus fair at Oroville for Butte county products, and says: If the products of Butte county are to be exhibited anywhere for the benefit of the county, let them be exhibited in Sacramento, San Francisco or Chicago.

TRUCKEE millmen complain that it is difficult to get cars to transport lumber, and orders are coming in faster than can be filled. There will be but very little lumber to be carried over this fall.

THE Southern Pacific and the San Joaquin Valley railroads are building parallel lines half a mile apart in the San Joaquin valley.

YUBA and Sutter counties are preparing for a vigorous war of extermination upon what remains of hydraulic mining this winter.

Close of the Agricultural Fair at Stockton.

EDITORS PRESS:—Saturday, the 8th inst., was the closing day of the fair of the Agricultural District No. 2, at Stockton. Although the weather was exceedingly warm, the attendance was good, but poor, almost, in comparison to the immense crowds that visited the new pavilion on other days in the past week. A number of visitors from San Francisco arrived on the boat and spent the day in the new building, returning in the evening and expressing themselves much pleased with their trip.

The building in which the fair is held has but recently been completed, and supplies a long-felt want to the inhabitants of the San Joaquin valley. It has cost upward of \$50,000, and is by far the finest and handsomest building of the kind erected within the past few years by any of the district agricultural societies. It is conveniently situated, on Washington Square, almost in the heart of the city, and street cars pass the door.

The interior is finished in two kinds of wood, in alternating dark and light stripes, while the light is exceptionally good, coming through large windows in groups of two and three, often softened by panes of stained glass.

Among the exhibits are several odd features that illustrate very nicely the interests and industries of the San Joaquin valley. One, a log cabin made of watermelons, chinked with moss and large enough to admit a dozen persons with ease, represents one of the leading products of Lodi, the watermelon country. Another house built of sacks of flour is exhibited by the large flour-mills of Stockton.

Among the interesting displays was the Stockton Nursery's exhibit, which occupied the conservatory on the ground floor. Potted ferns and rare, fragrant plants made it a bower of cool, delicious greenness, while on a bed of moss the proprietor's name, E. C. Clowes, was each day arranged in different colored flowers. On Saturday it was made of red and pink geraniums, which produced very prettily the effect of shaded letters.

The Houser combined harvester made of straw was a wonderful piece of skill and attracted a great deal of attention. It was so peculiarly suited to represent the interests of the great grain-growing valley that it possessed an attraction aside from its unique design and ingenious workmanship. The wheels of the harvester were painted dark steel color and iron, while the woodwork remained the natural color of the straw.

The fruit of the San Joaquin valley is proverbially excellent, and the display at the fair almost surpassed expectations. The exhibits of preserves and jellies were magnificent and the fresh fruit wonderful in size and fine appearance. John Elliott's exhibit was awarded the first premium, and it seemed deserving of the honor, for the display of fine, large, rosy apples, splendid blooming clusters of grapes and other fruits, drew forth exclamations of astonishment from old residents as well as strangers.

Carriages and farming implements occupied a prominent place among the exhibits and made an excellent showing of the progress in the farming districts of the State.

Very appropriate to an agricultural fair was the favorite rural paper. The *PACIFIC RURAL PRESS* occupied a corner to itself, and added the final thing necessary to make a fair devoted to agricultural interests, complete. Indeed, the remark was made more than once on the final day, even by strangers, who expressed themselves equally surprised to find such a large, fine periodical devoted to the development of rural pursuits and interests.

The art department was well filled. Norton Bush exhibited two or three of his "tropic land" pictures that were very beautiful, and a local artist, Oxley Miller, contributed largely to the collection of fine paintings. Two or three of his productions—one a very large picture of a mountain lake, that showed much skill and study—were decorated on the final day with blue ribbons in token of awarded premiums. Several well-known San Francisco artists added much to make the art department attractive. The curiosities were a prominent feature of the fair, and were extremely interesting to lovers of such things. The display of old fans promised an attractive field for the study of fine point lace, yellow with age, and quaint designs in carving and painting.

Among the relics entered were the following that were peculiarly interesting: Mrs. H. M. Fanning's old crockery—a bread dish in the collection being 150 years old; Mrs. Sargent's old-fashioned clock, over 100 years old; Mrs. Tower's fringe of a flag from the Battle of the Wilderness; Mrs. Judge Creanor's bedstead, used in 1780; Mrs. Thresher's old-fashioned mantilla; Mrs. B. S. Clowes' old hand-made bedclothes; Mrs. Laura De Force Gordon's history of Rome—263 years old, and several Indian relics; and Miss Bates' old crockery. There were many other curiosities equally interesting, and altogether they formed no inconsiderable attraction to the fair.

The efforts to make the fair this year surpass all past records seemed eminently successful, and those who so ably assisted no doubt feel amply repaid for their time and labor by the praise that echoed from all sides.

MAY BLOSSOM.



The Mountain Quail.

Oh! mountain quail with crested head,
Oh! pretty quail with white-tinged eyes,
For you a bounteous feast is spread,
By Him who jeweled all the skies:
You flit across the road so lone,
To ambush that each brooding knows,
And in a shrill, staccato tone,
Pipe out your call to frighten foes.

Mount Raymond like a Titan looms,
And shoulders morning's gauzy light,
While in his cloister crypt there glooms
Great miracles of silver bright!
Huge neighboring mountains fold away,
In scalloped curves along the air;
Where in gum woods the grizzlies stray
Or turtive lions build their lair.

Our California skies are blue
As are the violets in her grass,
Where by her seas the gray gulfs mew,
Or fawns through her weird forests pass:
There lizards slide across the rocks,
In canyon cups that drink the sun!
Or doves the fairy echo mock,
Where dripping springs refreshing run.

Sweet quail! Your nerves are aye unstrung,
You start, and poise your turbaned head,
And flutter o'er your reckless young,
As if life was one throe of dread;
You choose the bushes' tented shade,
Whose green pagodas o'er you bend;
You stand half rustling, half afraid,
And make no earthly thing your friend!

The pink azalias scent the air,
The sweet wild lilacs plume the road,
While ferns with tangled maiden-hair
Hang o'er the water-snake's abode!
Bright rainbow insects sail across
The pond's green breast like winged flowers:
By boulders dotted o'er with moss,
The horned kine dream out the hours.

His bait the swarthy Indian throws
Into the stream with conscious pride,
Where lively trout in glittering rows
Dart like bright arrows through the tide:
He lifts his treasure to the sun,
That wriggling, sparkling, gasps and dies,
Nor heeds this luscious atom won,
Has suffered all death's agonies!

But you, oh pretty, graceful quail,
With mother-love chirp o'er your brood;
And dread imagined foes assail,
With sharp glance peering thro' the wood;
So like a tender parent heart,
That fears the future for her child,
Lest as life's shadows meet and part,
She be from duty's path beguiled.

Oh! graceful quail, your crested head
May drop all sudden to the dust,
By kingbird, or by hunter's lead,
That ends your all of earthly trust;
But human spirits can look up,
And feel God's aid is ever nigh,
And though we drain affliction's cup,
We look for sweeter draughts on high!

Jean B. Washburn, in L. A. Times.

A Chat with a Naturalist.

Written for the Rural Press by FANNIE H. AVERY.

"Do you see that man just going out?" said a Kearny-street storekeeper to me the other day.

"Yes," said I, turning in time to catch a fleeting glimpse of a tall masculine figure as its owner went through the doorway.

"Well, he is 73 years old, but he doesn't look over 50, and there are few men of the latter age that I've seen present a fresher or more vigorous appearance. He lives out of doors a great deal; travels over the country collecting insects, ferns, shells, etc., to sell. That is how he makes his living."

"I would like to meet him and talk with him," I said, having in view the writing up of a sketch that perhaps might be interesting, for people are always wanting to know of anything new others are doing.

"That can be easily arranged." Accordingly it was arranged, and a few days later I made the acquaintance of G. W. Dunn, naturalist, and was invited to go and see a collection he had of various things.

Having been interested in natural history studies for some years, what I saw when I visited his sanctum was of absorbing interest to me.

Boxes upon boxes of beetles he showed me—large beetles and small ones, ugly and handsome beetles, beautifully tinted, plain-colored and black ones; beetles with short antennae, beetles with long ones; in short, beetles of all kinds, arranged on pins in rows in the neatest manner, and looking as natural as if alive. Then there were boxes of other insects, some familiar, some strange, of all shapes and sizes, a box of Orthoptera of many varieties and some boxes of mixed species.

I looked with wonder and admiration at them

all, my brain thronging with thoughts that would not have presented themselves had I not been familiar with the works of Darwin, Wallace, Bates, Forbes and other naturalists.

We talked awhile about evolution, adaptation of creatures to their surroundings, protective coloring, etc.; Mr. Dunn witnessing that concealment is often accomplished by resemblance to environments.

He had many specimens of rare and beautiful ferns that had been pressed and arranged on paper. These he finds a ready sale for, as indeed for nearly everything he collects.

During the interview he brought forth an ordinary-sized cobblestone.

"There doesn't seem to be anything remarkable about this, does there?" he said. "Yet I can sell it at any time for a good price. The fact is, I've become attached to it and don't like to part with it."

As he finished, he opened the stone, dividing it into halves, and I saw the perfect and beautiful fossil remains of a fan-shaped shell. I gazed upon it with awe, as if it were something sacred. And sacred it was to me, a mute but eloquent memento of unknown, untold ages. I could well understand why he cherished it so. He had picked up this singular and handsome fossil on the Columbia river.

He informed me that he almost always goes afoot in his journeys, which are quite extensive, and must give him an excellent idea of the geography of the country. California, Oregon, Arizona, the two Mexicos—these are the fields he travels over in search of whatever enters into his line of business.

"I live almost altogether out of doors," he said, "and am never so happy as when in the woods collecting. Sometimes I don't see a person for three weeks at a time. My health is splendid; my time agreeably and profitably filled. Idleness I know only by name; for when I've been out a number of months collecting, and come back, I have all my things to arrange and classify, and sell. I make a good living and wouldn't exchange my occupation for any other in the world. There's nothing I enjoy better than being out in the open air. It would be impossible for me to live indoors as most folks do."

As he sat talking I could hardly realize that this man was 73 years of age. True, his hair and beard were white as snow, but no wrinkles furrowed his face; it was young and fresh. His hand was steady and strong, his form—he is a six-footer—erect and stalwart.

"I will live a good many years yet," he told me. He has followed his calling for 20 years, and is a pioneer, having come here in '49.

As I conversed with him I thought of many naturalists I had read about; among others of my favorite Thoreau, who, in very desperation at the gyves civilization placed on him, went and lived awhile alone in Waldenwoods, where Emerson and other rare spirits used to visit him; and from his sojourn there gave to the world, as one of America's finest critics has said, one of the few books that will bear an annual perusal—"Walden."

Mr. Dunn told me an amusing anecdote in regard to what some folks he comes across think of his calling. He was stopping one night at a house in a small town, the walls of which were so thin that what was said in one room could easily be heard in others. He had left the sitting-room where several were playing poker, and smoking, by the light of a dim candle, this scene not presenting any allurements to this lover of nature. From his own apartment he thus heard himself discussed:

"Wonder if we can get that old fellow to play?" said one.

"Guess not," replied another. "He's no sporting man. He's round here looking for bugs. I think he's a little lunny."

I asked Mr. Dunn if he had ever encountered any Indians in the lower country, and he related the following incident:

One afternoon he was out in the woods near Chihuahua, waving his net about for insects, when suddenly looking up, he saw an Apache standing near viewing his proceedings with the greatest interest. He went quietly on with his work, and after a little managed to get away, the Indian not molesting him or addressing him. That night several white men in the same vicinity were killed, but he was unharmed. The Apaches no doubt thought him crazy. They believe an insane person to be under the special protection of the Great Spirit, and consequently sacred, and so never harm any one they think out of his mind. His net saved his life.

I must not forget to mention that I saw several large tarantulas in spirits. Great, formidable-looking creatures they were with their thick, furry bodies. I had always supposed their bite very dangerous, but Mr. Dunn informed me that it altogether depended on the state of health of the person bitten. If one were quite well the result would not be as serious as if one's system were out of order. Tarantulas are not much seen about towns in the countries where they are found. During a two-years' residence in Arizona I saw but one, and that was when I was crossing the Pinal mountains.

Mr. Dunn had disposed of most of the acquisitions of his last trip when I saw him, but what I did see convinced me that indispensable as books on natural history are, and intense as is the pleasure and instruction they afford, seeing a thing is better than reading about it.

San Francisco.

[Original—By S. M. H.]

The Age of Obedient Mothers.

"You see," she said with a smile as Maud's strong arm assisted her into the carriage, "you see, my dear, that I have come to the age of obedient mothers. And Maud's saucy face as she triumphantly slammed the carriage door and waved us a gay farewell, assured me that the frail little woman beside me found it a blessed "age," when the questions of every-day life were settled by this strong, bright girl, who quietly had decided that mother was to take a drive instead of staying at home to darn stockings.

I think I never knew a girl who enjoyed life more thoroughly than Maud. Her social life was full of gayety and attraction. I have often heard her mother say:

"Oh, John and I play Darby and Joan now in the evenings; Maud has so many engagements."

And yet, before Maud went out for an evening's pleasure, she somehow had found time to see the cook and had made arrangements for breakfast, so that mother need have no anxiety upon that score; she had lighted father's lamp and left the evening paper where he could find it, and the new magazine ready to his hand.

Maud's training had been, perhaps, exceptional. Her mother had been for years an invalid, and as soon as Maud was old enough, she had been only too glad to dismiss the housekeeper and assume the charge of the household. From her earliest childhood she had been taught to feel that her father's home comforts, her brother's pleasure and her mother's peace of mind depended in no small degree upon her, and the feeling of responsibility that so early fell upon her shoulders did her no harm.

Some time since there appeared in the *Century Magazine* an article by Frank Stockton, called "The Training of Parents," humorously describing the way in which young America invites old America to take a back seat and listen to his callow wisdom before he is well out of long dresses.

I read the article with some amusement, and laughed my laugh over it. But the laugh died away in a rather pathetic realization of the justice of the author's sarcasm.

Mothers, particularly in this country, come all too soon to the age of obedience, and in most cases the daughter's sway is not of the fostering kind which our Maud bestows upon her mother.

How often do we see Margaret Sr. weary and heavy laden with the care of the house, the domestic economies, and the anxieties of the entire family. The elasticity, health and activity which once made these matters light are slowly departing, as her years advance—and yet, the same untiring love which nursed Marguerite through the measles and scarlet fever, toils patiently on, that the idol of her heart may enjoy her youth.

And Marguerite? She is like the lilies of the field. Careless, happy, innocently selfish, courted, petted, indulged. Her slightest whim receives consideration and Margaret quietly sinks into insignificance before this beautiful darling, who makes her a willing slave.

Marguerite is by no means essentially selfish. When her turn comes, she too will patiently lose her roses, watching through weary days and nights beside the sick-bed of another little Marguerite, and in time will uncomplainingly come to the age of obedient mothers.

In the old Norse mythology even the gods had their twilight, and to a certain extent this age of obedience is as inevitable as the advance of years. But, dear patient mothers, is it not possible that in the economy of nature, youth, rather than middle age, should bear the burden and heat of the day? Is it kind to John to wear yourself out with matters which have all too long claimed your anxious care? Is it justice to Marguerite to let her grow up with the idea that she has no particular responsibilities in the home life, and that all the troublesome little details may be safely left to mamma, who knows so much more than she does about such matters? Will not the inevitable cares and trials of her future life fall with more crushing weight upon shoulders which have not been trained to burden-bearing?

And now, a word to Marguerite. My child, God may give you many gifts in life, but He can give you but one mother. She is the most precious of all His gifts, and when she is gone you will realize this in some measure. You can never love her as she loves you. You can never have the opportunity of ministering to her as she has ministered to you; but now, when perhaps the dear face is more careworn than it used to be, and the precious life frailer than in years gone by, you can, in your strong, young activity, be watchful that gray hairs do not come too fast, and that care does not prematurely bring the "twilight of the gods."

[Original—By M. B. D.]

The Legend of the Blue Plate.

We sat at tea, this dear old lady and myself. She had come in just for an informal little visit, she said, and while I listened to her intelligent flow of conversation, she loved to talk to me of her treasured long-ago experiences, I spread my little tea-table with my best Japanese-ware, and poured into our cups the steaming beverage, Japan's most delicate tea. I remember just as a sunbeam stole through the window and gleamed like a halo upon her silvery hair, she brushed the crumbs from her plate and asked if I had ever heard the legend of its pictures. It was an extremely old-fashioned piece of Japanese-ware, and I had supposed the story of its quaint design lost in the mists of centuries; and whether this was true, and the tale she told some modern fable, or whether a ray of truth gave the story such a thrilling flavor, I will leave it to the reader to decide.

Her gentle old voice went out like the mellow ring of an ancient lute, adding another charm which I cannot portray.

"The border," she said, "is a double circle of the Mikado's sacred emblems; and you see here to the right is a portion of his garden, with its foreign trees and luxuriant plants clustering about the dainty villa, which was built for his favorite daughter, a Princess so beautiful and gentle that he deemed her too lovely for any Prince in his whole Empire. Every day he sent to her charming palace and asked what he should bring as a gift to please her, so that she might never grow weary of her father's house. But as the gentle Princess had almost reached her most glorious bloom of beauty, she became capricious and asked for the most extravagant gifts, even impossible things, which made the eyes of the Mikado misty with regret, for fear he could no longer make his favorite child happy; and besides, cruel war threatened his Empire since he had taxed it so heavily.

"One day two doves fluttered above the green branches of a great tree-fern, and the Princess ran out to see them, when they perched upon her shoulders. Under the wings of one she found a letter which she supposed to be from the Mikado, telling her his whole heart; and beneath the wings of the other a most exquisite ring, said to possess the magic of contentment. She answered the letter, saying that she would wear the ring, and pine no longer, and the doves flew away. But the next morning, while yet the great, red moon hung above the sea, a strange galley floated over the lake in her garden, and steered boldly for the palace. The Mikado had already risen to walk about his daughter's favorite grounds, and stood amazed to see such a strange sight. Before he could order that the strangers should be put to death instantly, together with all their relations, for such an unheard-of intrusion, his daughter came lightly along the path, and clasping her beautiful arms about his neck, exclaimed: 'O father, I am perfectly content with your charming gift; and thinking to make him content also, she slipped it upon his finger. Now the Mikado, being perfectly happy, said nothing when the galley neared the boat-house, and allowed the Princess to precede him over the bridge, followed by their servant, to welcome the strangers. At this moment the artist portrays them, taking the incident as the most important in their history, and does not forget to picture the doves fluttering above their heads. Of course the galley bore a great Prince, who had sent the doves to gain the unapproachable Princess, and the Mikado, being so agreeably surprised by his boldness and splendor, accepted his suit, and so they all were happy.

"The minor circle on the plate represents the ring of contentment, with its magic device; and whoever eats from it will always be delighted with the refreshment it offers."

"Surely, I am, my dear," she finished with a smile, and her eyes beaming upon me, "and so the legend holds true even to this day does it not?"

"ANOTHER mine gone to the wall," said a gentleman standing on the sidewalk to a friend, as a lawyer who is interested in iron mining-stock was passing. "What mine is that?" asked the lawyer. "Kalsomine," answered the old joker, as he dodged behind a cigar sign, while the lawyer went off, looking over his shoulder, mad enough to fight. —*Peck's Milwaukee Sun.*

"WHAT is the matter?" asked a lawyer of his coachman. "The horses are running away, sir." "Can't you pull them up?" "I'm afraid not." "Then," said the lawyer, after judicial delay, "run them into something cheap."

[Original—By S. C. B.]

Home.

How many of us have built fairy castles, and beautified them in every possible way human ingenuity could devise; erected the shrine of our idolatry and bowed thereto, realizing great bliss in the creations of our fertile brain; then, in an ecstatic moment, witnessed calmly their ruins, only to be again rebuilt and annihilated. Life is full of such wasted products, full of profit and loss, waste and repair; glorious with aspirations, yet never fully perfected. Beyond—there lie more fields for the mental conflict, more warfare with right and wrong, more wasted energy, more desolation. Among these ruins—a home (joyous, beautiful and happy once) lies now rent asunder; each timber (representing a large family) sundered from its parent foundation, cast upon the highways of intemperance and vice, with characters weatherbeaten, rent and useless. This dismembered family for years have been the subject of attack from an insect that bores into and destroys every joint and sinew; this insect works quietly but surely through all the houses of our land. Look well to it, and see that it enters not your doors and devastates your beautiful homes. Its first visit is “5 cents a glass” only! Then follows a train of ills, misfortune, mental and moral wrecks, poverty, sickness, disease and death; our palace beautiful—our home is gone; dear loved ones, where are they?

Of all sacred words *home* leads us, keeps us as a castle, secure as a fortress from attacks, the most endearing spot of earth. “Home is where the heart is;” though it rest in the woodman’s cabin or the shepherd’s hut, if love is anchored there, the heart finds comfort, the soul grows, the family altar is the daily reunion of devoted ones who renew affection over and over, as the heart is renewed by its daily fuel. There is a subtle spirit blending those two ideas, heart and home, fashions accordingly, reminding of Whittier’s “Maud Muller,” when

“Her narrowed kitchen walls
Stretched away into stately halls;
The wearied wheel to a spinnet turned,
The tallow candle and astral burned—
God pity them both, and pity us all,
Who vainly the dreams of youth recall,”

To me that poem always lacked completion, viz.: The realization of homes in each other’s hearts; life is too short to spend in wasted desires, with the possibilities at hand. A land of homes is the measure of a nation’s greatness, a constant inspiration for a higher life, for nobler attainments; a surety for virtue, a panacea for crime. How many fallen women might have been saved a life of sin and shame through the surroundings of a Christian home! How thankful we, whose lives have “fallen in pleasant places,” that we are not the victims of such misfortune. Mothers! weary with your household cares and noisy little feet, did you ever feel “glad to get rid of them”? These words slipped from a good mother’s lips in my hearing to-day, but I little thought she meant it, as she hurried them off to school. They may bring headache yet through the company they seek, through the habits acquired from under your eyes.

She loveth best who longest holds her little ones at home. When Howard Payne wrote “Sweet Home” it was his sublime ideal, an inspiration that at times comes to us all, seemingly to mock our hearts’ desires—he penniless, hungry, homeless, with soul demanding home, hence arouse expression. Let us make our surroundings good, pure and beautiful, that not one shall be estranged for amusements elsewhere, not proper nor conducive to moral and mental growth. Music, songs, games, readings aloud, parlor entertainment, friendly gatherings, little surprises for birthday and legal holidays, family reunions, are a few of the many ways suggestive of methods to renew aged hearts and keep youthful ones at home; daily expressions of smiles, words and acts to brighten the sorrowed and lighten the saddened hearts. Unselfishness is a potent factor at home; thoughtless and unkind words mar memory’s picture all day, and the river of Love flows not smoothly over the rough stones of anger, faultfinding, disputes and hatred. Patient, constant endeavor, actuated by a desire to give all we have and are for those we love, brings the blessing—a happy home.

A LITTLE boy in East Nashville heard his sister say that Adam was the first man, and when he was asked who the first woman was, replied “Adam’s mother.”—*Nashville American.*

“I SEE that bacteria have been discovered in Hudson river ice,” observed Fangle. “Ah!” replied his wife; “that will be another excuse for raising the price, I suppose.”

YOUNG FOLKS’ COLUMN.

The Story of a Rag Doll.

[Written for the RURAL PRESS by MARTHA T. TYLER.]

Sallie was a large rag doll which Aunt Lindy, Mabel’s colored nurse, had made for her. Sallie was not a beauty like the French lady papa had brought from Paris, and she had peculiarities it was impossible for that fashionable miss to overlook. In the first place, her face was always dirty. No wonder. She had never had it washed in all her life. Then she only had make-believe hair—crooked ink lines traced on each side of her flat head. It was out of the question to think of combing such hair as that!

Then again—and this was horrid—she had but one dress, and she could not take it off because it was sewed on! The dress was made of scarlet merino and tied with a yellow sash. Aunt Lindy thought it lovely, and so did Mabel, but the French doll had better taste than to like it, so she stared contemptuously up her pretty blue eyes and turned up her little bisque nose at poor Sallie.

“What queer hands!” she thought, looking complacently at her own nice kid fingers. “She can never wear shoes on those lumpy feet, they’ve got no toes.”

But for all this, Mabel loved Sallie. Sallie slept with her and ate with her and went out riding every afternoon with mamma and herself. The world would have seemed a lonely place to Mabel if she had lost her shabby old doll.

The house Mabel lived in was a large one, and the garden occupied half a block. There was a conservatory with all sorts of beautiful foreign plants—Japanese lilies and tropical ferns, and odd little orange trees from China, with oranges on them about the size of marbles. Mabel liked to play in there; she used to imagine the flowers told her stories of the countries they had lived in before mamma brought them.

One day Mabel and Sallie were watching William, the gardener, trim the plants. Clip, clip, clip, went his large shears. “It must hurt them,” said Mabel; but William said no; it did them good. Suddenly in the doorway of the glass house stood a funny-looking woman with a red handkerchief on her head and a brown baby strapped across her back. The baby was winking and blinking over her shoulder and trying to stuff all of his dirty fist into his little mouth.

“I’m a gipsy,” said the woman, “ez tells fortunes.”

“Gipsy indade!” exclaimed William, incredulously; “we’ve nothing for beggars. Clear out!” And the woman moved off with a heavy scowl on her dark face.

Now, Mabel had heard of gipsies, how they lived in the woods in tents and sang wonderful songs; so in her eagerness to see more of the woman she ran out to the front gate to look after her.

“I say, ma’am, can you tell my fortune?” cried Mabel. “Do you live in the woods, and are there any fairies there?”

The woman turned back. “If you’ll come with me, my little leddy, I’ll show you the fairy queen. She lives not far from me, I calkerlate.” And without giving the child time for a second thought she pulled her through the open gate and hurried off down the street with her.

The gardener was old and absent-minded. He went on clip, clip, clipping with his shears for at least an hour, nor did it occur to him to think of Miss Mabel until he heard her mother calling: “Mabel! Mabel! Where’s Mabel?”

Meantime poor, tearful Mabel was dragged along by the woman with the baby, up this street and down that, and into this alley, until, at last, they stopped before a dilapidated building in a dirty lane. The woman pushed open the door, pulled her victim up two flights of rickety stairs into a small, barely furnished room, lighted by one little window which was quite high from the floor. Two children, brown, like the baby, were crying in a corner.

“Hush up, brats!” said the woman; then to Mabel: “Mebbe there ain’t no fairies here, but them fine clocs o’ yourn ‘ll fetch somethin’ for the brats’ supper, I calkerlate; and them fine folks o’ yourn ‘ll be givin’ somethin’ to git you back agin, I calkerlate. Thet there doll o’ yourn ain’t so pretty but what you may keep it. ‘Twouldn’t fetch nothin’ from the ragman, I calkerlate.”

So poor Mabel, divested of her nice clothes and shuddering in an old calico dress that was too large for her, pressed the faithful Sallie to her little heart and thought she should die of grief and loneliness.

The woman who had stolen Mabel was not a gipsy, though she was almost dark enough to have been an Indian. She lived in this miserable place with her three children, and gathered a few pennies each day by begging and pretending to tell fortunes gipsy fashion. She thought she would keep Mabel for awhile until her parents should begin to despair of finding her, and then she would try in some way to realize a large sum of money by offering to return her.

One afternoon, about a week after this, the woman, who had been on a long tramp that morning, sat dozing over a miserable fire where something was cooking in an iron pot. The three brown children were playing in their cor-

ner, and Mabel, with Sallie in her arms, had crept close to the window and was looking down into the street. She could see but a little bit of it because her head scarcely reached to the window-sill. But there—yes, surely, there just opposite the house stood papa and Mabel’s older sister Clara! An officer was with them. They were looking for her. Oh, if they only could see her. She did not dare make a sound. The woman would wake up and kill her, perhaps. Hush! She would hold up Sallie, high, high as she could possibly reach.

“Papa!” cried Clara, “what is that red thing up there in that window? I think—I do believe it is Sallie! I can see her distinctly now. It is Sallie, papa. No other doll ever had such legs.”

Mabel, from her position at the window, saw the three figures dart across the narrow street. In another moment she heard them coming up the stairs; a little more and she was in her own dear papa’s arms—safe, safe!

The woman woke up to find herself in the officer’s charge. “It ain’t the first time, I calkerlate,” she remarked with great composure as he led her off.

Mabel never parted from Sallie. When she was too old to play dolls any longer, when the French body had been broken into 100 fragments (pride goes before a fall), Sallie was laid tenderly away in a bureau drawer among perfumed ribbons and laces; and whenever Mabel looks at her dear old favorite she says: “I shall always love you, Sallie. But for you I might still be at the mercy of that dreadful woman.”

Alameda.

A Knowing Hen.

MY DEAR LITTLE FRIENDS:—I have something to tell you about a knowing old hen. My chamber window is covered with white rose vines, thickly matted. A calico hen is in the habit of roosting in them, directly opposite my window. About dawn, one can distinguish her form outlined against the sky. I see no reason why she prefers this place, as there is an abundance of room in the comfortable chicken-house. One Friday, having to go to the city on the early train, the good landlady had called me time and again. But I would open my eyes only to go to sleep again. The girl had awakened me for the third time, when suddenly that calico hen pecked on the glass and clucked, clucked very fast and loud, in a very coaxing way, then she cackled as if to inform me that I might be late for the train by my laziness. Presently she flew down, giving me the example. I took the hint, and arrived at the train in due time. Pretty good hen, that?

Cloverdale.

ELMYRNA TRESMERE.

GOOD HEALTH.

Management of Constipation.

The majority of cases of constipation are readily cured by the proper regulation of diet and regimen. Respecting the management of cases of simple constipation, Dr. Andrew Clark, an eminent English physician, instructs his patients as follows: 1. On rising or retiring, sip slowly from a quarter to a half-pint of water, cold or hot.

2. On rising take a cold or tepid sponge-bath, followed by a brisk general rubbing.

3. Clothe warm and loose; have no constriction at the waist.

4. Careful attention should be paid to diet. Avoid pickles, spices, curries, salted or otherwise preserved provisions, pies, pastry, cheese, dried fruits, nuts, and all coarse, hard, and indigestible food taken with a view of moving the bowels, strong tea, and much hot liquid of any kind, with meals.

5. Walk at least half an hour twice a day.

6. Avoid sitting or working long in such a position as will compress or constrict the bowels.

7. Solicit the action of the bowels every day after breakfast, and be patient in soliciting. If unsuccessful the first day, continue the daily soliciting at the appointed time only. On the fourth day assistance may be taken. The simplest and best will be an enema of equal parts of olive oil and water.

If the use of all these means fail to establish the habit of daily or of alternate daily action of the bowels, artificial helps may be necessary. The object is to coax or persuade the bowels to act after the manner of nature, by the production of a moderate and more or less solid-formed discharge. On waking in the morning try massage of the abdomen from right to left along the colon, and a dessert-spoonful of the best olive oil may be taken at the greater meals of the day.

SLEEP A PREVENTIVE OF HEADACHE.—A scientific writer says: “Sleep, if taken at the right moment, will prevent an attack of nervous headache. If the subjects of such headaches will watch the symptoms of its coming, they can notice that it begins with a feeling of weariness or heaviness. This is the time a sleep of an hour, or even two, as nature guides, will effectually prevent the headache. If not taken just then it will be too late, for, after the attack is fairly under way, it is impossible to

get sleep till far into the night, perhaps so common in these days for doctors to have their patients waked to take medicine if they are asleep when the hour comes round, that the people have learned the lesson pretty well, and they generally know that sleep is better for the sick than medicine. But it is not so well known that sleep is a wonderful preventive of disease—better than tonic regulators and stimulants.”

DANGEROUS DRINKS.—The Philadelphia News is authority for the following: “A bartender plaintively bewailed the necessity of having to rub congealed drops of sticky beer off the bar. ‘But if I let them remain,’ said he, in the tone of one seeking compassion, ‘they rot the wood.’ ‘They rot the wood, do they?’ fiercely repeated a beer-bibbler. ‘Then, what in the name of common sense does beer do to my stomach?’ Replied the manipulator of drinks: ‘It is beyond me to tell. Let me show you something.’ He placed a piece of raw meat on the counter, and dropped upon it a small measure of an imported ginger-ale. In five minutes the meat had parted into little pieces, as though hacked by a dull knife.”

PNEUMONIA EXPLAINED.—It is generally supposed that pneumonia is due to the accidental penetration of specific microbes into the system, but the observations of M. Jaccoud, a French student of the subject, show that the disease really results from the development under favorable conditions of microbic germs permanently present in the system. A chief condition of such development is a sudden chill, which explains the frequent coincidence of lung affections with abrupt changes of temperature.

DOMESTIC ECONOMY.

Hams and Bacon.

EDITORS PRESS:—Will some of your readers kindly inform me, through your columns, as to the best way of curing hams and bacon?—BACHELOR.

We have given a number of recipes. Who will describe methods they know to be good?

BLANC MANGE.—Make a cake with a cup of sugar, a cup of sweet milk, one well-beaten egg, a little salt, two teaspoonfuls of cream tartar and one of soda (or two heaping teaspoonfuls of baking powder) sifted in two cups of flour, beat all together a few minutes and pour batter in a square tin one-half inch thick (no thicker); make a custard by heating four cupfuls of milk in a pail set in a kettle of hot water; when boiling hot pour a cupful on three eggs beaten with one cup or little more of sugar and three teaspoonfuls of cornstarch, pour altogether and cook till it thickens; when cool, flavor. When you serve it, cut the cake in small squares, sprinkle sugar over, lay on a teaspoonful of jelly and then lay them on saucers filled with the custard.

CREAM SOUP.—Break fine the bones of a chicken from which the meat has been cut. Skin first, by pouring boiling water over, when skin can readily be removed. Cover with one quart cold water and simmer three hours; then strain, and return liquid to kettle. Add to it two chopped onions, three grated potatoes, one-half turnip grated, salt and pepper to season, and one-half teacupful soaked raw rice. Boil until rice is very soft, then strain and return to kettle. Bring to a boil, then add one quart of rich milk, one tablespoonful of cornstarch stirred with three tablespoonfuls of butter until smooth. Simmer five minutes and serve very hot.

POT ROASTED BEEF.—Take a piece of cheap beef, say from the round, boil two hours in about enough of water to almost cover it; season with pepper and salt. When the water is almost boiled away, turn the meat often, to keep it from sticking to the bottom of the pot. At last the water will all be evaporated, and then let the meat brown a little; take it out and add to the hot fat flour and water; this will make a rich brown gravy. It is best to have a tablespoonful of flour mixed with a quart of water ready to pour in as soon as the meat is removed, so as not to have the fat scorched. Pork, veal or mutton is equally nice cooked in this manner.

BREAD GRIDDLE CAKES.—Soak a small bowl of bread over night in milk. In the morning mix half a cupful of flour into which is put one and one-half teaspoonfuls of baking powder with one quart of milk, three well-beaten eggs and a little salt. Beat up the bread with this batter until it is very light and fry a delicate brown. The batter should be thick.

LEMON CREAMS.—Pare two lemons thin, pour over one-half pint of boiling water and let stand all night. Squeeze the juice of the lemons on one-half pound of sugar next morning, beat three eggs well, take out the peel and mix the water with other ingredients, strain through a sieve, then stir over a brisk fire till thick as cream; pour hot in the glasses.

BREAD PUDDING.—One quart of milk, one pint bread crumbs, the yolks of three eggs, one cup of sugar, a small piece of butter; flavor to taste; bake 20 minutes; when cool, spread jelly over it; beat to a froth the reserved whites of eggs; mix with one tablespoonful of sugar; pile on top of the jelly and set in a hot oven until slightly browned.



A. T. DEWEY.

W. E. EWER.

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The Week.

The prevailing activity of the week has been atmospheric. A hot norther of unusual duration and force has reached nearly all parts of the State, whipping off considerable late fruit, shriveling tender vegetation, licking the last trifle of moisture from the summer-dried soil, and the last vestige of good humor from the people. At the south the wind brought swift compensation, for south of the Sierra Madre mountains refreshing showers have fallen, at some points attended by hail-stones, but no damage is reported by them. Its hasty coming caught some raisins uncovered, and thus occasioned some injury. Up to our writing on Wednesday afternoon, no rain has fallen in the central and northern parts of the State, but the signs are for a downfall.

During the swift, dry wind, very serious field fires have swept over considerable areas in several counties. Beside the loss of dry feed there has been great destruction of hay and straw, and, in some cases, fences, farm buildings and dwellings have been destroyed, bringing hardship to a number of individuals, who have seen the products of their industry swept away. To all such the warmest sympathy will go out, and we doubt not neighborly aid will be promptly

extended to the sufferers. All wise haste should be made to introduce cultivated strips wherever possible over our wide areas that these raging conflagrations may not find material upon which to grow so great.

Humiliation.

While the great mass of our people is laboring for the progress of the State in industry, culture and morality, while we are holding up to the admiration of the world our products, our resources and our grand opportunity for home-seekers in a rich and genial land, there come to light facts which cause the Californian to bow his head with shame. For the moment, at least, we feel that California has special interest in the old hymn, "Where every prospect pleases and only man is vile."

The facts to which we allude are being spread out *ad nauseam* from day to day on the pages of the daily newspapers of San Francisco. For a long time it has been known that the great political parties in this city have been ruled by bosses of the most unscrupulous and corrupt type. Many efforts have been made to shake them off by running independent candidates, etc., but "the machine" generally triumphed. Honorable people sincerely deplored the result, proclaimed the safety of the State and the republic in an honest ballot-box, and then resumed the transaction of their business, with the soothing reflection that some one had to have the offices anyhow, and perhaps one set of candidates was as good as the other. Very few people had any idea that anything but ordinary official stealing was going on, and that corruption of the ballot-box consisted in buying enough whisky-soaked human cattle to carry an election, and it was claimed that both parties did more or less of that.

Such was probably the common opinion on the evil of bossism, and, aside from spasmodic efforts just before elections, the bosses were accepted as in some sense a necessary evil. Within the last few weeks, however, facts have come to light which show that, in one party at least, the rule of the boss has extended to an extent of abominable corruption, which has made a regular trade of protecting the most outrageous criminals from arrest and sharing their plunder, of thwarting justice by seating corrupt judges, packing juries with perjurers and thieves; of doing a regular business in straw bail bonds, of bribing witnesses, jurors and other officials—in short, so contriving our executive and judicial system that a criminal who had money could almost surely buy his freedom from justice for a certain sum. It is wonderful, past comprehension, how a boss working by such filthy methods could secure the service of some men that he did to carry out his behests—men whose adherence gave him political respectability and influence. We imagine there are many men, now that the cloak is drawn from the boss and his evil work, who would give half they possess to blot out the memory of the past. If there is any sense left in the community, those parties who have affiliated with this corrupt ruler are politically dead.

And it seems that not here alone has our great boss become infamous. Is it not humiliating to read, as we do in Tuesday's telegrams from New York City, that Inspector Byrnes, the celebrated head of the detectives of the metropolis, who has done such excellent service in bringing colossal thieves to justice, should have felt compelled to lecture a California political leader in this fashion:

This is the first time I have met you, Buckley, and I am glad to have had this talk. I do not know much about politics in San Francisco, but I do know something about crimes and criminals. I want to tell you now, with just as much impressiveness as I can bring to my command, that if you make associates and friends of men who outrage the laws and who make crime their great purpose in life, you will suffer for it just as sure as fate. The man never lived who could associate with criminals without having to pay a big price for it.

Why did Inspector Byrnes speak thus to the Californian? Simply because while he was in New York he was guest and companion of the most notorious criminals of the city, and was therefore looked upon by Byrnes as a dangerous character. And yet this man has been ruling our politics, dictating to conventions, to Governors, and even attempting to dictate to the President of the United States. Fortunately for the whole country, probably the President shared something of Inspector Byrnes' knowl-

edge of the man, for his commendations availed but little at the White House.

Such are a few of the many infamous things which are coming to light about the corruption of our public affairs. Fortunately, the exposure will speed the cure. The vile sore is being fully opened and will be washed clean. It fills one with shame to think that such things could exist in an enlightened community, but there is comfort in the reflection that San Francisco is only going through the experience of other large cities and will have a share also in the municipal reform which is one of the brighter signs of the times.

The "Sagebrush State."

Nevada has come to be popularly known and spoken of as the "Sagebrush State." Though applied to her in derision, such appellation is not altogether a misnomer. She has more acres of sageland with more sage to the acre than any other country we wot of. The brush grows everywhere and in many places to a large size, resembling on some of the rich bottoms a dwarf tree. So common is the shrub that some have thought the wild artemisia should have been incorporated into Nevada's coat of arms. If, however, the accounts of the Nevada State Fair, now being held at Reno, are not as they come to us greatly exaggerated, it will be found that such general acceptance of the wild sage as the emblem of sterility involves some mistake. The products of the soil displayed at this fair would do no discredit to States noted for their agricultural resources. There are on exhibition there horses and neat cattle, hardly inferior to any to be seen elsewhere, with fruits, vegetables and grains of which California herself need not be ashamed, these being all raised in Nevada.

In the early history of that State, mining and stock-raising engaged almost wholly the attention of the inhabitants, nor was it then supposed that the grazing resources of the country were at all extensive. Before the discovery of the Comstock mines some of the cattle-men of California had begun to drive their herds over the Sierra. But their feeding-grounds were then confined to the valleys, which alone it was thought contained any herbage suitable for the subsistence of stock. These valleys, commencing on the north and proceeding south, consisted of Honey lake, Long, Washoe and Carson, with the Truckee meadows, a grassy plain of great extent lying on either side of Truckee river, below the present town of Reno. The grass in these valleys, being mostly of the bunch species, afforded both summer and winter pasturage. Some hay was made for the horses, but, as a rule, the neat cattle were left to shift for themselves through the winter.

Later on it came to be discovered that the sage barrens, besides the bunch grasses growing sparsely there, afforded other kinds of herbage suitable for winter feeding, the most valuable of these being the white sage and the grease wood, both very nutritious. Browsing on the latter, cattle will, where it is abundant, keep in good condition all winter, even though the snow be quite deep. The finding of so much pasturage outside the valleys and away from the bottom lands along the rivers gave a great impetus to stock-raising east of the Sierra, this, next to mining, being now the leading interest of Nevada. Owing to the healthfulness of the climate and the sweet and nutritious properties of the herbage, both the beef and the mutton produced in that State are of marked excellence. The Washoe potatoes are also noted for their good qualities, many tons of them being sent yearly to California. Washoe oats brings everywhere an extra price on account of its great weight. The wheat is also heavy and makes excellent flour. More than a thousand horses raised in Nevada find every year a market in this State, besides a much larger number disposed of elsewhere.

According to the last report of the Surveyor-General of Nevada, the State consists of 50,000 square miles of mountain ranges, and 41,000 square miles of what are classed as deserts, the remainder, 21,000 square miles, being rich farming lands, capable of producing with irrigation good crops of grass, grain and vegetables, as well as most kinds of fruit. In this connection it is interesting to observe that latterly it has been found that less water is required to grow these crops than was formerly the case, the quantity having diminished year by year as the

cultivation of the land has increased. Good crops are now being raised in favorable localities without artificial irrigation, this being due to an increment of the summer rains on the Rocky mountain sides, and on the sandy deserts where 10 or 12 years ago not a blade of grass was to be seen, there is now good feed. The same has happened on the easterly side of the Sierra, from which the timber has been cut off. Here also the grasses are springing up thickly, where before all was barren. From the changes that are going on great hopes are entertained of the agricultural future of Nevada, which some of its more sanguine friends believe will yet become a great grain-growing State, not only so, but a few there are who predict that the time will come when the hop and the grape will be successfully grown on these sagebrush lands, and hop-raising and viticulture be here pursued as profitable industries. That this may so turn out is not improbable, both the hop and the grape having been matured in this State and elsewhere in the region formerly known as the Great Utah Basin. Among the cereals, corn and buckwheat are hazardous crops, the long time they require for maturing exposing them to be injured by the early frosts.

What will greatly tend to promote here every branch of agriculture, stock-raising included, is the facility with which water can be obtained by artesian boring. Most of the wells sunk by this method, some of them out on the barren deserts, have proved successful, many of them yielding copiously at moderate depths. Issuing from nearly all the mountain ranges of Nevada are numerous streams of water, some of them of considerable size. Many thousand acres of land can be irrigated by these streams when they come to be utilized for that purpose. Through recourse to dams and reservoirs, the capabilities of this water can be greatly increased. In the home markets created by the mines, the cattlemen and the cultivators of the soil enjoy here another great advantage, the markets being close at hand, while the prices realized are apt to be good.

The gold and silver mines, of which there are an infinite number scattered over the State, are yielding now at the rate of \$10,000,000 per annum, the prospect being that this amount will undergo steady increment for some years to come. In the Eureka district large quantities of lead are turned out every year. Considerable values in salt, soda and borax are also realized annually from the salines of Nevada. She has valuable deposits of iron, copper and sulphur, though none of these are being worked at present. This is the only country west of of the Rocky mountains that is now producing nickel in any quantity. The above, though the leading, by no means embrace all the valuable mineral products of Nevada, than which few countries have been more highly endowed with natural wealth.

Despite her sage plains and her sandy deserts, of which latter she has all too much, Nevada is to-day a tolerably prosperous State, with a very encouraging future before her. As with most other sections of the arid interior, the ideas that have generally obtained in regard to their agricultural value have been altogether misleading. They are not the barren regions they were represented to be by their early explorers, who, having traversed them hastily and under conditions of extreme hardship and discomfort, got naturally very unfavorable impressions of what they saw. Already the "Great American Desert" has been expunged from the maps, and it will not be long till this, like the gorgons of ancient travelers and the deadly upas tree of Java, will be relegated wholly to the realms of the mythical.

ARIZONA ADVANCEMENT.—We had a call during the week from Mr. G. W. Ingalls of Phoenix, Arizona, who has been visiting San Francisco to look up irrigation appliances and other matter relating to the development of the Territory. Mr. Ingalls is thoroughly in earnest in his work, believes in the future of Arizona, and rejoices that the country is beginning to receive the attention it deserves.

A CORRECTION.—Our old subscriber, R. L. Watt of Sonoma, says it was he to whom the premium for second best general display of fruit by the producer was awarded at the Mechanics' Fair. The name was not printed quite correctly last week.

The Suffolk Horse.

We have some good Suffolk-Punch horses in this State, and the breed deserves more attention. We are making great progress in our horse-breeding in general, as we have often remarked, and we are glad to see all the good breeds find advocates and promoters. The upper Pacific Coast is also moving forward in the breeding of the noble animal, and we are glad to give space to a portrait of a handsome animal, owned by Edmund Croft of Newaukum, Washington Territory. Mr. Croft has bred Suffolk horses for some time, and has imported them from the studs of his relatives and friends in Suffolk, England. His brother-in-law bred Cupbearer 3d, a most noted horse of this breed. Mr. Croft claims that the Suffolks do excellently all along the Pacific Coast, as they do in New Zealand and Australia, which have a climate similar to ours.

The horse shown in the engraving is Suffolk Prince, 1485, of the Suffolk Stud-Book. He is a grand specimen of a Suffolk Punch stallion, was foaled in 1882, and was bred by R. Garrett of Carlton Hall, Saxmundham, Suffolk, England, who had a world-renowned reputation for horses of this breed. Suffolk Prince is a beautiful golden chestnut color, stands 16½ hands high, and weighs 1800 pounds, has good feet and legs, with splendid action. His sire is R. Garrett's noted horse, Cupbearer 3rd, 566 S. S. B.; dam, Butley Moggy 329 S. S. B., and dam's sire Wilson's Briton 1303 S. S. B. Mr. Croft imported two mares at the same time with Suffolk Prince, and has succeeded in rearing some fine young stock.

As the Suffolk horses are likely to command increasing attention on this coast, we shall select from the Suffolk Stud-Book some points concerning their characteristics and record which we believe will interest many readers of the *RURAL*. In height the Suffolk horse varies from 15½ h. to 16½ h. on short, flat legs, with short, strong pasterns, free from much long hair; hard, clean legs, with bone of compact quality being desired, rather than soft, large legs. Shoulders very long, lying rather forward to suit draught purposes. Hind quarters long, heavy, well and close coupled with loin and back, having the legs well under the horse. Girth should be large and flanks well dropped. If the forehead is a little low it is not objected to, provided the neck is strong, and head well formed and carried with spirit. In all other respects he should be, as in other breeds, long, low and wide.

The recognized color is chestnut. Bays were very prevalent some years ago, but the presence of that color can, in nearly every case, be traced to the introduction of extraneous blood.

For power of endurance, constitution and longevity, the Suffolk horse has long been famous. As far back as 1813, Arthur Young, writing of the county of Essex, says: "The Suffolk breed of horses are favorites in Essex. Mr. Wright of Rockford Hall has 17, and, to show the healthy hardiness of the breed, remarked that in ten years he has neither changed nor added one to these teams, except a stallion."

Julian's Boxer (755) traveled 25 seasons. At one of the early shows of the Suffolk Agricultural Association, a mare was exhibited with a sucking filly by her side, the united ages of which amounted to 41 years. The filly was, however, we should add, then two years old; but the most reliable evidence was given which conclusively proved that at the time she was foaled her dam was 37 years old. The mare which bred Webb's Rising Star (1266), the first-prize horse at Leeds in 1861, was 22 years old when the horse was foaled. The dam of Loft's Cupbearer (842), a mare owned by the Rev. O. Reynolds of Debach, was one

of 16 foals which he bred from her dam in 16 successive years.

For long hours without food and short rations when they get it, the Suffolks are especially noted. The iron constitution of these deep-ribbed hardy animals, and their habits of life engendered from one generation to another, have insured them to what in this respect would have killed another breed.

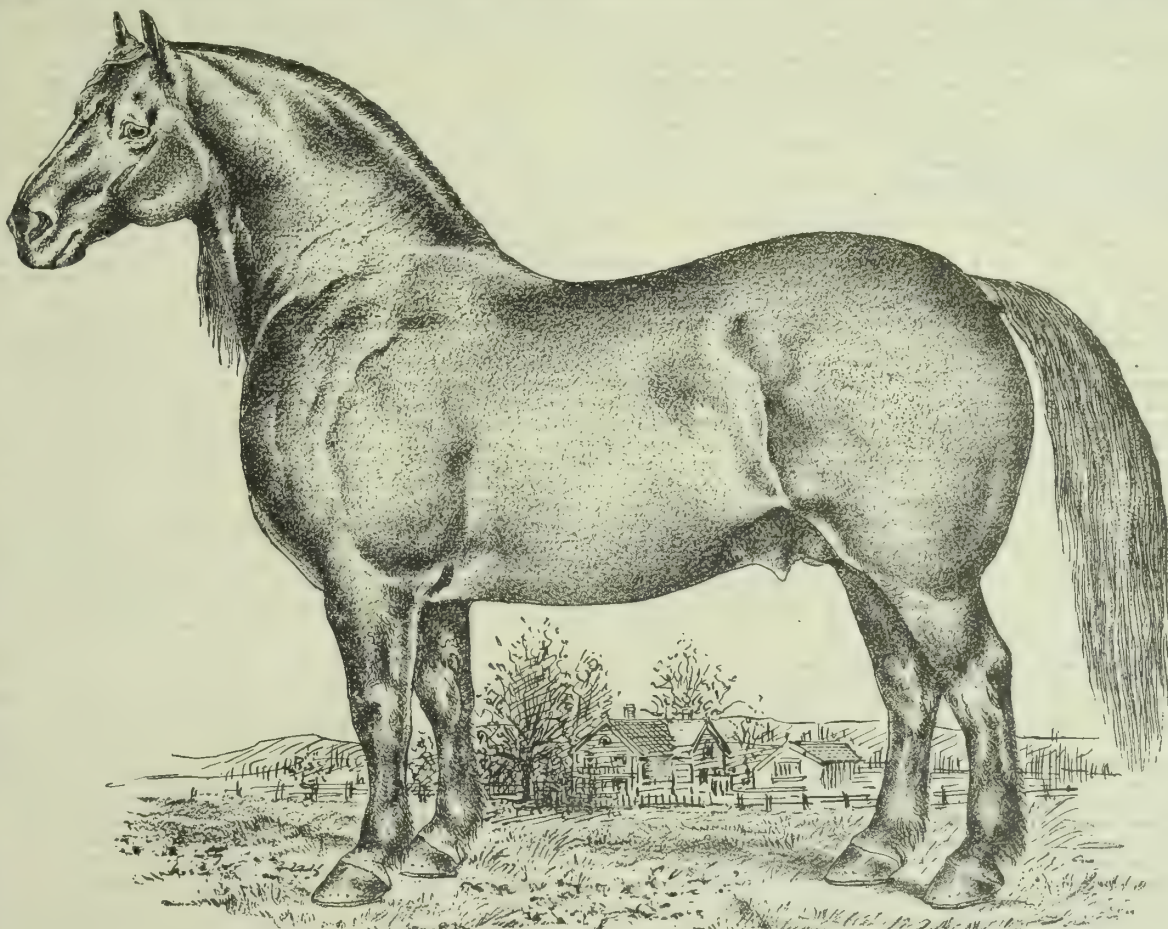
In temper they are docile in the extreme. Occasionally a stallion may turn savage, but as a rule their disposition is exceptionally quiet.

No breed of horses has been put to such a variety of purposes as the Suffolks. The sister isle takes him readily to cross the light-bred mares for general use; some excellent specimens may be seen in the vans and drays of London. The Continental States use them for artillery horses; some of the cleverest cobs in existence are bred from light, active mares of the Suffolk breed. Many excellent hunters in the field, and still more in the show-yard, have been the produce of pure Suffolk mares and a thoroughbred stallion. The Suffolk horse is exported to Canada, the United States, to South America

the Suffolk horse, smart between the shafts in harvest; quick at the ends of the plow; a fast walker on the harrows after the drill, and a stanch slave at the collar, be it flour, timber or chalk behind him, is unsurpassed by any breed of horses in England or Scotland either.

AMERICAN WHEAT.—During the last two years the laboratory of the United States Department of Agriculture has made analyses of a great number of samples of American wheat from all parts of the country, and grown under various conditions of climate, soil and culture. These analyses show that American wheat contains less albumen than foreign, about the same per cent of ash, more oil and less vegetable fiber. The smaller water it contains is, no doubt, due to the drier climate. These are all decided advantages in the qualities of American wheat as compared with that of the growth of other countries.

THE GAS TREATMENT FOR SCALES.—According to the *Pomona Progress*, W. G. Klee, State Inspector of Fruit Pests, in a lecture in



SUFFOLK PUNCH STALLION, PRINCE, 1485, OWNED BY EDMUND CROFT, NEWAUKUM, W. T.

and Australia; to Spain, France, Germany, Sweden and Russia, and some have been bought for the banks of the Nile, in each and all of which localities he seems to flourish.

The Suffolk horse is an excellent mover, with a smart, quick step, a true balance all around on the trot and a capital walker. The ultra-high, racking, showy action, now so popular with modern Shire-breds, is rather guarded against than cultivated among the breeders in Suffolk. A horse weighing a ton, bending his knee up to his throat-latch and striking the granite with his feet like a sledge-hammer, is not an exhibition the Suffolk farmer has any delight in. He has a notion, right or wrong, that therein are combined two elements totally different in their application. A horse heavy enough for the largest dray is seldom called upon to exhibit his 12-miles-an-hour feat in actual service; and one that is to work a railway delivery van quick on the legs, and moving well up to seven or eight miles an hour, should not weigh 20 cwt. This extraordinary high, fast-trotting action, if in every-day use in London, would wear the best of legs and feet completely up in a few months.

The Suffolk horse is an agricultural horse, and is bred for agricultural purposes; the dray horse—the modern Shirebred—although used on the farm is raised as an article of agricultural produce. The two animals have their proper spheres: on the docks of Liverpool; at the siding on the railway; or the heavy drays in London, the larger edition of the "English cart horse" is in his place. For all purposes of agriculture,

Pomona had this to say of the gas treatment for scales (which has been fully described in *University Bulletins* already published in the *RURAL*): "The gas remedy is probably the best, but it must be used with caution and experience, as the hydrocyanic acid is a deadly poison. It is unsafe to handle or even to inhale the gas. It is expensive, and an apparatus and tent for applying it would best be bought by a company or a neighborhood. It kills all kinds of scales and does not injure the fruit or tree." This statement from a casual newspaper report would not bind Mr. Klee in all respects, perhaps, but we know from other sources that his general opinion of the gas treatment is very favorable.

SANDERS' SAMPLES.—We have received from Sanders, Fresno county, two specimens of local products, the first being a remarkably fine head of durra, which was one of 10 heads grown from a single seed, with no summer irrigation, by J. A. McCreary, and the other a pair of handsome "nest-egg" gourds, from Jeanne Carr, Sanders, which might well beguile the eye with their resemblance to genuine "hen fruit."

THE WALLA WALLA VALLEY CONSOLIDATED AGRICULTURAL SOCIETY'S FAIR, held the last week in September, appears to have been quite successful, in a representative sense as well as financially. The association is urged, however, to secure more ample pavilion accommodations, and to bring the inducements for making fine agricultural exhibits up to those offered the owners of fast horses.

The Butter Dispute at Portland.

The issue over California butter in Portland, to which we have alluded in the two preceding issues of the *RURAL*, has not turned out as satisfactorily as we wished. The California butter was, in fact, vindicated, but for a mishap of some kind, which is most unfortunate, the matter took such a shape that the jury disagreed and a new trial must be had.

The testimony of Prof. Rising of the University of the purity of the sample, sent down under seal from Portland, was indisputable and seemed to be fully accepted; but while the trial was in progress, a doubt arose as to whether the butter analyzed by Prof. Rising was the same as that examined by the chemists employed by the Oregon Dairy Commissioner. For a long time, we understand, the Commissioner refused to present his specimen in court, but finally did so, upon advice of his counsel that it would be fatal to his case not to produce it. When it was brought forward, it was seen to be different butter from that in the can sent to California for analysis. The result was that

a doubt arose as to whether the testimony on the two sides of the case applied to the same butter, and on this rock of doubt the jury was divided, half on each side, and no verdict was reached. This will require a retrial of the case.

It was agreed by stipulation that Prof. Rising should take with him a sample of the butter submitted by the Dairy Commissioner, and should send his certificate north as to its character. It was also agreed that his testimony in the previous case should be admitted in the new trial. The matter now therefore rests upon the result of the analysis of the new sample. If Prof. Rising finds that also pure, the case will probably be dismissed. If he finds it adulterated, the question will then turn upon whether what the Dairy Commissioner had was really California butter or not, and the jury will have to determine that point upon the evidence they may have.

The authenticity of the sample first sent to Professor Rising seems clear enough. At the time the Dairy Commissioner took butter from the California boxes, the commission merchant sent rolls at once from the same boxes and

had them sealed up in tin cans and handed them over to other parties to keep, in case any question should arise concerning the purity of the material. These sealed cans were held by disinterested parties until they were opened for analysis by the chemists. The testimony that these were the facts seemed conclusive. On the other hand, the Dairy Commissioner testified that he took the butter and kept it in his cellar until he handed it over to the Portland chemists which he employed. Thus it becomes a question to determine if the analysis should show one pure and the other adulterated, which butter the merchant was really selling.

More than this; it was shown on the trial that the butter analyzed by Prof. Rising was an authentic as well as a pure article. It was traced back, through the Portland receiver, to the shippers in San Francisco and thence back to the Californian who made it, the dairyman himself testifying on the trial and identifying his brand as it appeared on the rolls, etc. The case in this aspect was perfectly clear and indisputable.

The matter will now rest until the result of the analysis of the second sample is finished. As we have said, if that, too, is pure, that will be the end of the matter and the whole affair will result, as we have anticipated from the start, in a "great cry and little wool." We are sorry for the shape the case has assumed. We expected a quick and clear demonstration of the purity of our California butter, as it is entitled to have. Now we shall have to await the result with as much patience as possible.

THE FIELD.

The Palouse Wheat Lands.

Frank Wilkeson sends from Spokane Falls to the N. Y. Times a long but very readable letter about a trip which he has lately made through a wheat-producing region that lies in the Walla Walla valley, along the base of the Blue mountains, and along the high lands which lie in the Palouse River basin, covering an area of about 5,000,000 acres. Having heard so much relative to the productiveness of this land, which has been divided between the Union Pacific, the Northern Pacific and the Oregon Railway and Navigation Companies, he says: I visited Walla Walla, Dayton, Prescott, Farmington, Garfield and Colfax, all of which towns are, I think, situated on the lines of the O. R. & N. Company. In addition, I went to the end of the track which the N. P. corporation is building into the Territory, claimed by the Oregon Co., and over which those corporations are at present fighting in the courts and persuading their employees to fight, club in hand, in the field. Never before have I seen such enormous crops of small grain grow. The physical configuration is roughly rolling. The ravines are deep and narrow. The hills are high and steep. The soil is a dark, almost black, loam, and it lies on a white subsoil composed of fine decomposed volcanic rock.

A Yield of 60 Bushels

Of plump wheat is not uncommon; this under very favorable conditions and on small areas of thoroughly tilled upland. Frequently large areas of thoroughly cultivated upland produce 50 bushels of plump wheat per acre. Under the ordinary cultivation which is in vogue in the region, the land produces 40 bushels of wheat per acre. As a class, the farmers with whom I talked did not impress me as being skillful and industrious. Very many of the farms were weed-grown. There were no fallowed fields as there should be in a wheat-producing region. Volunteer crops, a sure sign of lazy, shiftless farming, were common throughout the region. These volunteer crops yielded immensely in some cases. I saw near Dayton one field of volunteer wheat which thrashed 40 bushels per acre. Close to this field and a little higher up on the hill was a crop of second volunteer (that is the third crop from one plowing and sowing), which, I judged from the stubble, would yield 20 bushels. So sure is the growth of wheat plants to perfect maturity in this country, that the farmers sow in the fall if they feel like so doing, and the fall-sown wheat is the most productive; but if they have not plowed their land, they shrug their shoulders to express indifference, and carelessly wait till spring before they cast their seed-grain on the ground, or they trust to a volunteer crop. It is the most shiftless farming I have ever seen.

The yield of wheat per acre is enormous, but the most remarkable fact to me is the aridness of the whole region. The dust lay thick on all the roads. The stubble ground was as dry as an oven. I was assured by reputable men that not a drop of rain had fallen in the region since the middle of May, and harvesting began in August. Other men told me that there had been frequent local showers this summer for the first time in years, but that they could not see that the rain had beneficially affected the crops. Be this as it may, I saw green wheat which was in the milk, and which had been sown for hay, growing vigorously on light soil which was dry, absolutely dry, as deep as I could kick a hole. I looked amazed at that crop and pulled up handfuls of stalks. They were full of sap, and the wheat was in the milk. My agricultural knowledge was at fault. I should have said that hardy cactus might live through the hot summer if deeply rooted on that land, and here was a heavy crop growing, apparently.

Relishing the Heat and Drought.

The land is no more fit to raise wheat on, apparently, than the interior of a brick-kiln, but the crop was there and growing. There were many fields of cut grain in which the wheat stood in shocks. Other fields were waving in billows waiting for the lazy reapers to tend to their cases. In other fields the wheat was stacked, and poorly stacked, as though the owners never expected rain to fall again. In still other fields the thrashed grain sacked for export, lay piled in tiers, and the ground was dry deep down.

I saw gardens in which almost all kinds of vegetables were growing to perfect maturity, and on which no rain had fallen for months, as green as any market garden on Long Island. The small flint corn, which New York farmers mistakenly imagine to be corn, grew rank and green on these sun-burned, arid uplands, and on the unplowed hillsides rank, yellow topped bunch grass grew and waved in the brisk wind. Where do the plants draw moisture from to sustain their lives and mature enormous quantities of grain? No man can answer that question. The facts of the discovery of the value of these lands are, as near as I could gather them, that a few farmers, who then tilled irrigated land, plowed a few acres of light upland soil and sowed wheat on them. They were afraid to thrust their plow points into the summits of the hills where the land was presumably the most arid, and selected hillsides for their ex-

periments. The wheat gathered from these small experimental farms largely exceeded in quantity that gathered from equal areas of irrigated bottom-land, and the grade was higher. Instantly, almost, these progressive farmers thrust their plows into the summits of the highest hills, and on that ground they again sowed wheat.

The Yield of the Summits

Far exceeded the yield of equal areas of side-hill land, and the agricultural truth was established in the arid basin lying north of the Blue mountains and between the Cascade and Rocky ranges, that the higher the land, the larger the yield and the better the quality of the grain.

What are the objections to settlers entering this wheat region? I answer:

(1.) The extortionate charges the railroad corporations which operate in the region make for their services. These charges are settler-improverishingly high, as the squalid homes and mortgaged farms clearly prove.

(2.) Fuel and lumber, two essential articles of farm life, are costly.

(3.) The pet directors who falsely serve these corporations have been allowed, when the treasury ran low, to buy the corporation's arable lands at nominal figures, and these lands are now held firmly by them for speculative purposes. It would have been a better business policy for these powerful corporations to give their lands to actual settlers, rather than to speculators. For instance, 100 acres of land in the Red river country should produce year after year 3200 bushels of No. 1 hard wheat. The freight the grower would have to pay on that amount of grain to transport it to Duluth would be about \$480 annually. In the Palouse region 160 acres should, if properly cultivated, yield 6400 bushels of wheat per year, on which the freight charges from the grower to Tacoma would be \$900 annually. And that is a larger sum by far than the speculators paid for the land.

(4.) The grain exported from the Pacific Coast ports has to be sacked. A ship that carries grain in bulk southward across the equator cannot be insured, as the grain is almost sure to heat.

(5.) The Palouse country is broken. The hills are steep and deeply cut by ravines. Rolling over this uneven surface racks and tears the lightly built American harvesting machinery to pieces rapidly, which entails heavy expense on the farmer.

The Palouse region can easily be made to average 40 bushels of wheat per acre. Large tracts have averaged 50 bushels per acre.

Under intelligent management Palouse farmers can produce wheat, if the yield is 40 bushels per acre, for about 13 cents per bushel; if the yield is 45 bushels per acre the cost will be a little under 12 cents per bushel; if the yield should be 50 bushels per acre, and under intelligent management it will be, the cost per bushel will be about 10½ cents. And under free trade and a liberal railroad policy wheat can be laid down at Tacoma on the salt, deep water of Puget Sound, and at a profit to the grower, for 20 cents per bushel.

I sleep content to-night. I have seen an American region which I know will destroy the industry of wheat-raising in India, and that the English, who sought to destroy our wheat-growing industry by opening the Punjab and cultivating those fertile fields with ill-paid slavish labor, will come to financial disaster, just as their older brothers did when the slaveholders' rebellion was smashed by balls from Union guns. I have seen the region. If the railroad corporations treat it honestly and fairly, those farmers will ship, or can ship, 200,000,000 bushels of 20 or 25 cent wheat, laid at Tacoma.

Stack Your Straw.

The Delta gives some timely counsel about straw which may apply in other countries than Tulare. It says:

Farmers who have had their grain thrashed should save their straw and stack it. A few stacks in an alfalfa field that is used for pasturage are good to prevent bloat in cattle in the spring. Have it so that it may be accessible at all times. Should the rains be light during the winter, straw will be valuable for stock next year. It never does any harm to provide for a rainy day, and if it be found afterward that it will be unnecessary to save the straw, the stacks may be burned. In large grainfields it may be necessary to burn the immense amount of straw, which is put to no use, but those who have stock frequently destroy it when it is very valuable to them for feed.

In the same line are the following remarks of the Visalia Times:

A diversity of opinion exists among cattle-raisers as to the value of alfalfa pasturage—that is, where the feed consists exclusively of alfalfa. It is argued by a number of cattle-raisers that such feed is the cause of disease among stock; that it is a butter-producing grass; that it ruins the breeding qualities of cows and heifers, and is only good for fattening stock for the beef market. All stock-growers acknowledge that a few acres of salt grass inclosed in an alfalfa pasture is of great value to the stock, no matter for what purpose they are raised. Many farmers now stack their wheat and barley straw in their alfalfa pastures and find it of great advantage in fattening

their stock, increasing the milk and butter production of their dairy cows, and in every way being an advantage to their health and growing qualities. It is noticed, too, that both horses and cattle will leave alfalfa for days at a time to feed on straw stacks thus placed in the pasture.

THE STATE.

The River System of California.

There is not in the world another country having such a system of rivers as that of California. Whether regard be had to the regularity and frequency with which they occur, the amount of motive-power they furnish or the facilities they afford for irrigation, this system is without an example elsewhere on the face of the globe. In both the origin and the arrangement of these streams nature seems to have anticipated the future wants of the State. Having with few exceptions their sources in the Sierra Nevada stretching along the eastern border of the State, the tributaries of these rivers, after a fall of several thousand feet, gather and form the main streams, which, traversing the foothill region and the broad plains further down, flow into the two great drainage trunks, the San Joaquin and the Sacramento, which in turn empty their accumulated waters into a succession of bays, through which they finally reach the ocean. By means of this hydrographic system the water shed of nearly two-thirds of the State is drained. Outside it are only a few inconsiderable streams, not more than two or three of which can justly be called rivers. Between these principal streams occur many creeks, large and small, some of the larger carrying great volumes of water in the wet season, when also every water-course in the State is much swollen.

Lying between the basins of the San Joaquin and the Sacramento is the Coast Range, a long, irregular chain of mountains, divided throughout nearly its entire length into two, and in some places into three, summits. Being comparatively low, these mountains fail to arrest more than a small portion of the moisture carried inland by the air currents from the ocean; what moisture is so arrested being precipitated on the westerly side of this range. As a consequence, its easterly slope, with a strip of country along its base, has few running streams—none of any size—this constituting what may be termed the arid region of Central California.

Commencing on the north, the first large river met with is the Klamath, the only stream in California that, rising in the eastern part of the State, flows across nearly its entire breadth and empties directly into the ocean. The Klamath does not have its main sources in the Sierra Nevada, but in a series of lakes lying to the west of these mountains. While it is, therefore, nowhere very precipitous, its aggregate fall is considerable, it being a very long river. The next stream encountered coming south is McCloud river, which, rising about the southeasterly base of Mount Shasta, after running due south 65 miles, falls into the main Sacramento. The latter above this point takes the name of Pitt river, a large stream having its origin in a group of broken mountains to the east.

Proceeding 80 miles in the same direction, having crossed a great many streams coming in from the Coast Range on the west and more and larger ones coming in from the Sierra Nevada on the east, we arrive at Feather river, the Rio de los Plumas of the Spaniards. This, like nearly all the principal rivers in this system, consists of three main branches, denominated in all cases the north, the middle and the south fork respectively. The Feather, below the junction of its main confluent, is a large stream, being navigable for small steamers to Marysville, 30 miles above its mouth. At Marysville the Yuba, a smaller stream, enters the Feather. Ten miles further on, we cross Bear river, hardly more than a large creek, while 40 miles still further south brings us to the American river, laid down on the Spanish maps as the Rio de los Americanos. Hereafter it will be found as we go south that all the rivers encountered retain, with one or two exceptions, their early Spanish names.

After passing the American we arrive successively at the following rivers, none of the creeks, of which there are many, being mentioned: The Cosumnes, Mokelumne, Calaveras, Stanislaus, Tuolumne, Merced, Fresno, San Joaquin, Kings', Tulare, White and Kern, which brings us to the southern terminus of both the San Joaquin valley and the Sierra Nevada mountains, though a division of the Coast Range may be said to continue on somewhat further toward the south.

Here, in traveling a linear distance of 450 miles, we encounter no less than 30 rivers, this being apart from the creeks, of which 100 might perhaps be fairly counted in, the larger forks of the principal streams being included. During the wet season and the early summer, when the snow is melting on the mountains, the volume of water carried by these streams is very great, the flow of some of the larger rivers being nearly equal to that of the Hudson.

There are about these mountain streams a number of peculiarities, some of which it may be well to notice. In the first place, they never fail to afford a large supply of water, the precipitation on the Sierra Nevada always being sufficient to insure such result, however dry

the season elsewhere in the State. The snow-fall on these mountains, though greater some winters than others, is always heavy, varying with altitude from 10 to 40 feet. Being shaded by the tall forest growths, this snow melts slowly, not wholly disappearing below the timber line till nearly midsummer. Above that line there is a vast extent of perennial snow-fields, the higher peaks of the Sierra serving as great water preserves later in the season. In these immense bodies of perpetual snow, Central California is forever made safe against the occurrence of any stringent water famine. These mountains were not raised to such imperial heights without a purpose. Nature, foreseeing that this portion of the Pacific Coast would be subjected to a long, dry summer, lifted them to such height that they might receive and for a long time retain, this snow and thus guard against intolerable drouth by increasing the supply and prolonging the water season. To render still more effective this wise provision, the slopes of these mountains further down, where the snowfall was less, were planted with stately forests. And so, this part of California will always have water to drink, water for driving machinery and water for irrigation, as well as for every other needed purpose.

But what good all this water, had it not been given head sufficient to carry it on to the places where required for consumption and use? But this too, having been foreseen, has been arranged for. These mountain streams before they reach the plains have made a descent of several thousand feet, enough to carry them on the highest divides between the rivers, over the foothills and plains, and even over the Coast Range to the west, thereby insuring to San Francisco and other cities about the bay water in any quantity and of the best kind, should they ever have to look to the Sierra for a supply.

Nature in her wise husbandry has worked many strange things for California. A month of continuous dry weather on the Atlantic side of the continent causes much suffering and loss, two months of such weather bringing universal distress and widespread ruin. Six months of uninterrupted drouth in this State causes here no inconvenience, and, of later years, no serious loss, and this, even though the preceding winter may have been an exceptionally dry one. Most of the smaller streams, it is true, dry up, and all the larger ones reach a low stage. The springs show diminished flow and some of the shallow wells fail entirely. But the artesian wells and most other deep sources of supply are so little affected that no such thing as a general dearth of water can occur in this State. That water should here be so plentiful near the surface all through these long, dry seasons is explained in part by the peculiar geological formation of our mountain slopes, which consist of benches or terraces at the base of which the water flowing out comes to the surface at irregular intervals, instead of sinking as in flat countries to great depths, and making its escape through deep-lying channels. Again, animated creation suffers here but little from these protracted seasons of drouth, because it is constitutionally adapted to this condition of things, this being especially true of plant-life. With us, the tap-root at the very commencement of its existence begins to go down in search of moisture, whereas in wet countries the roots instinctively spread out near the surface. The dry season is our winter when nature rests but does not die, except where growth has reached maturity and life has fulfilled its purpose.

A RABBIT DAY.—In view of the rate at which the festive jack multiplies in the southern portion of the San Joaquin valley, the Delta suggests the appointing of a "rabbit day" or a "rabbit week," at the season when farmers have most leisure, and making a special business of slaughtering the pests in the three counties of Fresno, Tulare and Kern. It might cost a considerable amount of money to do so, but it would be a paying investment and probably a much more speedy and effective way of ridding the country of rabbits than offering a bounty for scalps.

GLEASON, the horse-tamer, says that the word "Whoa" should never be spoken to a horse unless it is desired that he stop still. A lad near Albany, N. Y., knows what sound advice this is. He was on a mowing machine and fell in front of the knives. As he fell he shouted "Whoa" to his horses and they stopped. The cutting-knife of the machine was resting on top of the boy's foot when he was taken up. Had the horses taken a single step more, the lad's foot would have been mangled.

GRAIN and spuds in Manitoba outrun all estimates this year, and if statistical reports are trustworthy, in many districts the Canadian Pacific railway will be utterly inadequate to move the crop. A dispatch from Winnipeg states that the yield of wheat has been 35 bushels to the acre in many places, and the average will be about 30 bushels. This would make 10,000,000 bushels available for export, if it could be moved; 1,000,000 bushels of potatoes also can be had for export.

A CONSULAR report gives the following ruling prices for live-stock in Honduras, Central America: For cows, from \$7 to \$10; steers, average, \$8; 2 years old, \$3 to \$4; 3 years old, \$4 to \$6; hogs, \$3 to \$6; goats, \$1 to \$2; cargo or pack animals (mules or horses), from \$35 to \$50; saddle mules, from \$60 to \$150; saddle horses, from \$20 to \$60; mares, from \$6 to \$10.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

BELOW AND ABOVE GROUND.—Haywards *Journal*, Oct. 8: The potatoes raised around Alvarado this year are remarkably fine. Samples shown us by Tony Lee Saturday weighed from 3 to 5½ pounds each. They were Burbank seedlings, the finest potatoes in the market. E. J. De Merritt, residing on the edge of Castro valley, brought us some fine grapes Saturday, of the Black Hamburg and Alexander varieties. His vines are only three years old, and the average weight to each vine this year was at least 20 pounds.

Colusa.

SQUIRRELS IN LEVEES.—Colusa *Sun*, Oct. 8: Walking up the levee just north of town a few days ago in what is known as the "Hagar bend," we noticed squirrel-holes in the levee from crown to base, in shameful abundance. We cannot conceive why people whose land is protected from overflow by a given piece of levee, allow the same to go to ruin all summer, and perhaps never think of it until the water is pouring through it as if it were a sieve, or until the flood has opened a gap 100 yards wide. If ever an ounce of prevention is worth a pound of cure, it is attending to levees in proper time. Here now is a half-mile or more of well-built levee, that a few dollars expended from time to time during the summer in squirrel poison would keep absolutely solid and render the lands protected by it entirely free from danger of overflow. Now many dollars will be required in killing these pests, and in digging out the holes they have burrowed; or if this be not thoroughly done many more dollars will be required in repairing breaks that are sure to follow neglect, besides the damage to property otherwise likely to result from an extensive overflow.

Contra Costa.

FINE HORSES.—Martinez *Item*: G. T. Wilds of Walnut Creek represented that section of the county by a fine display of stock during the county fair. The blood mares Rosa, Queen and Fanny, and standard-bred Dolly and colt, attracted a deal of attention. The most attractive showing, though, was his span of black matched work-horses, whose combined weight is 2990 pounds.

FLOURISHING OLIVE.—Antioch *Ledger*: On the ranch of John Garcia, near Willow Pass, is an olive tree 14 years old, not less than 30 feet in height, the trunk measuring 44 inches in circumference. It is now laden with a well-developed crop of young olives and has borne annually for several years.

Humboldt.

SUCCESS OF THE FAIR.—Dispatch from Rohnerville, Oct. 5: The directors of the Ninth District Agricultural Society met this morning to settle up the business connected with the last annual fair. The fair was a success financially, and will pay off an indebtedness of \$400, which has been standing for two years, and leave about \$400 over. The directors decided to give larger premiums and better purses at the next fair.

A PRIZE DURHAM.—S. S. Loveren sold his thoroughbred bull calf, Second Duke of Mad River, which took first premium at the District Fair, to Edmundson Bros. of Pacific Township. They paid \$200 for the calf, which was only five months old, and we think he was well worth the money, as he is the best Shorthorn calf of his age we have seen.

BEARS NEAR EUREKA.—Standard: It will, no doubt, surprise many citizens of Eureka to learn that a large bear was killed day before yesterday within 2½ miles of the courthouse. Mr. A. C. McArthur, who lives near the Russ claim, having noticed bear signs thereabout for some time, took some dogs and had no difficulty in starting bruin from his hiding-place. Instead of one there proved to be two large black bears. They soon took to a tree, and Mr. McArthur shot one dead and wounded the second, but did not succeed in killing it. The one killed weighed 200 pounds dressed, and was very fat. It measured over six feet in length.

Los Angeles.

NEW CANNING PROJECT.—Times, Oct. 5: A meeting for the organization and incorporation of a canning company was held last evening at the Board of Trade rooms. Among the prominent merchants present were Messrs. Porter Bros., E. Germain, R. A. Ling, Seymour & Johnson, H. Jevne, C. E. Day, S. J. Mathes, S. J. Peck, G. W. Tubbs and B. S. Hayes. Several short speeches were made, in which the crying need of such an enterprise was spoken of. Finally it was decided to form a joint-stock company, under the name and title of "The Merchants' Canning Company of Los Angeles, Cal.," and the amount of capital stock fixed at \$150,000. Articles of incorporation are to be drawn up and reported on at a meeting to be called in the near future. The intention of this new company is to put up none but sound fruit and vegetables and trust to the quality of their goods rather than to a showy label for their popularity and sale when placed upon the market.

POMONA'S HORTICULTURAL COMMISSIONER deserves a great deal of credit for detecting and returning a carload of trees shipped into Pomona this last week, which were infested with white scale. By a great deal of hard work the

Horticultural Society here have succeeded in exterminating the pest in this vicinity, and great care is taken that it shall not again be introduced.

Modoc.

WOODS IN FLAMES.—Adin *Argus*: During the entire week the mountain east and north of us has been ablaze. The distance is about five miles from town. The fire extends over the side of the mountain in almost a solid sheet for miles. The sight at night is grand, but causes much comment on the carelessness, or perhaps intentional outrage, of unknown originators. A severe penalty is attached to the crime of setting forest fires, and if a few persons setting these fires were compelled to suffer the penalty, it would improve the general state of affairs. These may have originated by the carelessness of hunters, but when the parties realize the damage caused by their thoughtlessness, as they may now plainly, they will undoubtedly see in the future that no spark remains to cause such destruction to the forests.

Napa.

ORANGE TREES.—St. Helena *Independent*: Geo. H. Beach has in his orange orchard some young trees which bloomed early in the spring. On account of their age the buds were about all plucked; but the trees were not to be fooled that way and are now blooming the second time. Mr. Beach has five orange trees 12 or 13 years old which are heavily laden with fruit and will present a beautiful appearance next winter. He has Navels, St. Michaels and Mediterranean Sweets.

Nevada.

PAWPAWS.—Grass Valley *Tidings*: A sample of this fruit, which we have heard called "Missouri bananas," comes to us from H. Clendenen's garden on Randolph Flat, near Grass Valley. The pawpaw grows only on rich soil, and indeed pawpaw trees in their native groves are always signs of good land. Wherefore we see that Nevada county has the good soil and the promotive climate.

San Bernardino.

ORANGE-TREE MARKET.—Citrograph, Oct. 8: Orange trees are in big demand for the coming season's planting and are high in price, \$2 each being asked for choice budded Navels. Trees are not scarce, there being hundreds of thousands ready, but the demand seems to run up into the millions. The acreage planted the coming season promises to be the largest ever made. This makes our home supply, large as it is, inadequate to the needs of the market, and hundreds of thousands of young trees will be imported from Florida and other places to supply the enormous demand. The call is mostly for Washington Navels, although a number of other varieties will be put out.

San Diego.

OSTRICH FARM.—San Diego *Sun*: Eight miles from Fallbrook is a bit of Africa dropped down between the hills. At least it requires but a small stretch of the imagination to think of the ostrich-ranch as a patch of the dark continent. A little valley encircled by barren hills, a herd of ostriches feeding, the old adobe where the incubators are kept, pomegranate trees and passion vines climbing over the low house, all make up a picture very unlike the conventional type of American landscapes. The birds seem to take kindly to their adopted home. There are about 40 kept at the ranch at present. The old birds are placed in pairs in their several pens, and only the young are allowed to wander over the grounds. One pair has a nest hollowed out in the ground and are patiently sitting on a dozen eggs, the male bird taking charge 19 hours out of the 24.

DAIRYING AT SOUTH CHOLLAS.—Cor. National City *Record*: The Duncans, of the dairy farm below us, have fine arrangements for feeding and milking cows, well worth a visit. They use alfalfa hay, bran middlings, oil-cake and meal for feed. Each cow knows her stall and places her head between the bars. They have been using loose hay brought clear from San Pasqual on wagons, but are now going to use baled hay from the upper country, which costs no more and is easier to handle.

Santa Barbara.

SANTA MARIA APPLES.—Times, Oct. 8: This week several fine varieties of apples and other fruit have been placed on Jos. Kaiser's display table from the following ranches: J. H. Rice, west of town, two varieties; J. M. Goode, pears, and apples of the bellflower and English russet variety; Isaac Fesler, the bellflower and a large red variety, a single apple measuring in circumference 13½ inches, grown down near the river where it is very sandy; sample of grapes from G. W. Battle's place, four miles east of town. But speak of a variety of apples from one ranch—we were shown by Mr. Kaiser 16 varieties from N. H. Wood's ranch in Cat Canyon; truly it should now be called "apple variety canyon."

Santa Clara.

FRUIT SHIPMENTS.—San Jose *Times*, Oct. 9: The warehouses at the S. P. R. R. depot are full to overflowing with grain, and the fruit shipments are enormous. Ten carloads of green and dried fruits were sent East yesterday and three carloads canned fruits to S. F. The cars averaged 12 tons of fruit each, or 156 tons. We learned that yesterday's shipments were only an average of what has been sent daily for three months. The above figures do not include any of the green fruit sent to supply the S. F. markets, as all of this is sent by the Narrow Gauge, the latter road having its entrance on

the water front where the fruit men are located. Fruit shipping will continue as lively as it is at present until about the first of December.

Santa Cruz.

SUN-DRIED PEACHES.—Santa Cruz *Sentinel*, Oct. 8: We have some sun-dried peaches prepared by a new process by Hon. Anson Miller of Highland. The peach is taken at the best stage of ripeness, and by an easy manipulation with hot water deprived of its skin. The pit is taken out and the meat subjected to bleaching by means of sulphur. Then it is placed on a tray and exposed to the sun. In about four days it is sufficiently cured. There is no need of building expensive driers. Judge Miller, we understand, has prepared and sold about \$500 worth of these sun-dried peaches the present season. They are so clean and bright, and of such excellent flavor, that the judge had no difficulty in selling them in preference to kiln-dried fruit. The specimens we have examined retain the best flavor of the peach. The sulphur is said to prevent decay or fermentation and attacks of insects, and yet there is no smell nor taste of sulphur.

Sonoma.

EXPORTING MERINOS.—Petaluma *Argus*, Oct. 8: John Lawler shipped to A. P. Moore at Santa Rosa island 150 merino bucks. Mr. Moore has the island now covered with sheep, but will use this new importation to grade up his flock. These rams are of the most approved stock and were raised by E. Denman on his Two Rock ranch and by Wilfred Page on the Cotate ranch.

BIG CARP.—Index-Tribune, Oct. 8: Sonoma creek near Vollmar's hotel is swarming with carp. On Tuesday last one weighing 13 pounds was speared with a pitchfork on one of the riffles of the creek, while another weighing 11 pounds was caught in the same manner.

Sutter.

A GREAT CORN CROP.—Farmer, Oct. 7: Jacob Doty was over from the Sacramento river on Wednesday. He tells us that the corn crop on the Sacramento river in his vicinity is simply immense. Stalks are from 10 to 15 feet in height and maintain from two to five ears of large, well-filled corn to the stalk.

AN EIGHTEEN-OUNCE LEMON.—M. E. Sanborn, District Attorney of Sutter county, placed on exhibition at the Immigration Bureau in Marysville last Wednesday an enormous lemon grown in his yard in Yuba City. Mr. Sanborn could not name the variety, but from its appearance we judge it is a Sicily seedling. They are like those of W. G. Murphy's, their rind exceedingly juicy and fine flavored. The one on exhibition measures 14½ inches one way and 11½ the other in circumference, and weighed 18 ounces.

Stanislaus.

COTTON.—Modesto *News*: V. E. Bangs sent to the Mechanics' Fair a sample of cotton grown in his garden. Good judges pronounce this sample of good length of fiber and excellent quality. The experiment was made by Mr. Bangs without the aid of irrigation, and in our judgment fully demonstrates that cotton may be successfully raised in Stanislaus county.

FOR IRRIGATION.—Modesto *Chronicle*, Oct. 10: An election was held Saturday in the Turlock irrigating district to decide whether or not \$600,000 in bonds should be issued to build an irrigating ditch. Full returns from the entire district have just been received, and the result is a victory beyond the most sanguine expectations of the friends of irrigation. The total vote cast in the five precincts was 188. For bonds, 176; against, 12. The land-owners in the Turlock district are jubilant. Nearly 200,000 acres of as fine land as there is in the San Joaquin valley are in the Turlock irrigating district.

Tehama.

APPLES KEPT A YEAR.—Red Bluff *Sentinel*, Oct. 8: Wm. Harbert of Digger creek, who owns a ranch about 25 miles northwest of Red Bluff, sent a couple of "Wine Sap" apples to this office a few days ago that were grown in 1886, picked and laid away in his house to see how long they would keep. He has kept them over 11 months, and although they are shriveled and not more than half as large as they were when picked, they are sound and well preserved. In some parts of the Eastern States, these apples are called "Romanite," and in other places the "Father Abram." Their keeping qualities are superior to any we have ever seen or heard of.

Ventura.

LOCAL SPECIMENS.—Democrat, Oct. 6: Mr. W. B. Baker of Satcoy left at this office one day last week a box of grapes and apples produced on his farm which, for size and excellence of flavor, are not easily surpassed. The apples were of the Rainbow and Gloria Mundi varieties. The Rainbows consisted of a cluster of 19 well-grown apples. The Gloria Mundi, four in number, were exceedingly fine specimens of that large variety. A Chinaman dug 1350 pounds of potatoes in town last Sunday from about one-third of an acre of ground.

Tulare.

A WOMAN WHEAT-GROWER.—Traver *Cor.* Los Angeles *Express*: Widow Crow is farming 3000 acres. She averaged nine sacks to the acre, amounting to about 2000 tons. She sold at \$31 a ton and banked \$60,000 for her crop. She has taken a partner for convenience and that gives her a superintendent in the field; but she remains the boss, bank and brain of

the enterprise. She owns one combined harvester, which will cut, thrash and sack 30 acres a day. When her crop was ready for the sickle she started her machine, hired four more and the five went marching around her golden fields—20 men and 120 horses cutting, thrashing and sacking 150 acres of wheat each day. It kept five of the men busy sewing up the sacks of grain as they came from the separator; five drove each a 24 horse team, five tended each a sickle, and the other five attended each to a separator. In a minute the standing grain is in the sack ready for transportation.

Yolo.

SEEDTIME AND HARVEST.—Democrat, Oct. 6: Farmers generally throughout Yolo county are making preparations for the fall rains. Summer-fallow seeding is concluded in most places, and many farmers have the volunteer seeding far advanced. Clover is raised in abundance around Woodland, where water can be easily had for irrigating purposes. The second crop is now being converted into hay, and immense quantities are being hauled into the city.

COYOTE SCALPS.—At the request of parties residing in Capay valley, and owning sheep and stock that have been annoyed by coyotes for some time, the Board of Supervisors has passed an ordinance allowing a bounty on the scalps of those animals. Parties presenting scalps and asking a bounty, however, must swear that the coyotes were killed after the passage of the ordinance.

MULE MARKET.—John Kelso has had agents in this county the past few days buying mules to work on the railroad that is being built between Cloverdale and Ukiah. Among those bought is an excellent span of bays from O. F. Woods, near this place, which weighed 1500 pounds each. The price paid was \$500 cash down—very cheap for such mules.

ARIZONA.

HORSES IN THE SALT RIVER VALLEY.—Phoenix *Arizona*: The number of fine horses noticeable on our streets is matter upon which strangers comment. The range is from the heavy farm and dray horse to the neat-built thoroughbred roadsters and standard trotters, and the larger portion are products of this valley. During the last four years the famed stables of Kentucky, Illinois and other popular breeding-places have been drawn upon as the basis for our horses. The climate has proven very congenial to the production of the noble animal, the nutritious alfalfa pastures here tending to a perfect growth and development, and it is pretty well assured that Maricopa county will become noted as a breeding-place. The military has drawn heavily on our stock for cavalry uses during the past year, and work horses have been taken to Pinal, Southern Arizona, and mules to Southern California from our pastures for use on public works.

NEVADA.

LINCOLN COUNTY.—Pioche *Cor. Bee*: South-eastern Nevada, instead of being a desert, is proving its adaptability to human habitation by the production of choice apples, pears, apricots, almonds, as good grapes as you can grow in California, and the best potatoes in the world. In the Muddy and Virgin River valleys cotton has been successfully grown for years. About 30,000 grapevines and 3000 almond trees have recently been planted in addition to those which have for years been fruitful, and an experiment with oranges is now in progress. This (Lincoln) county is about 100 miles wide and perhaps 275 miles in length; and, although there is much unwatered land, that which is and that which can be irrigated will in time support more people than now inhabit the whole State. The soil is very rich. I have seen at Hiko weeping willow trees 75 feet in height that were planted only 15 years ago. I have ridden in the Muddy valley through wild sunflowers growing so densely that a horseman could not ride through them except by the beaten path, and whose bright heads waved 18 feet above the ground. Still, the county contains but a handful of inhabitants, scattered here and there. The reason is our almost complete isolation from the world, the nearest railway being 100 miles from this point.

WASHINGTON TERRITORY.

HOPS FOR JAPAN.—Dispatch from Seattle, Oct. 5: Some time since Ezra Meeker of White River valley sent samples of Washington hops to Yokohama, Japan, and a few days ago he received a trial order for 20 bales to be shipped to that city. This is the first order for Washington hops ever received from Japan. Hop-growers feel that the order is significant of a new departure in the disposition of a large portion of the crop and also an escape, in a measure, from the domination of New York buyers.

LAKE COUNTY.—Handsome in typography and illustrated with pleasing views in the pamphlet on Lake county, its climate, attractions and resources, by Beakbane & Hertalet of Lower Lake. It does credit to the *Clear Lake Press*, whose imprint it bears.

THE DAIRY INTERESTS OF THE UNITED STATES represent an investment of more than \$3,000,000,000, nearly five times as much as the entire bank capital of the country, which is \$671,000,000. The number of milch cows is estimated at 21,000,000.

DEVELOPMENT MATTERS.

(Original Contribution.)

Lessons of the Fair.

It speaks to the credit of the fair and to the taste of the people that the place has been filled so constantly with those who desire to see our own productions, not the display of foreign importations that have heretofore been on exhibition. Home should be stamped on every table, California hung in letters of gold on every product of soil or mind that we may claim as belonging to this Golden State—golden in more than the metal from the mines. Where on the face of the earth will we find a land to compare with it? What mines of wealth are in the soil! Walk down to the tables and mark the product of orchard and field; for size, variety, and length of season, where can they be equaled?

Step to the section marked Kern, and see what 8000 square miles of our State can produce. The land has been principally used for stock-raising, and the fine cheeses give evidence of their excellent dairies, while the luxuriant fleeces prove the value of their sheep; but while they have been busy with the pastures they have been proving there is more in the soil than food for cattle, as is shown by the variety of fruits of mammoth size. They claim to have cultivated experimentally every production of the temperate and semi-tropic zones; they have all varieties of nuts, cotton, flax, tea and coffee, immense hanging clusters of hops that would make an Englishman's eyes dance, and the India rami plant standing next a case in which are specimens of the woven cloth. At the other end of the table are cornstalks 22 feet high, bearing 12 full ears; then there is wheat grown without irrigation, 4000 feet above the level of the sea; near by is some fine, clear salt from a lake at the same elevation; and nature does not stop here, but with her bountiful hand touches the rocks and quarries, and they bring forth metals and building stones. Borax and porcelain clay is also found.

Yet though this country may claim a greater variety, others may excel in some particular. Napa boasts of 400 varieties of grapes, that it has 80,000 acres devoted to their cultivation, and that in the year 1886, about 5,000,000 gallons of wine were made, which should prove that they have the favored home of the vine, in the sunny slopes facing the south and east where it can catch the first rays of the morning sun, and the last, as he goes behind the western hills.

Solano has festooned her display with vines, and filled her tables with luscious fresh fruits and a profusion of sun-dried ones that look as though his highness had kissed them gently, touching them lightly that their beauty might not be marred, leaving the impress of the pit with the deep coloring in the center; but with all their beauty they find no market here. Why should they, when Santa Clara furnishes strawberries nine months of the year, and San Mateo gives us Lawton blackberries three inches in circumference in January, placed on the table with grapes just picked from the vines in another county?

Sonoma displays a huge pyramid illustrating the vintage, surrounded by tables of fruits and vegetables to prove that nature has not neglected the coast range of mountains. We were visiting in that coast range about 15 miles from San Francisco, two summers since, and the morning we left, went out to gather flowers before breakfast. Just in front of the house we saw the footprints of his majesty, the bear, who had strolled down to call on his friend, the deer, to inquire how many years more he would be allowed to walk unmolested near our homes, and how long he would have to growl over our indifference at our great inheritance.

Now let us go further north and here is Placer with two very suggestive pictures—one, the miners washing out the gold; the other, the miner with his wife sitting quietly under their fig tree, surrounded by cultivated fields, proving that where mining was the principal source of wealth a few years since, a new era has dawned, and that land which was only thought fit for mining is more profitable for fruit; that the plow will turn up more gold than the pick. The county shows fruit already ripened beyond the eatable stage, and thence in regular gradations up the mountain-sides to an altitude of 4000 feet, peaches, grapes, apples and pears that are not yet ripe enough for exhibition. They claim that the country of the fig in Asia Minor is exactly similar to the lower foothills of Placer, the elevation being from 400

to 2000 feet. Then, too, Placer's climate is its stock in trade—the air laden with piney, resinous odors soothes the diseased lungs of consumptives, and asthmatics who have been benefited nowhere else have found relief in the foothills which are above the fogs, and have summer skies that excel those of Italy. In winter a person can pick oranges at any of the towns from Rocklin to Auburn, and in a few hours' travel he may enjoy a sleigh-ride at Dutch Flat or Cisco. Here, too, is an almost inexhaustible supply of timber; less than 10 miles on each side of the railroad stand forests yet untouched by the ax, containing white, yellow, and sugar-pine, spruce, fir and cedar, whose height is 15 to 300 feet.

Here is Inyo in the east that claims that every known mineral is found in their lofty county of the Sierras, and shows to different kinds of marble. The marble is marvelous for its purity and excellence, and the deposits are boundless in extent, being enough to supply the world and make our own city a second Rome. While the rocks give Italian marble, the ground brought forth the mammoth apples that are by its side.

Then Humboldt in the far north shows with pride her redwood. But not satisfied with that says we shipped last year 1,594,925 pounds of wool; and look at the tempting grapes and apples and think you'll not starve on sawdust and salt pork. Now, lastly, glance at San Luis Obispo's immense vegetables, potatoes and onions averaging 3 pounds; cabbage, 90 pounds; squashes over 200, and then think surely the giants of "those days" might have lived in Arroyo Grande. Imagine a giant handling a wild strawberry—no, there must have been gigantic fruits and vegetables as well as gigantic men in those days. Now, here in a case by itself, is a shrub growing wild in many parts of the State, that the discoverer claims is destined to revolutionize the silk trade. The native silkworm feeds on this shrub, thrives in the open air without care and spins a web outrivalling in strength and value that of the worm to whom we have given so much care for ages. If this prove true, what a source of revenue shall we have.

Over some counties is hung "no irrigation," but if that be needed, if the sun shines so brightly that rain will not come from the clouds, here are Californians, nursed in our colleges, skilled in knowledge to blast rocks, tunnel through mountains, ditch the valleys, and bring water to feed the thirsty land and make it obey the Maker's command to bring forth abundantly.

But the subject is inexhaustible, we have scarcely told what we are doing—what the future has in store for us, who can tell? The rocky hillsides that a few years ago were considered only fit for grazing, have proved to be the home of the olive, and when Californians realize that the product of the orange grove is worth several times that of the vineyard, they may agree with the Italians that "the olive tree is a mine of gold," and think if they have not been casting "pearls before swine," they have been feeding gold to cattle. But if we said more would not our statements be considered Munchausen—would we be believed if we said that roses were 12 inches in diameter, that immense figs and peaches were lying so thick under the trees that the ground could not be seen? If Californians will scarcely believe our statements, what shall we do to convince the outside world of the wonders of this glorious land? We can send the soil to be analyzed, but can we send a volume of the health-giving, invigorating air, can we send the sunlight that warms without the aid of artificial heat, and so heats the soil that it forces luxuriant growth?

In 1848 the gold fever started on the shores of the Atlantic and spread backward to the Rockies, and our fathers started to hunt for gold on these shores—started, crowded in small sailing vessels with a fare of salt pork and hardtack, carrying their beds with them—and landed here, after a six months' voyage, with pick and frying-pan, their only means of subsistence, hung on their shoulder—landed on a sandy shore, with a few adobe houses scattered here and there.

In 1888 let us send a return ball, glowing with fever heat, back over the Rockies, "land ho" stamped on it in golden letters. Let it touch every town and village, with every bound gaining new force, till it reaches the Atlantic and floats gently over until it is washed ashore on staid old England, and the Englishman unbends from his dignity, sniffs, turns it with his cane, and says: "What have we here? Bears and civilization? A-h-a! I think I'll take my gun and go and see what this can be." We bid you welcome. Our forefathers, in their independence, threw your tea into the Atlantic. Come and see the possibilities that in our repletion we may throw not only

your importations, but those of southern Europe also, into the Pacific.

And to our own we say come—come with your wives and your little ones—that your wives may renew their youth and your little ones thrive and grow ruddy in their childhood; and in their youth, their physical education fully ripened by the daily baths of sunlight, enter the schools ready to receive them and the college whose doors will be open for them to enter. Come with your capital to build mills and factories; come with your brains to run them; come with your hands to labor in the field, to care for the cattle on a thousand hills and to lead the sheep to pastures green; come believing there is scarcely a foot of soil from the tops of the mountains to the sands of the sea that will not repay you for your care. Come, not as did your fathers, creeping in the doldrums till the wind came, but flying by rail on a six-days' journey, fed on the delicacies of the seasons, lulled to sleep on downy beds; and as you enter, make a bow to California, who has given another proof of her ability to produce big hearts as well as big fruits and vegetables. Again has she asserted herself as queen of the realm. Was there ever a country where a private citizen furnished free passage to her settlers? California leads again. Will not that help settle the Chinese question? Replace the Chinese with our own and the difficulty is solved. Once more we say, come; our doors are open; we are waiting to greet you.

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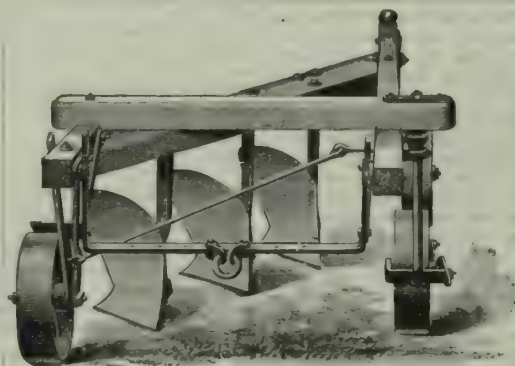
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TEXTILES.

The Mechanical Spinning of Flax.

[Translated from the French by M. N. M.]

The following from a paper by F. Kuchurzewski in the *Revue Scientifique* upon Philippe de Girard, the inventor of flax-spinning by machinery, and his 20 years' residence in Poland, where he became celebrated by the name of Girardow, explains the series of manipulations by which flax is made to pass from the moment of its severance, until the time in which, under the form of thread, it reaches the loom of the weaver, and he shows that the present processes conform to those which the inventor discovered. Having severed the flax, they begin to rot it by macerating it in water, or spreading it out in the air, to subject it to the action of the sun and rain, or of the dew. The stalk of the flax is formed in a series of muscular tubes, united by a resinous-gummy material, and enveloped in a kind of *ecorce* (skin). The object of the rotting is to dissolve this resinous-gummy part and to detach from the skin the central fibers, in order to facilitate their separation. Being dry and prepared by the rotting to be easily broken, the flax is brought for that operation under the brake, which crushes the stalk and separates the fibers. The *battage* (beating) disentangles the skin from the particles of bark which it might still contain. These operations to obtain the product for spinning are replaced in countries in which the culture of flax is conducted on a great scale, by breaking it between iron cylinders and stripping it by means of the *espade* (tewing beetle). There is another purification before spinning, which consists in combing the flax (hackling) by hand or machinery in order to disunite the bits as much as possible, without breaking the filaments; to make them supple without straining them; to detach them from each other so as to facilitate their gliding at contact, and to arrange them as parallel as possible.

In This Way Are Separated

The pure fibers of the flax called *long brins* (long staple) first, from the foreign bodies which the filamentous matter yet contains, and then from the *tres courts brins* (short staple), intermixed throughout, and which constitute the tow. The operations of spinning, properly speaking, begin upon the *table a etaler* (stretching-out table), annexed to the first *etireuse* (drawing frame). Behind the machine a table is placed, on a level with it, and divided into four parts, upon which goes an endless cloth. Some handfuls of flax are placed upon this cloth so as to get four uniform *rubans* (ribbons) which engage in the rollers behind the drawer. This machine has moreover another pair of rollers in front which move with more speed, the result being that the ribbon is drawn between these two pairs of rollers, which, by reason of the particular length of each bit of flax, should be sufficiently distant from each other not to break them. The ribbons are supported between the two pairs of drawing rollers by means of combs or gills composed of needles fixed in copper sockets. The gills move forward at the same time as the ribbon, all of them combing it, and it is this invention, allowing the deglutinating and removal of its adherent properties, which led to the solution of the problem of the mechanical spinning of flax. Each ribbon as it reaches the front roller is detached from that roller by

What is Called the Paralleiseur.

The purpose of which is to unite the four ribbons into one, in order to give it a more uniform bulk throughout its length. Turned out in this manner from the first *etireuse*, the ribbons are still further spun out by two or three other machines like the first but without the movable table. Being sufficiently drawn out, they pass to the spindle bench, where they undergo a new *etirage* (drawing out) and a last necessary combing, after which they are lightly twisted and rolled up on the wooden bobbins placed upon spindles.

The product thus obtained then goes to the spinning-mill. Spinning by machinery, the same as spinning by hand, has a double operation—to draw out and to twist. The flax is usually put in warm water before transferring it to the drawing cylinders of the spinning-mill. It is in this manner that the pure flax is treated. In regard to the tow, first of all it is combed upon a card, from which it comes out in the form of a ribbon that is also changed into thread by the same process as the ribbon of pure flax. Before Girard's time the machinery for drawing out flax in England, as in France, did not differ from machines for drawing out cotton. The ribbon of flax stretched between two pairs of cylinders rested only upon the surface of a drum, and the undirected fibers of flax, losing their reciprocal parallelism, got entangled and intermixed to the point of again becoming tow.

In Applying Blindly to Flax

The machinery for spinning cotton, it was proved that the very pronounced difference which exists in the vegetable structure of these two products of nature, had not been taken into account. The experienced lack of success had no other cause. During the first years of our century the spinning of flax was generally done by hand, with the distaff and spindle, or, as in the remotest antiquity, with the more recent but improved wheel, similar to that of which the design is found in the manuscripts of Leonardo da Vinci. In the meantime, the

spinning of flax condemned to the slowness of merely manual labor, was threatened with inevitable ruin by the rapid development of cotton-spinning machinery. It was, however, saved by a favorable circumstance. Napoleon, having declared war with England, saw himself obliged to conduct the struggle upon the field of national industry. The attempted competition in the domain of the cotton industry had failed, inasmuch as the blockade of the ports of the Continent by the English, impeded France in importing the raw material. It was necessary then to counteract this by promoting the flax industry, as the raw material might be had upon the spot, and so to say, at hand. Napoleon immediately comprehended the matter, and on May 12, 1810, he signed the famous decree which

Promised a Million of Francs

As a recompense to the discoverer of the best machine for spinning flax. The morning of the day on which the *Moniteur* that contained the imperial decree reached Lourmain, the father of Girard, while breakfasting with his three sons, said to Philippe (at the same time showing to him the article in the official journal), "Philippe, here is a piece of business for thee." That same evening the young engineer shut himself in his room in order to study the question, and the next morning on reappearing in the midst of the family, he embraced his father, exclaiming several times, "The million is mine! The million is ours!" The certainty which he felt of obtaining that magnificent reward gave him much pleasure, all the greater, too, because the fortune of his family, which had been seriously impaired during the Revolution, had not ceased to diminish, in consequence of miscarried and unfruitful enterprises; to which must be added the expense of the inventions of Philippe, that brought little or no remuneration. In this way the basis of the flax-spinning machine was discovered in a few hours. The genius of the young mechanic was all at once directed to the road which he should take in this great work. Instead of stopping with the idle discussion of what had been done before, or seeking to apply the cotton-spinning machinery to flax-spinning, he reflected upon the manual operations of the spinster, and then studied the nature of the textile filaments of flax. From these considerations

He Deduced Two Conclusions

Which still constitute the foundation of the flax-spinning machine. The first was that a ribbon of filaments of flax could be drawn out by two pairs of drawing cylinders, between which it is supported by means of a row of small combs placed upon an endless movable base and destined at the same time to maintain the parallelism of the filaments upon all the length of the ribbon. The second conclusion, which permits the drawing of the flax to the utmost limits of tenuity, resulted from a discovery made by Girard, with the microscope, that each filament of flax is composed of several elementary fibrils, five or six meters long, and which are united by a glutinous substance. The filaments being immersed in warm water, the gluten softens, the filaments become more elastic, and are more easily drawn out; and, by reason of the weakness of their coherence, the fibrils glide upon each other with perfect ease. From filaments drawn in this way, by means of the warm water, a much slighter thread is obtained than even the filaments themselves, which are united to form it by the *torsion* (twist). Now, to satisfy ourselves that these two deductions constitute the basis—indeed, the essence of the present processes of our spinning machines—and that from them they have their origin, one need only compare them with the short account given above. In this way, the drawing of the ribbon upon all the series of drawing machines has been rendered possible only by the employment of combs, which even now continue to be the only means of maintaining upon the table an equal distribution of the filaments, without disordering the parallelism, whatever may be the length of the ribbon. In this part of the operation, there has been introduced since the time of Girard, only a single important improvement—that of moving the combs by means of the Archimedean screw, instead of the endless chains. By this means the needles of the gills enter and leave the ribbons without inclining, and preserve always a direction perpendicular to that of the ribbon. These two great principles of the flax-spinning machine were clearly set forth by Girard, in his application for a patent for the invention, which he addressed to the Minister one month after the publication of the imperial decree of June, 1810.

MAN'S INSIGNIFICANCE.—Somehow, when a man's mind becomes really engaged—say like that of Baron Humboldt—and he is able to place in focus more and more of the cosmos of which he forms a part, the things he at the outset of his life regards as the largest get smaller and smaller, till at last that first immense and overwhelming important thing, himself, becomes so insignificant that it is only through a process of mental microscopy he can discern his little float swim or wiggle across the field of view. How big is a man, anyway? Well, he is smaller than an elephant, and an elephant is smaller than a mountain, and a mountain is smaller than the world, and the world is a mustard seed compared with the sun, and the sun itself is a mere mote in the dust-cloud of spheres that stretches out through the universe beyond the reach of thought.

Sale of Shorthorns and Herefords.

We wish to call attention to the advertisement of Shorthorn cattle for sale by Robert Ashburner, which will be sold at the same time and place as about 30 head of imported Herefords of the famous James Kay stock, the cattle belonging to Williams & Vaughan of Sacramento. The sale being held the day after Mr. J. B. Haggin's sale of horses, will afford people from a distance the opportunity of attending the two sales, with but little extra time or expense. The sale catalogue of Shorthorns contains the pedigrees of 12 young bulls, being all that are in the Baden farm herd that are six months old or over—the four stud bulls excepted.

This will be a good opportunity for any one who wants a young bull for improving his herd in size, substance and quality, and as milking qualities have been cultivated ever since the foundation of the herd—about 20 years ago—those wishing bulls of Shorthorn milking families should not miss the opportunity of attending the sale.

The catalogue contains portraits of the cows Yellow Rose and Garland, which will give those who have not seen the herd a good idea of the kind of cows bred and kept at Baden.

Yellow Rose, well known to many of our readers, by reputation at least, is the dam of two of the bulls now in use, viz.: Baden Duke, nearly 10 years old, and Grand Prince of Baden Second, the sire of four of the young bulls to be offered, there being two by Baden Duke, he being by imported Kirklevington Duke Second (34,364); Grand Prince of Baden Second being by imported Grand Prince of Lightburne (36,730), the sire of some of the best cows in the Baden farm herd. Two of the yearling bulls are by Baron of St. Lawrence, 37,610, a bull bred by N. M. Curtis of Ogdensburg, N. Y., and of the celebrated Princess family, which has always had a great reputation as a milking family of Shorthorns.

In cows, there are three of the Frantic family, descended from imported Frantic by Mr. Bates' Duke of York 4th (10,167). The herd now contains some 25 head of cows and heifers of this family, which has always held its own in milking qualities, combined with the general style and quality peculiar to Bates' Shorthorns in particular. Four of the young bulls are of this Frantic family, and, as there are no others of the family on this coast, excepting a few descended from the Baden herd, they should—the females particularly—be looked after by any one wishing to establish a herd of good, useful Shorthorns. The other females are of three different but old-established families now in the herd at Baden.

The Herefords.

The Hereford cattle which will be sold by Vaughan & Williams are the herd which we have noticed several times of late and which are quite fully described in the advertisement in this issue of the *RURAL*. The cattle are from the best English sources and were shown during the State Fair at Sacramento, attracting much attention. The Herefords are gaining ground on this coast, and are well worthy the attention of the stock-grower. The signal victories won by the Herefords at the Chicago fat-stock show last year show that they are bound to make a good mark on American soil. Vaughan & Williams will also sell the pair of Welsh ponies which were so much admired in the stock parades during the State Fair.

Killip & Co., the well-known auctioneers, will conduct the sales.

Great Sale of Horses.

The auction sale of horses—racers, roadsters, draft and saddle animals—now the property of J. B. Haggin, advertised to take place on the 25th at the R. R. stables, Turk and Steiner streets, S. F., is likely to be largely attended. Mr. Haggin's stock is so famous throughout the country that the mere announcement should be enough to draw a crowd. The offering made this year is varied enough to suit all tastes and needs. The production of good horses is now one of our very best agricultural industries, and the time is past when a thoroughly good animal can be had at a low price. Mr. Haggin's sale should be a grand rally of horse-breeders, horse-users and horse-lovers. The advertisement gives time and place. Killip & Co. will give the oration.

LIQUID GRAFTING WAX.—The so-called "French Mastic," so long known as "Lefort's Liquid Grafting Wax," is made by melting one pound of common rosin over a gentle fire and stirring in one ounce of beef tallow. Take from the fire, and when it has partially cooled, mix in eight ounces of alcohol. If this cools it off too rapidly, it must again be placed over the fire; but great care must be used to keep the alcohol from taking fire. When well incorporated and cool, put it in tin cases or glass bottles and keep well covered or corked. It is stated that this, until quite lately, was kept a secret, while the mastic was imported from France.

FAIRS are in progress this week at Chico, San Jose, Los Angeles, Ukiah, Santa Cruz, Visalia, San Luis Obispo and Independence, for the 3d, 5th, 6th, 12th, 14th, 15th, 16th and 18th Agricultural Districts respectively.

THE

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All branches of Farming, including the keeping and breeding of Horses, Cattle, Sheep, Swine, Bees, Poultry, etc.; Garden, Fruit, Vine, Grain, and Hop Culture; Reliable Market Reports, with other important departments devoted to the Grange, Home Circle, News, etc.

It is the Leading Agricultural Home Newspaper and standard authority on all branches of California Agriculture.

It has the fullest and most accurate REPORTS OF HORTICULTURAL MEETINGS, and is the best record of the EXPERIENCE OF INDIVIDUAL FARMERS AND FRUIT-GROWERS in all parts of the State.

Its market reports are prepared with care and the greatest reliability possible for the benefit of the producer.

THE PACIFIC RURAL PRESS has more circulation and influence in the Pacific States and Territories than all the other agricultural weeklies in the United States combined. Advertisers can reach nearly all the leading reading farmers through its columns.

A well-known horticulturist who was in attendance upon the meetings of fruit-growers, writes: "The greatest praise that could be bestowed on the *RURAL PRESS* at the late Fruit-Growers' Convention, and which shows, undoubtedly, the well-deserved popularity of that paper, is the fact that almost all the members of that Convention were subscribers to the Press."

It is a Farm and Home Journal of the highest class, pure in tone and well informed on all matters of industrial interest. It is handsomely printed and illustrated. It is a 20-page weekly, and is furnished, postage paid, for \$3 per year in advance. Single copies, 10 cents, prepaid.

What Others Say of the "Rural Press."

PROUD OF THE *RURAL*.—We feel proud of the *RURAL PRESS*. It is a paper that we are not ashamed to send to our friends in the East. Every farmer on the Pacific Coast should take it, and it is a valuable paper for any one to read. We appreciate your efforts. Long may you live to bless our cause.—James Blood, Santa Barbara Co.

INVALUABLE.—I congratulate you on the general excellence of the *RURAL PRESS*, and consider it simply invaluable to all residents of the Pacific Coast.—Frederick C. Sheldon, M. D., Los Angeles Co.

THE *RURAL BEST OF ALL*.—I take from four to six papers but if I could take but one, I should unhesitatingly choose the *PACIFIC RURAL PRESS*.—J. M. Asher, San Diego Co.

Established 1870. Yearly subscription \$3. [Thirteen and one-half months are allowed new subscribers and old subscribers paying \$3, strictly in advance.]

Send for samples. Address,

DEWEY & CO., Publishers,
No. 220 Market Street, San Francisco.

[In Preparation.]

The California Fruit Grower.

A manual of methods and practices in Tree Propagation, Planting, Cultivation, and Pruning, which have yielded greatest success; with Lists of Varieties of Fruit best adapted to the different districts of the State. By our editorial associate, EDWARD J. WICKSON, Secretary California State Horticultural Society, etc.

The needs of a multitude of new-comers and the disposition among many old residents, who have followed other pursuits, to plant orchards and vineyards, has created a wide demand for a condensed and yet comprehensive treatise upon California fruit growing. While it is not the expectation of the publishers to produce at once a perfect work on this important interest, in so new a field it is believed that a book may be prepared that shall contain a large fund of useful information, relating to all branches of fruit growing, and thus serve as a trustworthy guide to the novice, and of suggestive value even to those of large experience. A better book may be the outgrowth of the present effort when time shall bring more permanent features and a fuller understanding of the industry. Just at present what is most needed is a straightforward, practical description of the methods which have so far been proved to yield the best results in every branch of fruit growing from the propagation of the tree onward to the marketing of the product. It is expected that this book will be so plain and practical in its character that anyone (of ordinary ability) may successfully plant and grow any of the common orchard trees, even if he or she has had no previous experience in horticulture.

The obvious necessity for such a work arises from the fact that California conditions are peculiar and practices must be especially adapted to conform to them. For this reason none of the many excellent Eastern books on fruit growing are of use to the California fruit-grower. He needs to know the results of the experience of the most successful California orchardists as a guide to his own operations, and this is what the book now in preparation will furnish him. Published by

DEWEY & CO.,

Proprietors PACIFIC RURAL PRESS,
No. 220 Market St., S. F.

THE Santa Rosa Democrat says: Considerable doubt is finding expression among the fruit-growers concerning the winter apple-crop. It is feared the crop will fall much below the average, by reason of the premature development of the fruit. The crop has arrived at maturity, so it is stated, nearly a month earlier than usual, and owing to that fact the fruit is of inferior quality.

THE people of Paso Robles are setting a good example by organizing and raising funds to improve the roads in that vicinity. Such enterprise will bear fruit in the increased growth and business of the town.

THE Board of Supervisors of Santa Barbara have fixed the saloon licenses at amounts ranging from \$80 to \$100 per quarter and the license on billiard tables at \$5 per quarter.

American Steam Engines.

It seems to be universally conceded that the work done by prominent American steam engine and locomotive builders is thoroughly honest, and contrasts more than favorably with the same kind of work performed by any other nation. This is true whether of large engines made only upon orders, or of the smaller sizes held in stock. A man may buy now, as at any time, such kind of an engine as his ability permits or his inclination prompts, and he will find material difference in the same type of engine by different builders; but 19 times out of 20 he will get good honest work and material.

Another feature of the steam engine trade in this country is the remarkably low prices prevailing. Steam engines, says a cotemporary, were never before sold for so little money. Manufacturers have improved their facilities, frequently under the spur of competition, and have apparently given buyers the entire benefit of their improvements. Any one who has not had occasion to price steam engines during the past 10 or 15 years would be surprised, upon going to the market for one, at the smallness of the price quoted. It is probably true that prices are too low for the best interests of everybody; but it seems to be a fact that quality has been improved as prices have fallen. This may be, in part, accounted for from the fact that very many more parts are now made in duplicate than formerly, and when work is made in this way, it seems to be true that it is almost invariably better done. But aside from this, there has grown up among steam engine builders a most commendable pride in the quality of their products. It is much to their credit, if not always to their profit, and is doing much to build up a foreign market for this class of work.

A BIG ANT STORY.—The most dreaded insect invader is the white ant, writes Charles Frederick Holder in *St. Nicholas* for June. In Africa, their houses are dome-shaped mounds often 18 feet high. These insects erect pyramids 1000 times higher than themselves. The ants on their travels so conceal their approach that their presence is not suspected until the damage is done. They usually tunnel into any object which they attack, often reducing it to a mere shell. In this way they have been known to ascend within the leg of a table, devour the contents of a box upon it, and descend through a tunnel bored in another leg, all in one night. An officer of the English army while calling upon some ladies in Ceylon was startled by a rumbling sound. The ladies started with affright, and the next instant they stood with only the sky above them; the roof had fallen in and lay all about, leaving them miraculously unharmed. The ants had made their way up through the beams, hollowing them out until a great part of the frame-work of the house was ready to fall at the slightest shock.

Being entirely vegetable, no particular care is required while using Dr. Pierce's "Pleasant Purgative Pellets." They operate without disturbance to the constitution, diet, or occupation. For sick-headache, constipation, impure blood, dizziness, sour eructations from the stomach, bad taste in mouth, bilious attacks, pain in region of kidneys, internal fever, bloated feeling about stomach, rush of blood to the head, take Dr. Pierce's "Pellets." By druggists.

"As is the bad bit with an envious worm," so is many a youth cut down by the gnawing worm consumption. But it can be made to release its hold and stop its gnawing. Dr. Pierce's "Golden Medical Discovery" will, if taken in time, effect permanent cures, not only in consumption, but in all cases of chronic throat, bronchial and lung diseases.

"Good deeds," once said the celebrated Richter, "ring clear through Heaven like a bell." One of the best deeds is to alleviate human sufferings. "Last fall my daughter was in decline," says Mrs. Mary Hinson, of Montrose, Kansas, "and everybody thought she was going into consumption. I got her a bottle of Dr. R. V. Pierce's Favorite Prescription, and it cured her." Such facts as the above need no comment.

Don't Fail to Write.

Should this paper be received by any subscriber who does not want it, or beyond the time he intends to pay for it, let him not fail to write us direct to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to any one who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

UTILIZING THE CACTUS PLANT.—In Mexico a company is being formed to utilize the cactus plant. The oil will be used as a lubricant, the leaf for paper, fiber for cordage and the fruit for eating, the latter being so juicy that some years ago, during a severe drought, thousands of cattle were saved by eating this fruit.

THE EGG AND ITS SHELL.—After an egg has been laid a day or more, the shell comes off easily when boiled. If the contents of an egg adhere to the shell after boiling, it is a sign the egg is fresh.

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GEO. BEMENT & SON, Redwood City. Ayrshire Cattle Southdown Sheep, Essex Swine.

R. J. MERKELEY, Sacramento, breeder of Norman, Percheron Horses and thoroughbred Shorthorn Cattle.

M. D. HOPKINS, Petaluma, Cal. Eastern Imported registered Shorthorn Bulls and Heifers for sale.

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San Francisco, Cal., Oct. 22, 1886. **PETER SAXE & SON, Lick House, S. F.**

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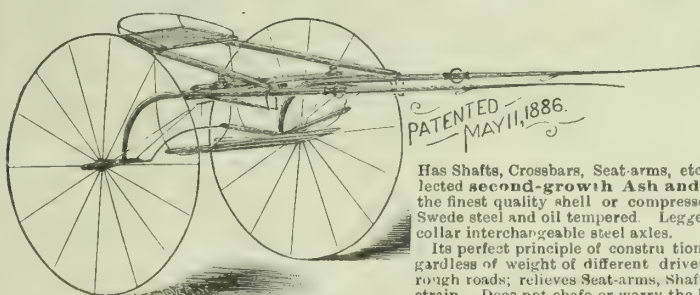
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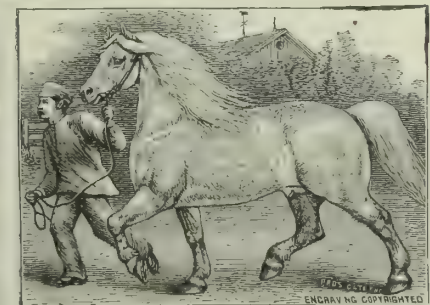
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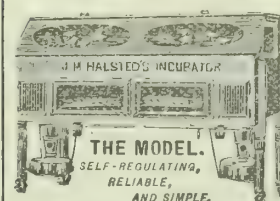
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S. H. MARKET REPORT

NOTE.—Our quotations are for Wednesday, not Saturday, the date the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Oct. 12, 1887.

There was continued fine weather up to Tuesday, when many sections reported rains, which it is feared have done some damage in the raisin districts. In the grain belts rains are wanted so as to start the plow. It is claimed that not more than one-half of the usual number of acres is summer-fallowed. In the foreign markets wheat has ruled strong and fairly steady. To-day's cablegrams are as follows:

LIVERPOOL, Oct. 12.—Wheat quiet but steady. California spot lots, 6s 3/4d to 6s 3/4d; off coast, 3s; just shipped, 3s 6d; nearly due, 3s 9d; cargoes off coast, quiet but steady; on passage, hardly any demand; Mark Lane wheat, quiet; English country markets, quiet; French rather easier; wheat on passage to continent, 208,000 qrs.; wheat and flour on passage to U. K., 1,552,000 qrs.; wheat and flour in Paris, quiet; weather in England, some snow.

Foreign Review.

LONDON, Oct. 10.—The *Mark Lane Express* in its review of the British grain trade says: Under inquiries seed wheats in the provinces are 6d@1s dearer. In London wheat for consumption is no dearer. Sales of English wheat for the past week were 70,509 quarters at 28s 7d per quarter, against 67,481 quarters at 30s 3d during the corresponding week last year. Country flour was stronger; prices rose 61. Foreign wheat dearer; quantities arriving deaden trade. Flour steady. Corn stronger. Prices of linseed advanced 2d. At to-day's market English wheat was steady, but inactive. Prices of foreign wheat against buyers. Flour firm. Corn 6d dearer. Malting barleys 3d higher. Peas 6d@1s dearer. Oats advanced 3d.

Crop Reports.

WASHINGTON, Oct. 10.—The statistical report of the Department of Agriculture makes an increase of only one-half of 1 per cent in the condition of corn. The past month has been very generally favorable, but the status of a large part of the crop was fixed at the date of the previous report. The general average of the condition is 72.8, instead of 72.3. The average of the seven surplus States is 64.9, instead of 64.2 in Sept., a lower condition than has ever been reported, except in 1881, when the average was nearly seven points lower and the average yield 18.6 bu. The indication is now for a yield of a small fraction over 20 bu. per acre. The exact area, exclusive of that cut for fodder as not worth harvesting, is not yet determined. The slight uncertainty regarding it may cause a variation in the final record of 1 or 2 per cent from 1,500,000,000 bushels.

The test of thrashing has not materially enlarged the average rate of the wheat yield, which appears to be about 11.8 bu., or .4 of a bu. less than last year. The increase of acreage, which is large in Dakota, will make partial compensation, and bring the product to nearly or quite 450,000,000 bu. The rate of yield in New York is 16.7 bu.; Pennsylvania, 10.5; Ohio, 12.4; Michigan, 13.3; Indiana, 15.5; Illinois, 15.8; Wisconsin, 10.3; Minnesota, 9.5; Iowa, 10; Mississippi, 17; Kansas, 9.6; Nebraska, 10.7; Dakota, 10.5; California, 13.8. In the principal States of the central valley region, the State averages range from 25 to 30 bu.

The barley yield is nearly 20 per cent less than a medium yield, or about 2.7 bu. per acre. New York, 20.3; Michigan, 19.5; Wisconsin, 18.5; Minnesota, 19; Iowa, 19; California, 20.5. The yield of rye is 11.5 bu. per acre, and the product about 24,000,000 bu.

There has been a drop in the condition of buckwheat from 89 to nearly 77. The condition of potatoes declined from 67.3 to 61.5, partly from the appearance of rot in the Atlantic States.

The yield of oats is slightly below an average of about 25 bu. per acre. The product is fully 600,000,000 bu.

California Products at Chicago.

CHICAGO, Oct. 11.—Fancy lines of home-grown grapes are about out of market, and this causes more demand for California grapes. California peaches and pears are also in fair request, prices ruling steady. Pears of all kinds, p-r box, \$2@2.25; peaches, \$1.25@1.75. Grapes sold at \$2.25@2.50 for double crates of Muscats and Tokays. Quinces quiet, with no special change to note. They bring \$1.50@1.75 per box.

California dried fruits are ruling rather quiet. The trade has become fairly supplied and the demand is light. There has also been more fruit than it was first supposed there would be. Quotations are: Peaches, sun-dried, in sacks, per lb, 13¢@14¢; do, evaporated, unpeeled, in sacks, per lb, 16¢@16½¢; do, do, peeled, in sacks per lb, 27¢; apricots, sun-dried, in sacks per lb, 13¢; do, evaporated, do, 15¢@17¢; plums, pitted, in sacks, per lb, 13¢@14¢; nectarines, according to quality, sacks, per lb, 15¢@18¢; raisins, loose Muscats, per bx, \$2; London layers, \$2.20.

California strained honey, 12¢@12½¢. Beans continue steady and firm. They are in very good request, and arrivals, as yet, are small. California beans, according to quality, \$1.75@2.10; California lima beans, 3¢@4¢ @ lb.

Eastern Wool Markets.

NEW YORK, Oct. 9.—Wool—Among holders of domestic fleecings the feeling is becoming more confident. No important advance in prices is expected, but a larger outlet is looked for. Buyers are more frequently in the market and less shading in prices is done. Among sales were 4000 lbs. scoured California at 55¢; 2000 lbs. spring California at 18¢@20 and 2000 lbs. Eastern Oregon at 21¢@22¢.

The Philadelphia market shows slight improvement. The supply of Territory wools is abundant with the market still in buyers' favor. Among sales were 11,000 lbs. Territory bucks at 12¢@13¢; 10,000 lbs. Territory fine at 16¢; 27,000 lbs. Montana fine medium at 23¢.

The Boston market is more active, manufacturers showing more interest. Sales of Territory wool are large, generally at 57½ to 58¢ for scoured, but much

of it on the basis of 55¢. Among the sales were 975,000 lbs. Territory at 17¢@25¢.

PHILADELPHIA, Oct. 11.—The wool market is quiet. Eastern Oregon, 15¢@20¢; Valley Oregon, 22¢@27¢; New Mexican and Colorado, 14¢@20¢.

Eastern Hop Markets.

NEW YORK, Oct. 9.—Brewers buy sparingly, but the market is firm on strictly first-class goods. Coast crop of 1886, best, 12¢@14¢; same common to good, 9¢@12¢; 1885, good to prime, 6¢@8¢.

CHICAGO, Oct. 11.—Hops are ruling quiet and rather dull, with no changes in the general state of the market. The arrivals are as yet small and the demand meager, for brewers are said to have some old stock on hand and their wants are limited at present. The quotations are: Pacific, new crop, choice, 20¢; do, medium, 15¢@18¢; Pacific, 1886, choice, 12¢@14¢; do, medium, 9¢@10¢; Pacific, 1885, 5¢.

NEW YORK, Oct. 12.—New Pacific Coast hops are arriving in this market. It is reported that California hops make relatively better showing than the Oregon or Washington Territory crop.

Eastern Wheat Markets.

NEW YORK, Oct. 12.—83¢ for cash, 81¢ for Oct., 81½¢@81¾¢ for Nov., 82¢@83¢ for Dec. and 88½¢@88¾¢ for May.

CHICAGO, Oct. 12.—69½¢ for cash, 69½¢ for Oct., 70¢ for Nov., 72½¢ for Dec., 72½¢ for Jan. and 77 11-16 for May.

Dried Fruit at New York.

NEW YORK, Oct. 9.—Prices for California raisins are unchanged, but holders of New Valencias, layers, will probably ask 10 cents or more.

Local Markets.

BAGS—The market is very strong, but quiet at 7½ to 8½¢ for Calcutta.

BARLEY—Continued heavy receipts with stocks accumulating have caused options on Call to go still lower, under heavy sales. The sales on Call to-day were as follows:

Buyer season—200 tons, 95½¢; 800, 95½¢-400, 95½¢; 200, 95½¢. Seller 1887—100 tons, 81¢. Buyer 1887—100 tons, 87¢; 100, 86½¢; 200, 86½¢; 300, 86½¢. Old contract—200, 86½¢ @ ctl.

BUTTER—Hot weather the past few days caused fresh rolls to shade off, but there was a good demand for pickled and firkin, which are going out of stock, with the more choice grades in the lightest supply. If the cooler weather of yesterday continues, fresh roll will do better.

CHEESE—The market is strong at another slight advance.

EGGS—The market is weak and in buyers' favor, under free receipts and only a moderate demand.

FLOUR—Cutting by agents of outside brands continues the order of the day, but leading brands are strongly held.

WHEAT—The market on Call has been very active the past week, with slight but attractive fluctuations. The closing to-day was steady. At to-day's Call the sales were as follows:

Seller season—700 tons, \$1.43½; 100, \$1.43½; 500, \$1.43½. Seller 1887—100 tons, \$1.27. Seller 1887—100 tons, \$1.33½; 100, \$1.33. December—100 tons, \$1.32 @ ctl.

[COMMUNICATED.]

Market Information.

Cereals.

The latest estimates of the world's wheat requirements and surplus are given by the New York Produce Exchange Reporter, which, for the sake of comparison, are herewith given. The Reporter says: Having looked the ground pretty carefully over, the Reporter ventures the following estimates of the world's wheat supply and demand for the harvest year of 1887-88, and in the general interests of the breadstuffs trade places those of its contemporaries alongside. With regard to these estimates, and all others of a similar nature, it is to be remarked that they are at the best mere approximations, such as our latest and most reliable advices enable us to make, that later information may require more or less alteration in the figures, and that in any event they do not furnish any sure guide to the future course and state of the markets.

PRESUMED FOREIGN REQUIREMENTS.

	The Reporter.	Kains-Jackson.	W. J. Harris.
United Kingdom.	140,000,000	136,000,000	138,000,000
France.	15,000,000	32,000,000	12,000,000
Belgium.	16,000,000		
Holland.	8,000,000		
Norway & Sweden.	1,200,000		
German Empire.	9,000,000	64,000,000	64,000,000
Switzerland.	12,000,000		
Spain & Portugal.	14,000,000		
Italy.	33,000,000		
Greece & Medit'n Sea.	4,000,000		
S. America, West Indies and China.	23,000,000	32,000,000	16,000,000
Miscellaneous.	3,000,000		
Totals.	281,200,000	264,000,000	228,000,000

PRESUMED SURPLUSES.

	The Reporter.	Kains-Jackson.	W. J. Harris.
United States.	80,000,000	104,000,000	104,000,000
Russia.	71,000,000		72,000,000
India.	28,000,000	98,000,000	30,000,000
Canada & Manitoba.	4,000,000		
Australia.	8,000,000		24,000,000
Chile.	700,000	16,000,000	
Argentina.	350,000		
Uruguay.	1,500,000		
Danubian countries.	8,000,000	24,000,000	
Persia.	1,000,000		
Egypt.	3,000,000		
Miscellaneous.	5,000,000		
Totals.	210,550,000	240,000,000	280,000,000

Appar't deficiency in world's supply 70,650,000 24,000,000

W. J. Harris' estimate was among the first. It was published in the *Mark Lane Express*. H. Kains-Jackson's followed a short time afterward, and appeared in Dornbusch's *Evening List*, while the Reporter's was only published October 1st, after fuller and more complete returns had been received. The large requirements made by the latter paper were probably based on the following remarks from an editorial in the Reporter on the subject: The United Kingdom's average wheat crop from 1876 to

1885 was 81,452,364 bushels. It is to be noted that oats and all kinds of pulse crops are very short in yield both here and in Europe, and with the shortage in potatoes and vegetables cannot fail to impart greater strength to wheat. The shortage in these crops seems to be overlooked by the trade, for they do not appear to attach much importance to the loss, while on reflection they admit that their places will have to be filled by some other food, but the great shortage in the corn crop in this country exceeds the deficiency in all other cereals, and the question naturally arises, how is this great deficit to be made good? We answer by drawing on the next cheapest food obtainable. The cheapest food now in use is wheat flour, this especially true of the lowest grades, and being cheaper than Indian meal, they are quite certain to be in active request for feeding live-stock.

The Eastern wheat market, as also our wheat market, fails to respond to the strong statistical situation, taking the New York and Chicago Call Board sales and it seems that most dealers in options keep their eyes fixed on wheat in sight and the export call for it from day to day, not taking into consideration outside conditions that are certain to influence values later on in a large degree, viz: the great shortage in the corn, rye, oats and potato crops. The last named crop is so deficient at the East and in Europe that the loss of it cannot fail to exert a most telling influence ere mid-winter.

Of the available export surplus of wheat in the United States on July 1, 1886 (about 115,000,000 bu.), 43,586,830 exported up to September 24th. The remaining exportable surplus September 24th is, therefore, about 71,500,000 bu. (of which 15,000,000 bu. will be wanted for the West Indies and East Indies, South and Central Americas and the British North American colonies), leaving about 56,500,000 bu. available for export to Europe, from both coasts, during nine months, about 1,450,000 bu. wheat and flour weekly until July 1, 1888.

On this coast wheat in Oregon and Washington Territory is being marketed quite freely at current rates, but in this State holders are firm, and will not part with their holdings except at an advance on present prices. This necessarily restricts trading and causes a stagnant market. In the meantime the tonnage on the way and in port is increasing quite rapidly, so that lower charters must obtain soon.

In barley the market has continued to sag, until prices have reached figures that make it more profitable to hold than to sell. The decline is due to heavy receipts and stocks accumulating, notwithstanding the large consumption. Brewers are not disposed to stock up heavily with the market in its present condition. The consumption is large.

Corn continues to drag, with buyers offish. Choice grades are not offering on the market, but off grades are in good supply. The very great reduction in the crop estimate of this country causes dealers to look forward for a stronger and more active market before the year closes.

Oats are accumulating, with dealers bidding down, owing to free receipts and barley low and heavy at the lower prices.

Rye is steady, with a strong tone reported. Buckwheat is fairly active in a small way.

Fruits.

The hot weather of the past fortnight is said to have made late apples ripen too soon. The market for apples holds steady, with an increasing demand as other fruits go out. For defective, buyers bid down, but for choice, free from worms, good prices are obtainable.

Pears are in fair supply, with a steady call reported at unchanged quotations.

Peaches are going out, with prices taking a wide range according to quality.

Berries are in light supply, as the excessive heat has been against them. Quotations are more or less nominal.

Quinces are in lighter receipt, but prices do not show any material change.

In grapes, receipts of wine are free, but then buyers stand ready to take all received. The consumption this season is larger than last year, which keeps prices well up.

In table grapes the market shows quite a range, owing to the differences in the keeping quality. Grapes well ripened are forced on the market at the best prices obtainable, as buyers confine their purchases to those that will keep well either in the store or to ship up North. Receipts continue free, with an active demand still ruling.

In raisins the New York market continues firm, with weak and uncertain market here. Large operators who have formerly held the bulk of the pack are biding their time and refuse to operate largely. Large quantities of raisins will undoubtedly come on the market later on. It is feared that the damage in Spain is more than discounted by the prices in New York, and many buyers are refusing to buy heavily, fearing that the usual dump will come in late November and December. This has prevented the spirited operation of former years. We estimate the following holdings of raisins already bought:

Wm. T. Coleman & Co.	135,000
G. W. Meade & Co.	150,000
H. M. Newhall & Co.	100,000
D. L. Beck & Sons.	50,000
J. K. Armsby & Co.	60,000
Total.	495,000

In the hands of brokers and small dealers, 55,000 boxes. Unsold in the hands of producers, 500,000 boxes.

Dried apricots are showing a little more strength. Dried prunes are very strong. Dried peaches, evaporated, are weaker.

Live-Stock.

Beef cattle continue to be offered in excess of the demand, which keeps prices low. The consumption is light, owing to the warm weather and liberal supplies of fruits. Mutton sheep are barely steady. The offerings do not appear so large. Small calves are wanted and fetch good prices. Hogs are steady at full prices, with sellers able to obtain a slight advance for a round lot of choice. The supply to come forward is said not to be equal to last year's. Horses are in good inquiry, particularly genuine utility animals, roadsters and matched spans. For work horses of fairly good size, there is a good demand.

BEEF—Extra, 7¢@7½¢; first grade, grass fed,

6¢@6½¢ per lb.; second grade, 5¢@6¢; third grade, 4½¢@5½¢.

MUTTON—Ewes, 5¢@6¢; wethers, 6¢@6½¢.

LAMB—Spring, 7¢@8¢.

VEAL—Large, 6¢@7¢; small, 6¢@8¢.

PORK—Live hogs, 4¢@4½¢ for heavy and medium; dressed, 6¢@6½¢ per lb; light, 4¢@4½¢; dressed, 6¢@6½¢; soft hogs, live, 3¢@4¢. On foot, one-third less for grain or stall fed, and one-half less for stock running out.

Feedstuff.

Bran and middlings have moved up again, with a strong closing at the advance. The consumption is very large, as is the shipping demand.

Ground barley can be bought for less money, and in consequence is in good demand.

Hay has been advanced under strong holding, light receipts and an increasing demand. Even on our higher quotations sales have been made at an advance. The consumption, owing to poor pasture, is very large.

Vegetables.

Choice good-keeping onions are in demand, and for which an advance is paid to fill distant orders. Soft onions are hard to place, except to night-by trade, and then lower prices must be accepted.

Potatoes have ruled fairly steady throughout the week. Receipts are free, but then the demand is large, which keeps the market well balanced. The supply in country is said to be large, but owing to low prices will not be marketed yet. It is claimed that a better market can be looked for after this month.

Cabbages are very strong at full prices, with the more choice hard heads selling at a slight advance.

In other vegetables the market is essentially unchanged, prices being governed from day to day by the receipts and demand.

Miscellaneous.

Poultry has come in freely the past week, but prices for the more choice-conditioned kept well up.

Beans are in free receipt, and go out on orders chiefly from the East, nearly as soon as received. The market holds strong.

Hops have been more inquired for, with the better grades taken at a slight advance.

Wools have a strong tone in sympathy with an improved market at the East. Choice desirable clips are readily placed, but defective are slow of sale.

The tonnage movement compares with last year at this date as follows:

On the way.	1887.	1886.
In port, disengaged.	336,445	260,540
In port, engaged.	94,960	78,033
	6,480	87,197

Totals. 437,885 425,770

The above gives a carrying capacity as follows: 1887, 680,067 short tons; 1886, 662,126 short tons; showing an increase compared with last year of 17,941 tons.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

	WEDNESDAY, Oct. 12, 1887.
Paper shell.	15 @ —
Bayo, ctl.	1 90 @ 2 25
Butter.	2 00 @ 2 40
Peas.	1 20 @ 1 50
Red.	1 40 @ 1 55
Pink.	1 50 @ 1 70
Large White.	2 10 @ 2 40
Small White.	2 25 @ 2 50
Lima.	2 25 @ 2 75
Ed. Peas, bkt.	1 00 @ 1 05
do, green.	1 00 @ 1 12
do, Niles.	1 25 @ —

	WEDNESDAY, Oct. 12, 1887.
South n. port.	50 @ 75 00
North n. port.	50 @ 75 00
California.	51 @ 64
German.	50 @ 64
DAIRY PRODUCE, ETC.	
BUTTER.	
Cal. fresh roll, lb.	35 @ —
do, Fancy brands.	40 @ —
Pickle roll.	28 @ 32
Firkin, new.	24 @ 28
Eastern.	— @ —

	WEDNESDAY, Oct. 12, 1887.
Cheddar, Cal. D.	13 @ 16
Eastern style.	14 @ 16
Cal. ranch, dos.	35 @ —
do, store.	22 @ 30
Ducks.	— @ —
Oregon.	— @ —
Eastern.	19 @ 21

	WEDNESDAY, Oct. 12, 1887.
Brant, ton.	17 @ 19 00
Common.	28 @ —
Gr'd Barley ton.	30 @ 22 00
Hay.	10 @ 17 50
Middlings.	22 @ 23 50
Oil Cake Meal.	26 @ 28 50
Straw, bale.	35 @ 50

	WEDNESDAY, Oct. 12, 1887.
Extra, City Mills.	45 @ 50
do, Country Mills.	42 @ 45
Superfine.	37 @ 40
GRAIN, ETC.	
Barley feed, ctl.	87 @ 95
do, Browning.	1 08 @ 1 25
Chevalier.	1 25 @ 1 40
do, Coast.	— @ —
Buckwheat.	1 00 @ 1 20
Corn, White.	1 15 @ 1 25
Yellow.	1 15 @ 1 25
Small Round.	1 20 @ 1 30
Nebraska.	1 07 @ 1 15
Oats, milling.	1 50 @ —
Choice feed.	1 40 @ 1 45
do, good.	1 37 @ 1 40
do, fair.	1 20 @ 1 30
do, black.	— @ —
do, Oregon.	— @ —
Rye.	1 25 @ 1 50

	WEDNESDAY, Oct. 12, 1887.
Wheat, milling.	1 42 @ 1 45
do, choice.	1 40 @ —
do, fair to good.	1 35 @ —
Shipping choice.	1 30 @ —
do, good.	1 25 @ 1 27
do, fair.	1 22 @ 1 25

	WEDNESDAY, Oct. 12, 1887.
Wet salted.	7 @ 8
HONEY, ETC.	
Bee wax, B.	20 @ 22

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.						
WEDNESDAY, Oct. 12, 1887.						
Apples, bx com.	40 @	75	Figs, loose.....	4 @	6	
do choice.....	1 00 @	1 25	Nectarines.....	10 @	14	
Apricots, lb.....	— @	—	do evaporated.....	16 @	18	
Bananas, bunch.....	1 50 @	3 00	Peaches.....	12 @	13	
Blackberries, ch.	— @	—	do pared.....	24 @	25	
Cantaloupes, ch.	1 00 @	1 25	do evaporated.....	8 @	9	
Cherries white bx	— @	—	Pears, sliced.....	8 @	9 1/2	
do black bx.....	— @	—	do qrd.....	8 @	9	
do Royal Ann.....	— @	—	do evaporated.....	11 @	12 1/2	
Cherry plums.....	— @	—	Plums, evapo'd.....	13 @	14	
Crabapples.....	— @	—	do unpitted.....	3 @	5	
Craneberries.....	10 @	12 00	Prunes.....	10 @	13	
Currants ch.....	— @	—	do French.....	11 @	14	
Gooseberries lb.....	— @	—	Zante Currants.....	8 @	—	
Figs, black bx.....	75 @	1 25	RAISINS.			
do white bx.....	75 @	1 25	Dehesa Clus, fcy	4 00 @	—	
Grapes, white.....	20 @	50	Imperial Cabin-	et, fancy	2 50 @	
do black.....	20 @	50	Crown London			
do Rose Port.....	25 @	45	Layers, fcy.....	2 25 @	—	
do Muscat.....	25 @	45	do Loose Mus-	cats, fancy	2 00 @	
do Tokays.....	75 @	1 00	do Loose Mus-	cats	2 00 @	
Isabel.....	20 @	23 00	do Loose Mus-	cats	2 00 @	
Wine, Zinfandel	20 @	23 00	Cal. Valencia.....	1 80 @	—	
do Mission.....	16 @	18 00	do Layers.....	1 60 @	—	
Limes, Mex.....	4 00 @	5 50	do Sultanas.....	1 75 @	—	
do Cal. box.....	— @	—	Fractions come 25, 50 and 75	cents higher for halves, quarters and eighths.		
Lemons, Cal. bx	2 00 @	4 50	VEGETABLES.			
do Sicily, box.....	2 00 @	4 50	Artichokes, doz.....	— @	—	
do Australian.....	— @	—	Asparagus, bx.....	— @	—	
Nectarines, box.....	50 @	75	do extra choice.....	— @	—	
Oranges, Com bx	— @	—	Okra, dry, lb.....	15 @	20	
do Choice.....	— @	—	do green bx.....	50 @	1 00	
do Navel.....	— @	—	Parsnips, ch.....	1 50 @	—	
do Panama.....	— @	—	Peppers, dry lb.....	10 @	—	
Peaches, bx.....	50 @	1 25	do green, box.....	25 @	50	
do basket.....	— @	—	Pumpkins prtn.....	— @	—	
do choice.....	— @	—	Squash, Marrow			
do Bartlett, bx.....	— @	—	fat, too.....	5 00 @	8 00	
Persimmons.....	— @	—	do Summer bx.....	25 @	60	
Jap. bx.....	— @	—	String beans lb.....	30 @	35	
Pineapples, doz.....	4 00 @	5 00	Tomatoes box.....	30 @	25	
Plums lb.....	2 @	3	do choice.....	30 @	25	
Pomegranates, b	24 @	30	Turnips cti.....	25 @	60	
Prunes lb.....	24 @	30	Beets, sk.....	30 @	50	
Quinces bx.....	40 @	70	Cabbage, 100 lbs.....	75 @	—	
Raspberries ch.....	— @	—	Jarrots, sk.....	35 @	—	
Strawberries ch.....	5 00 @	6 50	Eggplant, bx.....	35 @	60	
Watermelons, 100	4 00 @	8 00	Garlic.....	15 @	75	
DRIED FRUIT.				Green Corn, cr.....	50 @	75
Apples, sliced, lb	— @	—	do sweet cr.....	75 @	1 25	
do evaporated.....	12 1/2 @	13 1/2	do large box.....	1 00 @	1 50	
do quartered.....	13 @	14	Green Peas, lb.....	— @	—	
Apricots.....	9 1/2 @	10	Sweet Peas lb.....	2 @	3 1/2	
do evaporated.....	16 @	18	Lettuce, doz.....	10 @	—	
Blackberries.....	13 @	15	Lima Beans lb.....	— @	—	
Oltrons.....	28 @	30	Mushrooms, lb.....	8 @	20	
Dates.....	9 @	10	Rhubarb bx.....	— @	—	
Figs, pressed.....	6 @	7 1/2				

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

- FOR THE WEEK ENDING OCTOBER 4, 1887.
- 370,922.—PORTABLE CENTRIFUGAL FOUNTAIN—W. N. Best, Los Angeles, Cal.
- 371,029.—ARCHED BRIDGE—P. Britvich, Los Angeles, Cal.
- 370,861.—POTATO-MASHER—G. M. Drum, Los Alamos, Cal.
- 371,140.—WASHING MACHINE—Wm. J. Hunt, Los Angeles, Cal.
- 371,073.—CAR COUPLING—C. M. Jones, Fresno, Cal.
- 371,143.—PIPE WRENCH—Egbert Judson, S. F.
- 371,076.—HYDRAULIC ENGINE—S. N. Knight, Sutter Creek, Cal.
- 370,802.—STERN TUBE-BUSHING FOR PROPELLER SHAFTS—J. Menzes, S. F.
- 370,974.—MILK BOILER—C. D. Salfeld, S. F.
- 371,013.—PACKING PLATE FOR RAISINS—T. C. White, Fresno, Cal.
- NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

AGRICULTURAL BOOKS.

Sold by Dewey & Co., Publishers "Pacific Rural Press."

- CALIFORNIA FRUIT GROWER.—A practical Handbook for the orchardist (in preparation).
- CATALOGUE OF EUROPEAN VINES.—With synonyms and brief descriptions, by I. Bleasdale, D. D. Invaluable to those growing the vinifera. Price, in pamphlet, 50 cents.
- ORANGE GROWING IN CALIFORNIA.—By T. A. Garey, of Los Angeles. The most comprehensive treatise on the growth of this fruit. It contains full instructions for growing the trees, planting and care of orchards, etc.; 227 pages. Price, 75 cents.
- SILK GROWERS' MANUAL.—By W. B. Ewer, A. M. A practical treatise full of useful hints for beginners in this State; 20 pages. Pamphlet, price 25 cents.
- FRUIT GROWERS' CONVENTION REPORTS.—These annual conventions have resulted in bringing out the best and most useful information concerning the growth of different fruits in this State. The subjects discussed are of the most direct practical value and the facts laid down will prove helpful and suggestive to all in the fruit business. We have the reports of 1881, 1882, 1884, and 1885—the first for 10 cents, the others at 25 cents each.
- THE AGRICULTURAL FEATURES OF CALIFORNIA.—By Prof. Hilgard, 138 large pages, bound in stiff cloth, with colored maps, \$1. This book is the best general review of California soils, climate and productions in existence.
- NILES' STOCK AND POULTRY BOOK.—Pamphlet, giving directions applicable to poultry growing in this State; 120 pages, post-paid for 50 cents.
- KENDALL'S TREATISE ON THE HORSE AND DISEASES.—Post-paid for 25 cents.
- ARCHITECTURE SIMPLIFIED OR HOW TO BUILD A HOUSE.—Contains plans and amounts of materials for a number of buildings from a little cottage to a large dwelling. Price, five cents.
- A VALUABLE PATENT.—George Westinghouse, Jr., inventor of the air brake, is worth \$9,000,000. "This is, perhaps, the largest fortune ever made out of wind," says the Atlanta Constitution.

QUITE a large number of cabins have recently been erected by pre-emption and homestead claimants on the plain southeast of Sumner.

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps U. S. A.]

	Portland.				Red Bluff.				Sacramento.				S. Francisco.				Los Angeles.				San Diego.			
DATE.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.
Oct. 6-12.																								
Thursday....	50	56	S	Cy.	00	70	Nw	Fr.	00	70	Nw	Cl.	00	68	Nw	Fr.	00	68	SE	Cl.	00	68	SW	Cy.
Friday.....	38	56	SW	Cy.	00	68	Nw	Cl.	00	68	Nw	Cl.	00	71	N	Cl.	00	74	N	Cl.	00	68	Nw	Cl.
Saturday....	00	62	S	Cy.	00	78	Nw	Cl.	00	78	Nw	Cl.	00	82	N	Cl.	00	80	S	Cl.	00	68	SW	Cl.
Sunday.....	00	62	Nw	Fr.	00	86	NE	Cl.	00	82	SE	Cl.	00	83	W	Cl.	00	78	SW	Cl.	00	66	W	Cy.
Monday.....	00	62	Nw	Cl.	00	84	N	Cl.	00	84	Nw	Cl.	00	85	NE	Cl.	00	76	W	Cy.	00	68	N	Cy.
Tuesday....	00	68	NE	Cl.	00	84	SE	Cl.	00	82	SW	Hy.	00	68	W	Cl.	11	68	S	Cy.	T	76	W	Cy.
Wednesday..	00	68	NE	Cl.	00	70	SE	Cl.	00	70	S	Fr.	00	62	N	Cy.	01	70	W	Cy.	00	68	W	Cl.
Total.....	88				00				00				00				12				T			

EXPLANATION.—Cl. for clear; Cy. cloudy; Fr. fair; Fy. foggy; — indicates too small to measure. Temperature. Wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

Odor of Fresh Blood.

Marvelous Curative Powers in Pulmonary Troubles.

Although consumption is as common and fatal a complaint in South America as in any other portion of the globe, says the New York Mail, there is a class of persons resident in that country among whom the dread scourge is said never to have appeared. These are the inhabitants of the saladeros—a place where cattle are slaughtered and dressed, and where sometimes the manufacture of beef extract is carried on. A gentleman recently returned from the Argentine Republic, in talking of the subject with a reporter, said: "In former years, cattle in my country, that is, South America, were slaughtered simply for their hides, bones and tallow, which were articles of export. The meat, except such as the butchers in the different cities chose to carry away, was stacked out on the plains and was eaten up by quicklime. The places where the work of killing the cattle was and is carried on were and are still known as saladeros. They are large inclosed spaces in the open country, generally some distance remote from other habitations. The people employed in the business live within the inclosure and form a little colony by themselves. "From 5000 to 10,000 head of cattle are slaughtered in these saladeros every day. Necessarily there is a constant odor of fresh blood, which, to those unaccustomed to it, is decidedly unpleasant. Consumption, however, has never been known among persons who live in these saladeros, and, strange as it may appear, persons who were so affected and through some circumstances or another went into one of these places to live, have speedily recovered. At first the medical men of the country reasoned that their diagnoses were in error, but as the result was the same time after time, they came to look upon the matter in a different light, and now declare that a residence in a saladero will heal an ulcerated lung and entirely destroy the germs of consumption. The process is slow, however, and a consumptive must be patient and content to live in one of these places a considerable time."

FOR PAINTING FOR FLOORS.—Some months ago the floors of many Austrian garrisons were painted with tar, and the results have proved so uniformly advantageous that the method is becoming greatly extended in its application. The collection of dust in cracks is thus prevented, and a consequent diminution in irritative diseases of the eye has been noted. Cleanliness of the rooms has been greatly facilitated and parasites are almost completely excluded. The coating of tar is inexpensive, requires renewal but once a year, and presents but one disadvantage, namely, its somber color.

ORANGE CULTURE IN CALIFORNIA.

A Timely Treatise.

Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in parts of the State where the growth of the fruit has been longest pursued, will be found of wide usefulness. "Orange Culture in California" was written by Thomas A. Garey, of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well-printed hand-book of 196 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties etc., etc.

The book is sent post-paid at the reduced price of 75 cents per copy, in cloth binding. Address, DEWEY & CO., Publishers "Pacific Rural Press," 220 Market St., S. F.

A Treatise on the Horse and his Diseases

By E. J. KENDALL, M. D.

35 Fine Engravings showing the positions and actions of sick horses. Gives the cause, symptoms and best treatment of diseases. Has a table giving the doses, effects and antidotes of all the principal medicines used for the horse, and a few pages for the action and uses of medicines. Rules for telling the age of a horse, with a fine engraving showing the appearance of the teeth at each year. It is printed on fine paper and has nearly 100 pages, 7x5 inches. Price, only 25 cents, or five for \$1, on receipt of which we will send by mail to any address. DEWEY & CO., 220 Market St., S. F.



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Property of J. B. HAGGIN, Esq.,

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The Trotting and Driving Horses are sired by Echo, Algona, Geo. M. Patchen, Jr., Alaska, Norwood and other noted Stallions, and out of mares of approved blood.

Catalogues now ready. Horses at Stables on and after Oct. 23d.

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Shorthorn Cattle FOR SALE AT AUCTION, AT SAN FRANCISCO.

20 Head of Shorthorn Bulls, Cows and Heifers; also 6 Head of Horses,

BELONGING TO ROBERT ASHBURNER, of Baden Station, San Mateo Co., Cal.,

WEDNESDAY, OCTOBER 26th, At 1 P. M.,

Being the day after Mr. J. B. Haggin's sale of Horses, at RAILROAD STABLES,

Cor. Turk and Steiner Sts., San Francisco.

Catalogues can be had of

KILLIP & CO., 22 Montgomery St., S. F.

Or of R. ASHBURNER, Baden Station, San Mateo Co., Cal

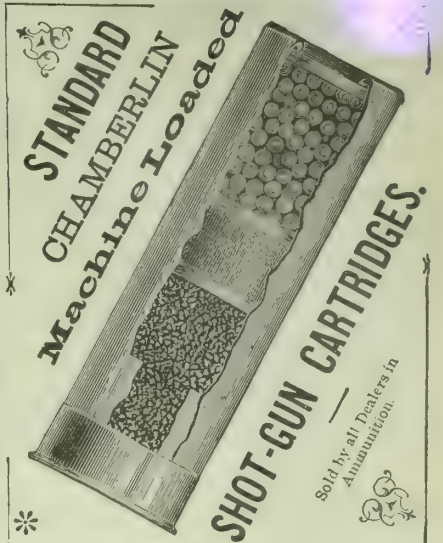
KILLIP & CO., Auctioneer.

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The Dewey Engraving Company has lately issued a proof sheet, giving an idea of the remarkable work it is now prepared to produce by methods combining all the advanced ideas in the arts of engraving and photography. The company makes engravings from photographs, drawings and original designs, for book, card or job printing. Also fac-simile printing plates of letters and legal documents, portraits and maps, and fine pictorial engravings.

The company has for sale over 3000 engravings, many of which are fine and picturesque illustrations, including historical scenes and views of this coast and other parts of the world, and portraits of notable men, of which enterprising publishers will doubtless soon avail themselves. Proof sheet No. 1 contains 40 engravings, and proof sheet No. 2, just issued, about 20 more. Copies may be obtained, with further information, by addressing DEWEY ENGRAVING CO., 220 Market St., S. F.

August, 1887.



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The Cattle can be seen up to the 22d of October at the Agricultural Fair Grounds, Sacramento, Cal.

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 Send for catalogue and price list. All stock unirrigated and free from disease. LEONARD COATES, Napa City, Cal. For County Rights for a new and valuable Fruit Drier, address as above.

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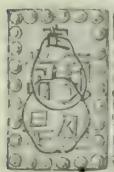
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Capital Paid up in Gold Coin, \$624,160.

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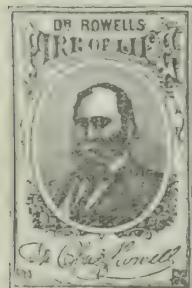
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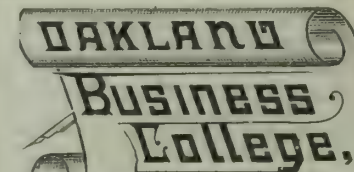
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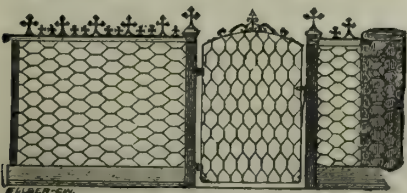
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Soluble Phosphoric Acid.....	12.90 per cent
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Insoluble Phosphoric Acid.....	2.83 "
Potash.....	2.23 "
Ammonia.....	1.87 "
Nitric Acid.....	2.95 "

The above amount of Nitric Acid is equal to 0.85 per cent Ammonia, therefore, total of Nitrogen calculated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vineyards, orchards, gardens, farms, and I recommend its use by the cultivators of the soil generally, in California. Yours truly,
DR. E. A. SCHNEIDER.

University of California, College of Agriculture.
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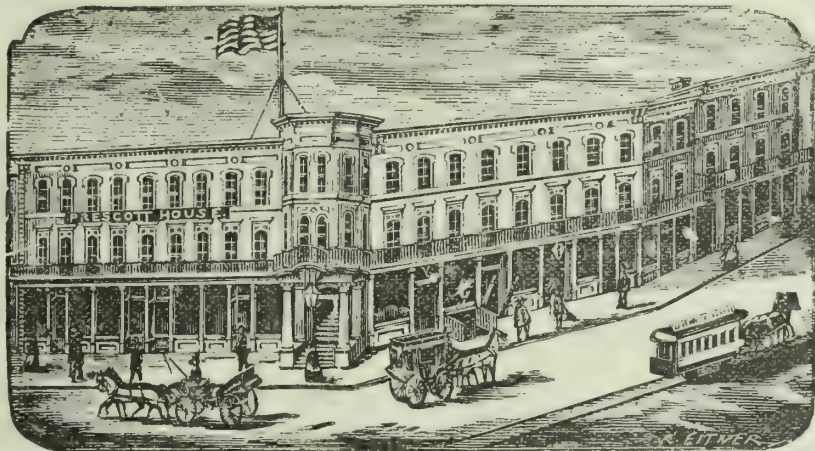
In ordinary soils the following quantities will be found sufficient: For Wheat, Barley, Corn and Oats, 300 to 350 pounds per acre. For Grass, Sugar Beets and Vegetables, 250 to 300 pounds per acre. For Vines, Fruit Trees, from 1/2 pound to 1 pound each. For Flower Gardens, Lawns, House Plants, etc., a light top dressing applied at any time, will be found very beneficial.

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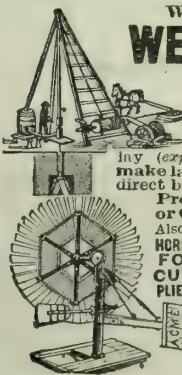
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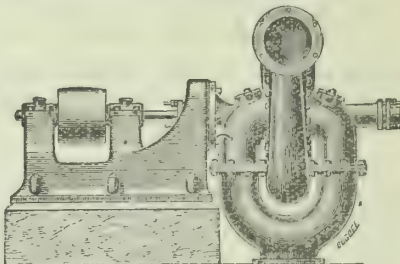
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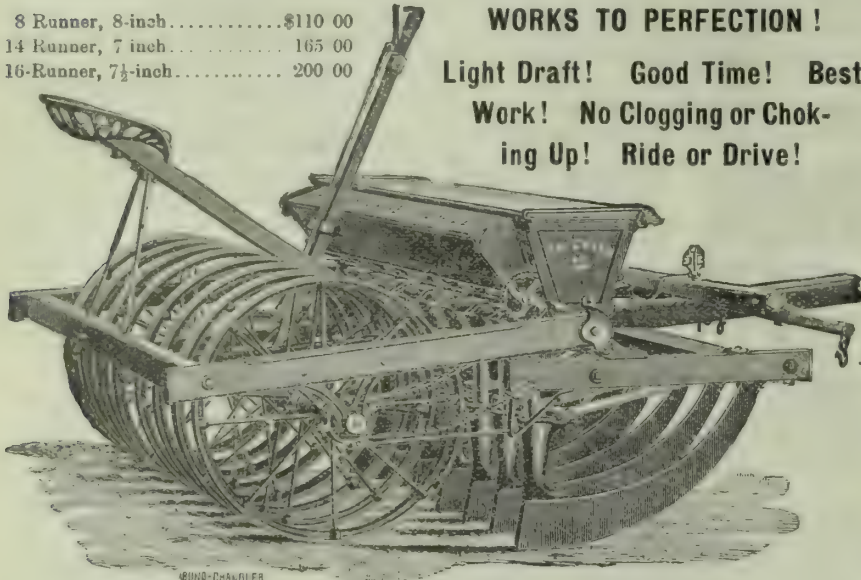
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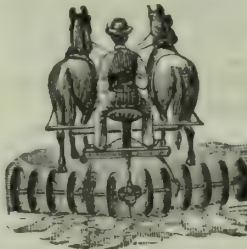
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4. The Peerless is the only Gang which can be instantly changed from a four to a three-Gang Plow on account of our improved detachable Beam.
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6. The Peerless is no experiment. It is home made, home tried, has given satisfaction, and will continue to be the farmers' friend.

PRICE LIST:

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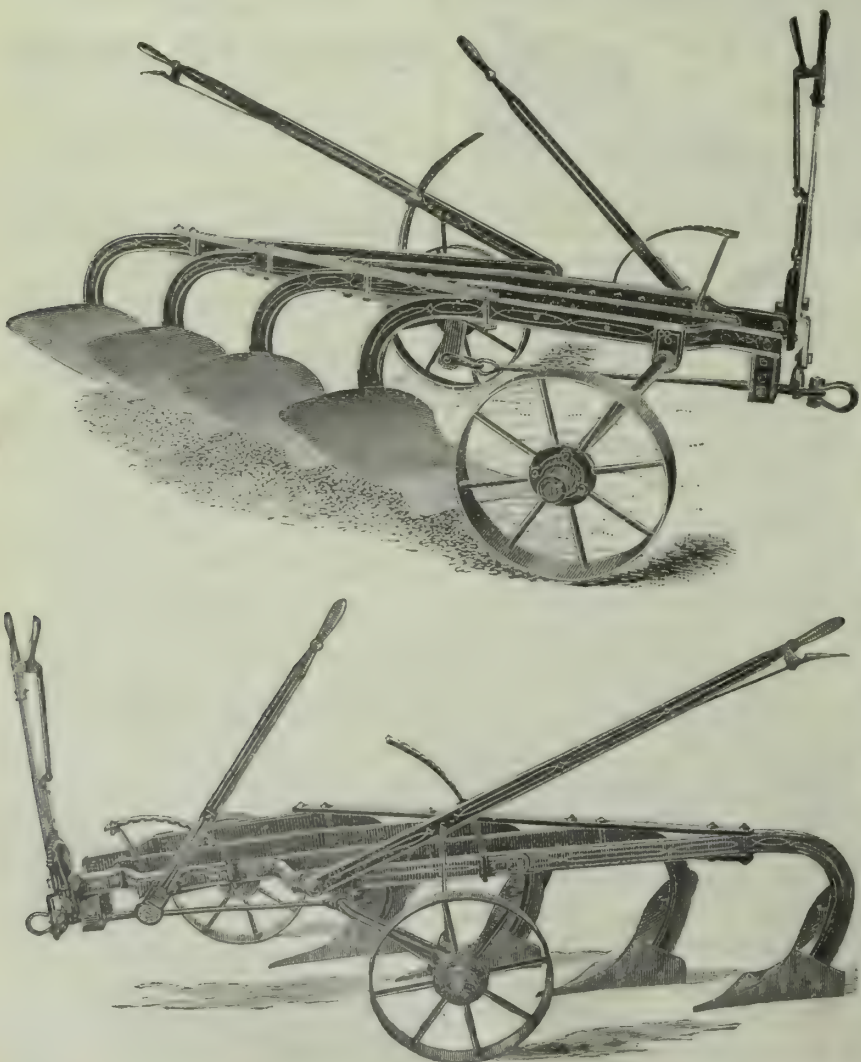
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PACIFIC RURAL PRESS

TWENTY-PAGE EDITION.

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Hornless Cattle.

Dehorning cattle is progressing to some extent in this State. We hear of one of our old dairy farmers on the coast side of San Mateo county, who has sawn the horns from his old bulls and uses the machine for eradicating the horn growth on the calves. We hope to have at some future time more definite accounts of his operations and his conclusions. At present we understand that he is satisfied the practice is of advantage and he feels much safer and surer of the lives of his cowboys now that the bulls are tamed by the loss of their weapons. The dehorning even of full-grown bulls does not seem to put them to long discomfort.

If it is really to be an advantage to have our cattle with horns, we have always been inclined to advise greater attention to the hornless breeds. Although the hornless bull has no formidable sharp arms, it does not follow that they cannot kill, for the hornless animal, if vicious, has a very effective way of meeting an adversary or his keeper; but we believe it is conceded that on the whole the hornless breeds are more peaceable, and less likely to injure each other than the horned. Although the consciousness of the loss of his horns may "cow down" a bull who is used to having them, it cannot be argued that a bull who has never had them will be thus depressed.

There is a difference in disposition among hornless breeds as among those armed with these appendages. We believe the Red Polled cattle, of which we give a fine specimen on this page, are conceded to be of very kind and mild disposition. This is the experience of Gen. L. F. Ross of Iowa City, Iowa, who is one of the leading breeders of the Red Polls in this country, and the owner of the cow shown in the engraving. We have written at considerable length of the Red Polls in previous issues of the PRESS and need not enlarge upon its adaptations at this time. It is claimed that this breed is most admirably adapted for the general purpose breed. For dairy uses they are excellent and furnish a large quantity of rich milk. Their beef qualities have not been fairly tested in the competition of the fat-stock show rings, but it is known that in the land of their nativity they are highly regarded for this quality. In color they are a handsome red. They are destitute of horns, which peculiarity they transmit invariably to the half-blood. Gen. L.

F. Ross, the owner of the cow shown in the engraving, is the pioneer in this part of the world in bringing them to public notice, and is enthusiastic in their behalf. He has received his second importation this year, and his herd now numbers over 50 head of pure bred and more than that number of grades. His exhibits at the great fairs of the West this year are much praised by our exchanges. We hope a colony from the herd may be secured by some

The Great Animal Displays.

All Californians who are in the East during the ten days from November 8th to 18th, should not fail to visit the great animal displays in Chicago. This will be the tenth year since the establishment of fat-stock shows and the exhibitions have already become famous all over the world, and the results of the careful tests which are made in the competition be-

and the United States. This year's display will be the Third Annual American Dairy Show. The extent of the display of dairy products and appliances, as well as the uniform excellence of the butter and cheese exhibited, attests the enterprise and skill of the dairymen residing in the wide extent of territory represented annually at this show. All interested will have an excellent opportunity for the examination of the most approved appliances and obtaining information concerning the methods adopted by the practical and successful dairymen of the country.

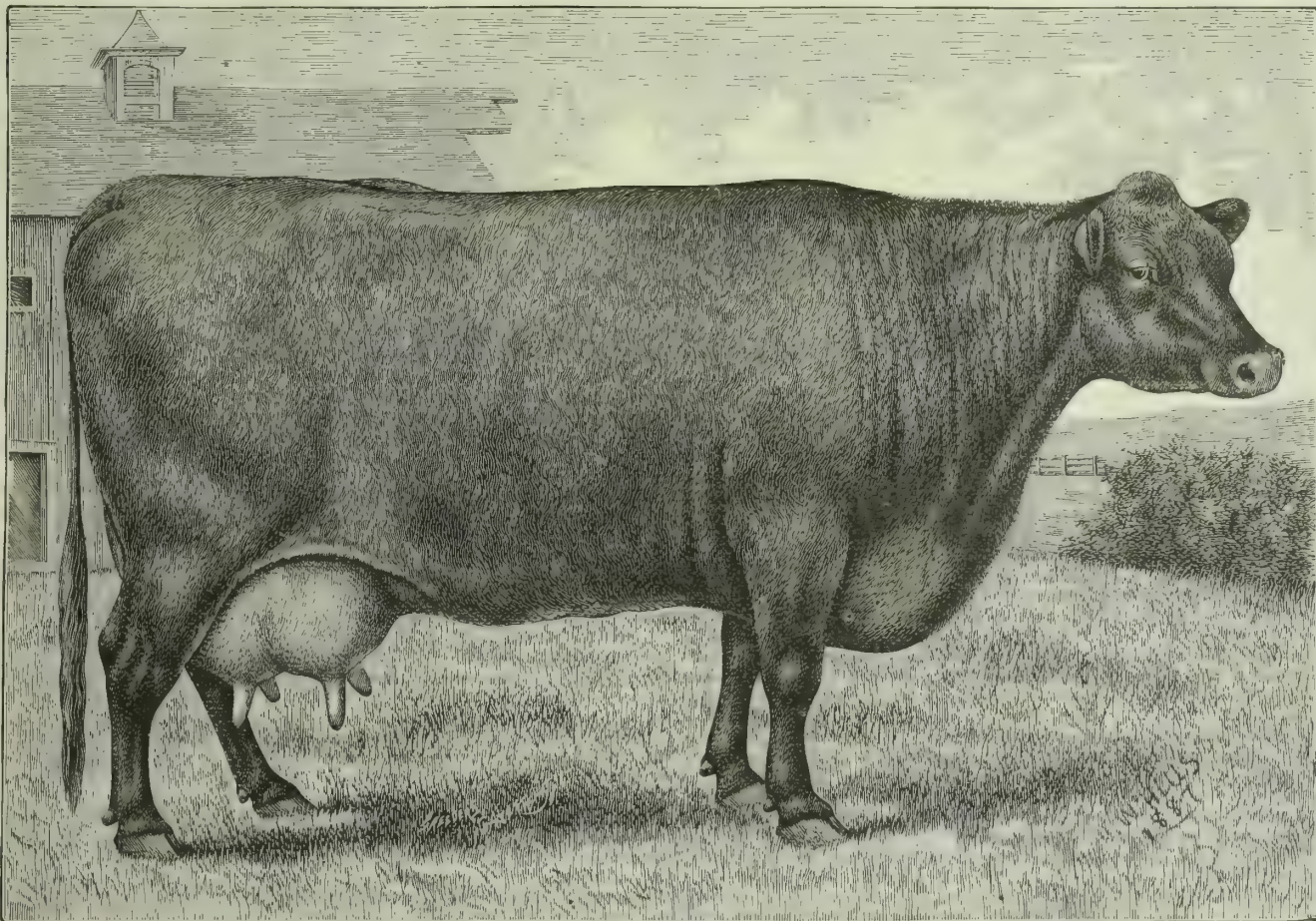
The south half of the Exposition building has been admirably arranged for the Second Annual American Horse Show, and all the space has been secured by the leading horsemen of the country. There will be a large and attractive exhibit of the various breeds of riding, driving and draft horses, which will be shown to the best advantage in the large ring provided for that purpose in the Exposition building.

The entire gallery of the great Exposition building has been set apart for the American poultry show. This gallery is nearly 2000 feet in circumference and about 30 feet wide, and will be occupied with the grandest display of pure bred poultry ever exhibited in this or

any other country. Enough birds have been promised to warrant the belief that more than 4000 specimens will be exhibited at the coming poultry show.

All the displays are held in the grand exposition building, which is amply commodious for the purposes. Thus the fairs are beyond reach of weather, and it is a most fortunate combination which allows the breeder or lover of animals to see such a variety of animal life at once. The dairy show gives a chance to display the actual achievements of the dairy breeds. The premium animals in the dead-meat classes are slaughtered and their carcasses exposed for examination, thus giving opportunity to judge of beef qualities of breeds especially bred for the shambles. During the fair also are held usually the annual meetings of all the breeders' associations, and a most excellent opportunity is given not only for seeing such an array of stock, but for making the acquaintance of the men who are acting leading parts in the progress of improved cattle in this country. We hope there will be quite a California delegation present.

LABOR of all kinds is scarce all over the coast. Unskilled labor is as hard to procure as skilled.



RED POLLED COW FLOSS 2d 1523, IMPORTED AND OWNED BY GEN. L. F. ROSS, OF IOWA CITY, IOWA.

California farmer. We need good representatives of all breeds on this coast.

THE WEATHER SERVICE.—General Greely, Chief Signal Officer, in his annual reports, calls attention to the need of improved methods of signaling in the army, and thinks carrier-pigeons should be trained for carrying intelligence from war vessels, etc. Concerning weather forecasts, he hopes, during the ensuing year, to make arrangements which, in addition to providing the Northwest with more accurate warnings of cold waves, etc., will furnish the great centers of population special predictions. The general percentages of successful indications during the year have been: Weather, 74.75; wind, 69.1; temperature, 74.4; general average, 73.9. One thousand five hundred and ten storm signals were ordered, of which 68.5 per cent have been verified.

FAT-STOCK SHOW.—The third annual exhibition of the Northwest Domestic and Fat-stock Association opened at Portland Monday, and is to last through the week. The display of stock is large and fine. The Dairy Association of the State makes an excellent showing of butter.

tween individual animals and breeds are scrutinized everywhere. In view of the immense animal interests of the United States and the wonderful success which has been attained in handling all the famous breeds of the world, it is only natural that the fat-stock shows at Chicago should stand beside those at Smithfield in the world's estimation.

Hon. Charles F. Mills, secretary of the Illinois State Board of Agriculture, under whose auspices the great Chicago displays are held, sends us a prospectus of coming events, from which we glean information that will be read with interest by all. First of all there is the fat-stock show, but besides there are dairy, horse and poultry exhibitions in progress at the same time. The American Fat-Stock Show has for its object the encouragement of the most economical production of the best quality of meat. The large premiums offered and the emulation among breeders and feeders attract in large numbers each succeeding year to the American Fat-Stock Show the choicest specimens of meat-producing animals to be found on either continent. The live-stock entered for competition at this show most creditably represents the best breeders of England, Scotland,

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

The Twenty-Sixth District.

EDITORS PRESS:—The child is born and is already a giant! Yesterday closed the first fair for the new Twenty-Sixth District, and never was a more successful first fair held—from all sides come commendations and expressions of surprise at the varied products of this district, comprising the counties of Amador and Calaveras.

Our people are enthusiastic and gratified at the large attendance and interest taken by prominent men. President Shippee made us a visit and a speech of highest praise on the opening night, and expressed his astonishment at the resources of this hitherto comparatively unknown section. Senator Caminetti, the creator of the district, made the inaugural address, followed by Hon. J. A. Eagon of Jackson. Hon. Jud. C. Brusie, an Ione boy, Judge Armstrong of Sacramento and J. H. Miller of the *Record Union*, gave addresses on the following evenings.

This district has a mile regulation track within a picturesque park, embosomed among the foothills, and has the indorsement of horse-men as a fast and already perfect track although no winter rain has yet moistened its surface. It has a substantial grand stand, a large array of boxed and open stalls which were all filled, as well as pens for swine, sheep and poultry.

The pavilion was a tent 100 feet in diameter, attached to a frame building on adjoining premises, and was full of the varied products of this region.

This fair has aroused our people from their lethargy, and struck the keynote for rapid progress in the future. Considering how richly nature has endowed this district, we wonder that it is not better known and more densely populated, and the price of its lands enhanced.

Commencing at the western border and coursing its full length north and south, it has first a stratum of pottery-clay of great value, which is the chief source of supply for works in Oakland and Sacramento. The pottery industry alone has built cities in other portions of our country, and this clay being of a character suitable for white granite ware, there seems no reason why a similar result may not be expected here at some future day.

Next is the coal belt, known under the name of Ione coal land, on which are located two actively working mines. After the coal comes the vein of copper, from which thousands of dollars worth have been shipped, though the industry is just now stagnant on account of the low price of its product.

Parallel with the foregoing lies the great mother quartz lode, on which are located the richest gold quartz mines in the world and from which samples showing more gold than quartz were on exhibition at our fair, more notably those from the Grover and the Ginochio mines. This great lead has furnished the main support of this district in the past and created Plymouth, Drytown, Amador City, Sutter Creek, Jackson, in Amador county, and Mokelumne Hill, San Andreas, Altaville, Murphy's, Sheep Ranch and numerous other towns in Calaveras.

Above the quartz comes the great timber belt containing the finest trees of the Sierra range and a future of great wealth, among them being the noted Big Trees of Calaveras. Inclosed in the summit timber recesses are never-failing reservoirs of water, which, if available in Southern California, would be worth millions upon millions of money, and is worth as much prospectively to this district, where, with its aid, the varied cereal and pomological productions flourish unexcelled.

The foothill region has long been noted for the superiority of its fruits, which, owing to the long, dry maturing season, ripen to fullest and finest flavor. Nowhere in the world will the grape do better, and in this section will doubtless be found, in time to come, the noted vineyards of this coast.

One line of railroad terminates at Ione and another at Valley Springs in Calaveras county; a third is projected to transverse the district north and south.

Fruits shipped through the Fruit Union this season to Chicago, Philadelphia and Boston, have received the highest commendation, and evaporated products which have been scattered through the different markets have brought the highest price.

The peach here has its home, likewise the French prune, which develops the finest flavor. Pears, apples, cherries and apricots also flourish, and, from the exhibits from various localities, I may add the orange as well. We have the finest of climates, but, by reason of the sparsity of population, the hill lands are held at small, nominal valuations.

To a thinking observer, it would appear that with all these natural advantages there can be nothing to retard the growth of this district, and we look for the bound that will set us the 20 years ahead, which we are accused by the speakers from abroad of being behind our sister districts.

We intend to represent ourselves at the next State Fair, and expect the Baby Giant to take an advanced rank with her sisters of the commonwealth.

G. W.
Ione, Oct. 9, 1887.

More About the Stockton Fair.

[Written for the RURAL PRESS by Mrs. W. D. A.]

A. Hueppers, stationer, large exhibit of Stockton Paper Mills' goods; printing, letter, ledger, grades of wrapping-paper, bags and boxes of paper. S. F. Chronicle with its immense roll of printing paper, forms, etc. Now, Geo. West has a table, below his wine, of standard and rare varieties of wine grapes, faultless in color and cluster. Thos. Yost, a table with fine figs, quinces and the largest Italian chestnuts. Mrs. Isabel Reed, the finest jellies in the hall—apple jelly clear as water; also choice house-plants.

Upstairs, Taber & Co. fine photos of several of the dredging machines. South and east wall, "Cone Carr," large collection of crayons. T. J. Lewis, six landscapes. Companion piece of "Silver Lake, El Dorado Co." won the \$100 prize at Sacramento. "Yosemite Valley," Mary Lewis, age 18, grand in sublimity of nature, light and shadow. "Off Cape Mendocino," by C. Von Parbraund, a wild stretch of shore, foam-dashed rocks and masterful ship riding away. Twenty-four, by different authors, six by S. M. Brooks, true to nature's form and warmth of bloom. The gem of the art collection is "The New Vintage," by Edwin Deakin, holding gold medal and \$100, a masterpiece for which he has been offered \$2500. The "Mountaineer" (H. Poschen) attracts most attention, as, holding his awl, he drowsily pushes his needle through the broken bridge, while his supper-pot boils briskly, the firelight revealing the logs of his strong cabin, dog lying near and saddle, his rude cupboard and skins from the hunt. Mrs. Allard and pupils show a fine collection of crayons and paintings. Mrs. Smart, Dutch Flat, "A Vermont Sunset," grand in mountain light and autumn richness. A corner, guarded by a large, knotted rope above, a pole held by links of chain supports a curtain of deepening blue bordered and fringed with gunny; displays with the careless grace of a fine esthetic eye, landscape portraits in crayon and charcoal, crayons and a perfect branch, in oil, of rich magnolia blossoms and cluster of purple grapes with their bloom on white bolting silk—all the work of Miss N. Littlehale, Stockton, only 17, but an artist of great promise. Oxley Miller's collection is beautiful beyond description. Lurid flames leap up the spars of the dismantled ship in "The Close of the Combat," and, by their light, her crew row away from the grandly swaying ship. Finest is a group of bare, rocky heights; at their base a waterfall broadens into a peaceful stream, mountain, guarded, soft with verdure, dark with firs, behind which may lurk the wild game, and from a jutting crag looks forth a buck and doe. Here L. Wulff shows fine wallpapers, frames and artists' goods. J. P. Spooner has a large array of photos, black crayons and finely finished portraits. Hattie Keep has paintings in copy of great merit; F. W. Larabee, crayons and water-color portraits; Walter Steves, object and portrait paintings in oil, crayons in charcoal, remarkable for expressiveness. "Death of Cleopatra," "Scene in Venice," "Portrait of Sister," all worthy of premium. Young, raised near Stockton on a farm, he was sent to the art school in San Francisco four years, then two years in Europe—has been back two months; paints from life and nature. Dr. Todd has a collection from Europe very fine "Sadome"—copy and sweet faced Madame Le Brun—most life-like in the gallery. Three very large paintings from Commercial hotel, by Ebert. Landscapes, flowers and stuffed birds by Miss Hahn from that hotel, all very natural; 11 large photos, Hodson, Sacramento. P. C. Lethier, neat show druggist's goods. Native Daughters, elegant ice-cream parlors. Splendid display by White and the Domestic sewing machine. Excellent photos and crayons by Monaca Bros. Mary L. Woods, very complete herbarium. I. D. Holden, fine show druggist's goods; A. C. Gall, beautiful candies; charming articles from Mrs. Dohrman's thorough kindergarten school.

"Old Curiosity Shop," southeast corner, shows things ancient and modern; cup and pewter platter brought over in the Mayflower, Bible 1683, clock 112 years old; dress goods, cocoon fiber, Sandwich island paper sheets, pitcher found in '49 on Merced river beside a dead man, cut out of a tree; splendid case of Syrian, Algerian and Persian embroidery, and gorgeous velvet table-spread worked and fringed with gold, and ancient lamp. Mrs. Grattan has a lovely booth. Miss Grattan, elegant painting on china and shells, waterlilies on bolting silk; Mrs. T. W. Newell, sensible and excellent knitting; Mrs. W. Daggett, crochet and macramé-work; Miss Vanderberg, tasteful fancy articles; Mrs. Waterhouse, 83 braided mats; Mrs. J. McCall has a large show of rugs drawn of yarn or rags, tasteful in color, even and strong as Persian. She rapidly works them in with a hook or needle. Mrs. J. R. Williams has a large show of fancy articles, bric-a-brac, likewise Miss Althea Hickman. A dress made by hand, Miss Andrews, 15, deserves great praise. A stand of California woods made of 1900 pieces is shown by R. Reno, Stockton. W. Van Vlear exhibits case of guns from 150 years to the present. H. T. Donance, large show harness, robes, etc., first-class. A. Easton, richest carpets and furniture from his popular store.

Pacific Spring Mattress Co., San Francisco, exhibit Clark's Improved Folding Bed. (They employ 70 men and hair from California cattle). Crandall Spring—a secretary of maple and California ash, lovely cherry, oil finish, fold up a perfect bed. Pacific Electric Belt Co. show galvanic belt articles.

St. Mary's College, work of pupils and very fine case of philosophical instruments. Hull & Stewart, creditable school supplies. Stockton Business College has a fine exhibit of that admirably conducted school. San Joaquin College, Woodbridge, shows fine mineral cabinet, books, apparatus, creditable in a high degree. Sacramento business makes a fine show.

Mrs. W. J. Belding, noted for her public spirit, makes a fine show of merchandise from one of the oldest and best stores of Stockton. The whole southeast corner of the gallery is dazzling with needlework, knitting, paper flowers, painted mirrors, everything!

Mrs. M. H. Ober, S. F., exhibits healthful ladies' wear. Mrs. Netz, easel of seven kinds of grain. Alberti shows fine Weber pianos, Estey organs; also Ramaciatto exhibits Spencer pianos.

Saturday Evening, Oct. 8, 1887.—The building again is brilliant with flowers and beautiful girls, alight with joy, as the floral march is repeated under Mrs. C. Dohrman. Flowers, fruit and vegetables on ornaments. Banners of satin with clusters of flowers, sprays and mottoes are borne—one carried a big floral parasol. A Lodi young lady, an illuminated watermelon. She and her lantern were charming. The floral march was planned and carried out by Miss Hattie West, and the sylvan retreat and live-oak tree by Miss Alice Ashley of the floral committee. The president and directors have spared no pains to make the fair a success and to give each exhibitor his due. It has been a decided success—now the bell is ringing to close the splendor of labor and art till another year. Visitors praise our hotels and the coolness of the pavilion.

HORTICULTURE.

The Florida Orange Interest.

EDITORS PRESS:—The "orange belt" of this State is divided, with considerable distinctness, into two sections—one in which seedling trees prevail, the other in which budded trees are most numerous. These two sections lie, speaking in a general way, on the two slopes of the peninsula; the budded trees on the Atlantic Slope, the seedlings on the Gulf Slope. The explanation of this fact is curious, and shows how great an influence, for good or evil, one man may sometimes exert on a young community whose institutions are still in a plastic condition.

Soon after the war Colonel L. A. Hardee established near Jacksonville the Honeymoon nursery, from which he sold tens of thousands of orange trees. He was an ardent believer in sweet seedlings. In addition to what he sold outright, he furnished a great many to small nurserymen and growers to be grown and sold on shares. That also made them advocates of seedlings. He was an officer of the railroad line from Fernandina to Cedar Keys (since incorporated into the extensive F. R. & N. system), and he naturally extended his tree-selling operations along the line of this railroad; hence the preponderance of seedling trees to-day along this route, and extending southward through Gainesville and Ocala to Orlando, where the seedling current meets and is thrown back by the column of budded trees ascending the St. John's river. This column of budded stock was and is carried forward mostly by men from the north. The eastern, or budded half of the peninsula, therefore represents northern progressiveness and thrift, while the seedling area on the western or Gulf Slope stands for southern ideas and systems.

It is hardly necessary to say to your California readers that, while the seedling trees have their points of undoubted superiority, chief of which are their greater hardiness, size and longevity, on the whole they are not to be chosen by the beginner with which to found a grove, unless it may be in a very few exceptional cases. Further, it goes without saying that the influence of Col. Hardee has been a detriment to Florida, and especially to the Gulf Slope of it.

A very intelligent gentleman, an old university friend of mine, and until recently the editor-in-chief of the *New York Railroad Gazette*, a trained observer and writer, last winter and spring made a tour of many thousands of miles through Florida and California. From Sacramento he wrote me that he thought in five years the orange crop of Florida would be 10 times as great as at present, and that the problem for the growers would then be how to realize a quarter of a cent apiece for their oranges. He also thinks that the output of California will be immensely increased in that time, though not so much as that of Florida, because there are not so many young trees in sight in your State. By that time, he adds, "I do not feel at all certain that California can sell oranges east of the Mississippi." Still, I suppose, if the growers of your State could be assured of undisputed control of the territory west of the Mississippi for their oranges, they would be satisfied. He says: "The best Florida oranges are very much superior to the best I have

anywhere found in California, but I think the average in California is higher, because there are fewer seedlings here, a very large percentage of the fruit being Navel, which are of an excellent quality and seedless."

The California pole seems to be knocking the persimmons just now, so far as immigrants and land sales are concerned. Florida has been asleep, lying on her oars, as it were. Our subtropical exposition at Jacksonville this winter is fondly looked to by many to recall the "missing tourists," but they will not come unless a great deal more money is expended in advertising in the North than is now being expended. The railroads leading south, and whose lines lie outside this State, have formally and officially challenged the Florida roads to meet them in this matter, engaging to expend as much money as the latter will in advertising the attractions of Florida over and above the routine advertising of their lines. Indeed, they not only challenge the Florida roads, but the hotels, real estate men, etc., also. If the Florida people and corporations do not rise to the height of this opportunity, they will deserve to see the State fall even further behind in the race with California than it is now.

Some lemons and "dropped" oranges from South Florida have already gone North in small lots, but the oranges at least have damaged the market far more than the worth of the consignments. Not an orange should be cut in the peninsula before November 15, and better not before December 1. The earliest oranges strike a bare market and fetch \$4 or \$5 a (bushel) box; but November fruit is too sour for anybody; it sets the Northern teeth on edge, and damages the good name of Florida oranges.

Perhaps your readers might like to see an estimate of this year's orange crop in Florida. I shall not venture one myself; but neighbors of mine, recently returned from South Florida, say the crop down there will be light, and very rusty. That is the case here, though most of the groves in this country are too young to be made an element in any calculations of the yield.

Following suit after your State, we are talking a good deal about cold storage for our oranges, to hold them for next spring. The citizens of Waldo, 20 miles south of us, are erecting a building 60x100 feet (if I remember correctly) for this purpose. For my part, I do not take much stock in cold storage in Florida with artificial ice. Our true policy, it seems to me, is to store in the fall in the North, where, if the buildings are properly managed, little or no ice will be required and very little expenditure of any kind. There are firms who offer us this accommodation for a nominal expense—some, indeed, gratuitously, saving and excepting their commission.

S. POWERS.
Lawley, Bradford Co., Fla.

Citrus Fruit Sales in New York.

The *New York Mail* of Oct. 8th says that the official bulletin of the Minister of Agriculture and Commerce of the Italian Government, containing an elaborate report on the rapid increase of the production of oranges and lemons in this country, and the effect on the market for Italian fruit, has just been received. The report says that the California orange is superior to the Italian fruit. It is preferred for its aroma, taste and color. The Florida orange and also that of Louisiana is much sweeter and finer flavored than any foreign fruit. The report then states that in about three or four years this country will grow all the oranges she can consume, and not many years later the same will be true of lemons. The attention of the commercial world is called to the gradual coming to an end of the grape and raisin importations from Spain to this country, and this is cited as a warning to prepare for the time when the United States will supply all her own wants.

A *Mail* reporter called on Mr. Contencin, of the firm of Frederick S. Robinson & Co. of New York City, and learned that the enormous prices obtained for oranges and lemons at the close of the Civil war set the Italian producers wild, and encouraged them to largely increase the cultivation of these fruits, at the expense of other products. These prices also induced orange and lemon tree planting in Florida, Louisiana and California. "The boom in oranges," said Mr. Contencin, "resulted in much wild speculation in Florida, and many thousands of trees were set out in soil not suitable, and of course they will not bear."

"The capacity of Americans for consuming oranges and lemons seems to be unlimited," said one of the leading importers of these fruits to the reporter. "The oranges and lemons produced in Florida and California, and even the West Indies, do not as yet begin to satisfy the demand. The main supply comes from the Mediterranean, and is brought by steamer to this city, Boston, Philadelphia and New Orleans. The fruit comes from the ports of Palermo and Messina, on the Island of Sicily, and Sorrento, Catania and Naples, in Italy. There are over 100 steamers now engaged in the traffic, and each one carries on an average of 20,000 boxes each trip. The regular lines of steamers are specially constructed so that the cargo is well ventilated, but the tramp steamers have not these provisions, and occasionally a whole cargo arrives in such condition that it is a practical loss. The shippers are almost entirely Italians, and their shrewdness is shown by their sending their sons over here a few

years ago to take clerkships in commission-houses and learn the business. The sons are now in business for themselves, and the green-fruit trade is gradually but surely being monopolized by Italians. During the busy season there is usually a steamer arriving every day, and some days two or three of them. The fruit arrives every month in the year, the smallest quantity during the winter months and the largest in the early summer. In one month last summer the receipts were 500,000 boxes of oranges and lemons, and the total receipts this year will reach 2,250,000 boxes at this port alone, and the other ports will take 1,000,000 more."

"How is such a quantity of perishable fruit sold?"

"By auction. That is the only way. When a steamer leaves the other side the shippers send by cable the marks and number of boxes in each lot to the commission-houses, who are the consignees here. A catalogue is made out in advance, and when the steamer arrives the sale is announced. Skilled longshoremen unload the fruit and pile it in separate tiers of each line or mark. Several boxes of each line are opened for inspection, and the jobbers arrive, examine it thoroughly and note the condition and quality of the fruit on the margin of the catalogues for reference at the sale."

A red flag hanging in front of a large building in Broad street indicates that a sale is taking place. A fruit auction brings together a remarkable gathering of men. On an inclosed platform is the auctioneer and half a dozen clerks. Throughout the room are 300 buyers. They are brokers who buy for out-of-town purchasers, jobbers who buy for the city trade and for shipping to interior points, and peddlers who sell the fruit in the streets. By the side of men whose checks for \$100,000 are good are men who carry their whole capital in their pockets and are obliged to pay for the fruit before delivery.

The sale goes off with lightning rapidity. The auctioneer, with a voice in moments of excitement like a foghorn, and at other times as mild as that of a child, reads his customers like a book. He works them up to the highest point, and knows the instant that they have done. He sells 15,000 boxes an hour, and it is all the buyers and the half-dozen clerks can do to follow him. The auction business has outgrown the present facilities, and a fine new building is now being constructed. It occupies two lots, fronting on State and Bridge streets, and will be finished in November.

After the sale the buyers send nearly 250 trucks to the wharf, and haul away their fruit. Within two days of the arrival of a steamer the fruit is generally unloaded, sold and removed. Sometimes the receivers hold the vessel for a day or two waiting for better prices, but this is very risky, owing to the perishable nature of the fruit, and the fact that the brokers know the reason of the delay, and will not be influenced by it.

THE BOTANIST.

Kern County Plants and Trees.

The following schedule of indigenous plants will contain only those that are most common, or such as have at least striking and peculiar parts. It will be, in giving the useful, cultivated varieties, the aim to indicate the character of the region in an agricultural view.

Aside from the large cultivation of wheat for home use and exportation, that of corn to a limited extent and that of oats and barley chiefly for a stock feed; few others of the small grains are grown at all. All the grains are cut at an immature stage for hay, as wheat, barley, oats (wild and tame). For the same purpose or for grazing there are, for the most part, the clovers and numerous other native grasses.

The native clovers found in this county and the adjacent region are above 20 in number, and alone form an interesting and extensive botanical study. There may be added to these general classes sweet clover, burr clover, the poas, cheat vetch, blue joint, alfilerilla, several varieties of setaria, agrostis and numerous other grasses.

This county is not rich in the abundance or quality of the native forest trees. In making this list it has been a question sometimes where to draw the line between trees and shrubs. Some of what might be called shrubs in less favored climates grow to trees here. We will only give those most commonly seen in this and adjoining counties.

The white oak differs from the Eastern white oak; grows on open spaces, timber useful; is a large tree, and has a long acorn.

The liveoak is evergreen; low and spreading like an apple tree; timber hard, crooked in grain and valuable in ship-building. Acorns small.

Canyon liveoak is a valuable tree, with tough fibred growth.

The chestnut oak furnishes tanbark of the best quality. It is scarce; an evergreen.

Fulvous oak is a newly discovered species; a pretty little tree with wide-spreading top.

California chestnut, generally shrubby, but sometimes grows 50 feet high.

The western chinquapin is an evergreen shrub; grows in the Sierra Nevadas. Bears an edible fruit,

Hazelnut, eight to ten feet high, bears an abundance of nuts.

Buckeye, horse chestnut, a handsome and ornamental tree.

Big-leaved maple, 40 to 90 feet high; wood soft but valuable.

Box elder, 50 to 60 feet high.

Madrono; handsome evergreen; 50 feet high; wood hard and valuable.

Manzanita, 6 to 12 feet high; berries abundant; edible; wood very hard and red; grows very unshapely.

Azalea; 10 to 15 feet high, flowering all the year, giving fragrance and beauty to the woods; a species of calycanthus, without fragrance, is found in the canyons, and the "California lilac," of which there are many species, is a beautiful evergreen shrub, growing about ten feet high, with clusters of lilac-like flowers, of various shades of blue, violet and red, according to the species. The tree produces a multitude of little twigs, and a dense foliage, and may be trimmed into almost any shape.

Elder grows to be quite a tree, 10 to 30 feet high, and often a foot or two in diameter. Another variety is a shrub four to eight feet high, but growing with the habit of a tree, on dry hills, with pines and manzanitas. Still another grows from eight to ten feet high.

Of the composite, only one or two assume anything like the proportions of a tree.

Sycamore, 50 to 100 feet high; wood valuable; receives a good polish.

Wild currant, 6 to 10 feet high; has beautiful fuchsia-like flowers; another variety grows to be a small tree, 12 feet high; beautiful flowers.

Dogwood, 20 feet high; resembles the flowering dogwood of the East, but is more showy. It is quite common on banks of mountain streams. Another variety grows 10 or 15 feet high.

Alder buckthorn, 10 to 20 feet high, forming thickets, wood soft, like alder. The fruit contains a seed like the coffee-grain, hence is called wild coffee, and the seeds have been used as coffee, but the plant is quite different from the coffee plant.

California lilac, 6 to 18 feet high; borders of forest; wood hard; makes good fuel; flowers fragrant and handsome. Another variety resembles this, but is not quite as large; 6 to 10 feet high; still another variety is hardly a tree, but a large straggling shrub.

Tree lupine, 4 to 10 feet high, with a variety of fragrant flowers.

Wild cherry; an evergreen; 15 to 40 feet high.

Oso berry, 2 to 15 feet high.

Photinia, 4 to 20 feet high, with beautiful red berries, ripening in December.

Chaparral, 8 to 20 feet high; grows in dense masses on the sides of mountains.

Bigelow's willow, 10 to 15 feet high; common.

Smooth willow, a handsome tree, especially when in bloom; 20 to 40 feet high.

Sitka willow has a beautiful silky leaf underneath; 10 to 15 feet high. Another variety grows from 8 to 20 feet high.

Cottonwood, large trees along the creeks; probably two or three species, as yet not fully decided. Among them is the Balm of Gilead.

Poison oak, from a small shrub to quite a large tree. A great pest on account of its poisonous qualities.

Bay tree or mountain laurel; valuable for cabinet and furniture work; beautiful for inside finish of houses; 30 to 100 feet high.

Another variety is occasionally six inches in diameter, and could be classed with trees.

Leatherwood, a bush 6 to 10 feet in height.

Bayberry or wax myrtle, 15 to 20 feet high; evergreen.

Yellow pine, valuable timber, reaching 100 feet in height.

Sugar pine, the most valuable of all the pine kind.

Nutmeg tree, a valuable timber; nuts edible; grows 80 feet high.

White cedar, grows 100 feet high.

Knotty pine; a handsome little tree, 40 to 60 feet high.

Douglas spruce, next to the sugar pine in size and value for lumber.

Western yellow pine, quite common; large size.

Nut pine, the resin has excellent medical qualities.

Kern county has no indigenous elms, hickory, beech, birch, persimmon, mulberry, sassafras, locust, catalpa nor magnolia trees. We have willows and cottonwood, which differ little in appearance from those of the Mississippi valley.

There are wild grapes, blackberries, gooseberries, huckleberries, raspberries, salmonberries and strawberries. The raspberry grows wild, but never in the great quantities in which the blackberry was found. The latter, for a great many years, was quite a source of revenue to the Indian squaws, who gathered and sold them to the whites. There are a few left yet, but the great bulk of the vines have had to give place to products of greater value.

Liliorhiza lanceolata is among the earliest spring flowers. Has a rather unpleasant odor.

There is a wild hemp growing upon the low lands, from which the Indians used to make fish nets and rope.—*Bakersfield Gazette*.

RASPING THE HOOFF.—Says an experienced blacksmith: "More horses' feet are ruined by rasping the hoof than by any other cause."

This outside coating is impervious to water and does not evaporate. When broken into by rasping, the moisture of the foot evaporates, leaving the hoofs dry and brittle.

THE DAIRY.

Cows Slipping Their Calves.

This is one of the most serious of dairy ills, and it has been a problem in dairy circles for a generation or longer. Investigations held by State authority in New York some years ago only yielded negative results. We find floating in our exchanges, without proper indication of its source, a report of French investigations which will be read with interest, and, if true, will, no doubt, come forward ere long in more authoritative form. The account is, that for the past two years the French Government has employed one of its most eminent pathologists, Prof. Nocard, in a series of exhaustive investigations on this disease.

The following is a summary of conclusions concerning his investigations:

M. Nocard asks these questions: 1. Is it a disease of a pregnant cow? 2. Is it a local affection of the genital organs of the mother? 3. Is it a disease of the fetus or of the envelopes which envelop it?

The first hypothesis, he says, must be discarded. The condition of the cow is not affected. She preserves her health; her urine, her milk remain normal, and a post-mortem examination discovers no injury whatever. The second hypothesis deserves more attention, and in dealing with it, M. Nocard inscribes upon the head of his program:

1st. The post-mortem examination of cows soon about to abort.

2d. The post-mortem examination of cows upon the point of aborting.

3d. The post-mortem examination of cows having aborted the previous year, and not having since been impregnated.

The following are some of the experiments, as compiled by a writer. A Nivernaise cow, aged 2½, gave premature birth to a fine calf of about five months. Her health was good, but she was killed the same day at Nevers. Some of her blood, milk, and urine was saved, and the viscera was found normal. An incision in the uterus discovered some flakes of yellow muco-purulent matter. Cotyledons adhered to the placenta; around some pedicles was yellowish pus-like matter, similar to that which drains from the vagina after abortion. By pressure a few purulent drops also drained from the cotyledon, and by scraping the part a milky-like juice was seen. A small quantity of the milk, the blood, and the cotyledon pulp, as well as the pus-like matter, was shown in some "bouillon" or fowl and veal, and in some tubes of peptogelatin, probably after the system of M. Pasteur. The pus-like juice and the uterine mucus were examined by means of a microscope. The pus-like matter presented a large number of micrococci, together with some bacilli; in the cotyledon juice were bacilli almost to the exclusion of micrococci, while the juice obtained by scraping gave both organisms in about equal quantities. After 48 hours, the "bouillon" sown with cotyledon juice had cultivated almost a state of purity, the bacilli above mentioned. That which had received the pus produced both organisms, while the blood and milk showed no organisms at all, and the uterine mucus presented no especial alternations. A cow numbered "7" presented the same results as the cow mentioned above. No. 8 cow which had aborted many months before, and which had refused to take the male, was killed for the butcher. Her viscera and uterus were normal; a scraping of the mucus membrane of the uterus was slightly acid, and swarmed with microbes.

The uterus of aborting cows always contains micro-organisms, whereas that of a healthy beast does not contain any, nor is the uterine liquid acid. In all the cases of experiments and post-mortems greatest precaution was taken to avoid the introduction of foreign organisms or germs. M. Nocard draws the following conclusions, which a contemporary prints:

1. In aborting cows there exists, between the mucous membrane of the uterus and foetal envelopes, micro-organisms which are not found in pregnant cows which have previously borne calves, and coming from a district where abortion is unknown.

2. These micro-organisms do not appear to exercise any injurious action upon the mucous membrane of the cow during gestation or after abortion.

3. Abortion repeated in the same animal is explained, if the influence of the microbe is admitted, by its persistence in the uterine cavity until the moment when it can exercise this action upon a new fetus or upon its envelopes.

4. Consecutive sterility is also explained by the acid relation of the uterine liquid, in which the microbes perpetuate themselves, the spermatozoa not being able to preserve their vitality in acid media.

Lastly, the third hypothesis. "Does abortion result from disease of a fetus or its envelopes?" To answer this question M. Nocard made two series of post-mortem examinations. In the first series he dealt with abortive calves born "likely to live," and in the second place with those "not likely to live." In the first series the blood, spleen, kidneys, liver and lymphatic gave negative results, neither organ presenting any trace of micro-organisms. In the second series the same results were obtained with regard to the blood, bile, urine, serum, liver, etc. The digestive organs, not

having been used and not having, consequently, received any micro-organisms from the exterior, yet contained numerous microbes of various species, either in the intestinal liquid or in mucous membrane. This discovery is of considerable importance, for the digestive canal of a normal fetus which has never breathed or drunk does not show any trace of microbes at all. Their presence, then, may be considered as an incontestable sign of the epizootic nature of abortion, and it also explains the diarrhea which causes the death of calves and the rapid putrefaction of the fetus. Most breeders have noticed the strange and continued bellowing which aborted calves make before they die, and M. Roux, chief of Pasteur's laboratory, believes that he will be able to prove an analogy between this symptom and the cry of a dog affected with rabies; but to prove this it will be necessary to search for the initial cause of the microbe.

In two other experiments upon 12 and 8 calves respectively, the positive results obtained were further sustained.

POULTRY YARD.

Seasonable Hints.

Don't neglect the gravel box. Half a meal, well digested, is better than a feast without teeth.

"Kill two birds with one stone." Prune your apricot trees now, and feed the green branches to the poultry and pets.

Keep the roosting-places of the chicks clean, feed only as much soft feed or scraps as they will eat up clean. Keep the drinking vessels filled with pure water, and clean them every day, and you will not be bothered with gapes.

The heat of summer is past; the fowls have about all completed molting, and are laying. The roosts, yards, nest-boxes, and, in fact, everything connected with the poultry yards should have a thorough overhauling before the heavy winds set in. Brush crude petroleum over roosts and into cracks where lice find refuge. Sprinkle the floors with carbolized water, clean up all filth about the yards, and fill up all holes where water may stand, so as to thoroughly drain the yards.

Early hatched pullets are now laying, and will continue to shell out all winter if well managed. Remember, that pullets are still growing besides producing eggs, and require more food than old hens. Yard them separately, for if allowed to run together the old stock will become too fat or the pullets too lean.

If the cockerels are all kept in one inclosure they will grow up without becoming quarrelsome, and are altogether easier to manage. The culls may be taken out and sold or eaten, but a cockerel should never be returned to a yard after being out for even a day, as there will very likely be war in camp.

October is a good month to hatch chicks, provided that the breeding stock is in good health, and the chicks may be protected from the winter rains. If the above conditions are present, the chicks will thrive, and all culls may be sold in January at a good price. Fall hatched chicks are much to be preferred to summer hatches, as they hatch better and are much easier to care for with a little extra preparation.

Douglas' Mixture seems to stand the test of time remarkably well. One of the best breeders on this coast informs us that he knows of nothing to equal it as a tonic during the molting season. He gives it to his fowls twice or three times each week, mixed with their soft food. It is easily prepared as follows: Dissolve eight ounces of copperas in one gallon of water, and add one-half fluid ounce of sulphuric acid, keep in an earthenware or glass vessel, and use as wanted.

Alfalfa and apricot leaves make first-class green food for poultry, and, in fact, any of the domestic animals or pets. Alfalfa is cheaper and easier to raise than any "garden truck" that we know of, and is green the year round, while the apricot prunings (cut any time after the fruit is off) come at a time when other green feed is exceptionally scarce. Give them a trial and report.

Light and active hens make the best mothers, quite a number of poultry writers to the contrary notwithstanding; while sitting they are less liable to break the eggs by their weight, and after the chicks are hatched they will "rustle" around and find insect food for the brood, at the same time giving them exercise, which to all young growing things means health and growth.

Do not discard good mothers on account of their age. When you find a hen that raises you one or two fine broods in a season, no matter of what breed she is, try her another season, and if she still continues to serve you faithfully in this direction, even though she is the veriest scrub, mark her in some way and keep her on, year after year, until she either dies of old age or disgraces herself in some unpardonable manner. We have now a little hen that is a cross of a Houdan on the dung-hill fowl, then crossed again on the P. Rock. She is small in size, P. R. in color, but has the Houdan "top-knot," or crest. She is over seven years old, yet she is as spry as a pullet, and will fight any hen on the place—if not accustomed to being with them—and no hen on the place has laid any better, set any steadier, or reared a larger brood of healthy, hearty chicks than she.—*California Cackler*.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

The State Grange.

(Continued from our last.)

We continue to give more of the important official reports and a condensed resume of the annual proceedings of the California State Grange held at Santa Rosa Oct. 4th to 8th.

Lecturer's Report.

When Sir Isaac Newton, the astronomer, scholar and philosopher, was about to wind up his affairs on earth, he said to those around him, "I know not what the world may think of my labors, but to myself it seems that I have been but a child playing on the seashore, now finding one pebble more polished and now some shell more agreeably variegated than another, while the immense ocean of truth extended itself unexplored before me."

Newton is dead, but the majestic orbs of heaven still move on in obedience to the great law which he discovered in the falling of an apple.

If a man of Newton's research, culture and application should give voice to such thoughts, what shall we say of ourselves who have scarcely made an attempt to add to the world's storehouse of knowledge.

There are persons who ridicule all superficial knowledge, and think that nothing is worth having unless it is profound and goes to the bottom or roots of all research. There is a saying that it is better to know something of everything than everything of something.

I believe it is generally conceded that this age is more given to specialties than former ones, and it more particularly applies to mechanics and agriculture. A diversity of crops on one farm in this country does not seem to be tolerated.

The tendency seems to be, large holdings, large crops and large profits.

If there is any one person that needs a liberal education, it is the farmer. He should know something of everything. In his calling and contact with the world there arises many a problem which requires skill and tact to solve.

He should be somewhat of a botanist, so that when he passes through his fields he may distinguish his friends from his enemies.

He should know something of chemistry that he may know the kind of crops or trees adapted to various soils.

He should have a smattering of veterinary science that he may relieve the distress of his animals and provide for their comfort.

He should understand physiology and hygiene that he may know what the human frame will endure and administer a preventive as well as cure.

In fact, a progressive farmer should be a man of great resources. Chemical changes are going on about him all the time, some of which he can control and guide.

A farmer that is interested in his calling has but a few idle moments. He should trace things from cause to effect and from effect to cause.

When a person follows some of these suggestions that I have enumerated, if he is not already a member, he can consider he is a proper person to make application to become a member of our Order.

I have never heard a good reason given yet why every farmer should not become a live member of the Order. If a person wishes to become a progressive and intelligent farmer, and be numbered among the prominent persons of the land, he must put forth personal effort.

It is very seldom the wealthy divide with the poor or the intelligent with the ignorant. If we wish to occupy front seats we must procure them by early application.

When these reasons seem so plain to me why every farmer should join the Grange, and still that apathy exists, it leads me to ask why are these things so?

Have the members and officers of the Subordinate and State Granges discharged their duties, and made such progress, by precept and example, that others, seeing our good works, shall be desirous of joining us?

I can say for one that I have put forth some effort, but have come far short of accomplishing my purpose.

I fully believe that from my close intimacy with some of the members of the Order, there are brothers and sisters that are fully as devoted to this Order as they are to the Christian religion, and will make as much sacrifice for its success.

If each member will do that, no Order that ever existed can surpass it for numbers and usefulness.

No person that has watched the rise and progress of the Grange, and has made himself familiar with our Declaration of Purposes, can say but what it is one of the grandest Orders ever instituted by the human mind. How can we sit idle and dream our lives away when such opportunities present themselves?

Have we no hope or care for the future generations?

Shall we not gladly give them the benefits of our experience that they may take up the good fight that we have begun, and carry it on and on to a successful future?

Who knows but that after we have passed away that we may be permitted to cast our spiritual eyes on the affairs of this world and mark the progress of coming generations. We may be transformed or transmuted to unknown forms of destiny.

The poet says there is no death:

There is no death; the stars go down to shine upon a brighter shore;
And in heaven's bright, jeweled crown they shine forevermore.

There is no death; the dust we tread shall change beneath the summer showers
To golden grain or mellow fruit or rainbow-tinted flowers.

There is no death; the leaves shall fall, the flowers shall fade and pass away;
They only wait, through wintry hours, the coming of the May.

Do not remain idle or passive; there is no eloquence in either. Let your silver tones ring out in the valley and the hills. Wave your mighty arms

aloft, and speak out in thunder tones to the dormant and listless.

As my official term is about to close, I would bespeak for my successor that same kindness that has ever characterized the members toward me. Ever thoughtful of the shortcomings of humanity, the members have always been ready to make proper allowance in my case.

I had the pleasure last spring of going down to the southern part of the State with State Deputy Overhiser, and assisting at the reorganizing and instituting of several Granges.

The county picnics are growing into one of the most pleasant and conspicuous features of our Order, and if they continue to increase at the same ratio for the next few years, they will develop into a State picnic or reunion only second to some of the large gatherings of a similar nature on the other side of the Mississippi.

I had the pleasure of attending three picnics last spring in three successive days. The one at Beach's Grove, below Sacramento, was attended by all classes and professions. The amusements were games and sociability, and were without literary exercises. The attendance was immense, and the expressions were, whence came so many teams?

The gathering at Clements, San Joaquin Co., was a grand affair. It took place in a grove of oaks, where ample preparations were made, with seats and tables, an elevated platform for dancing and literary exercises. Several of the State officers were there by request, and in giving vent to their eloquence, it reminded one of a windmill oration.

The next gathering was at Danville, Contra Costa county, and it was a success in every particular. Their hall was most beautifully and tastefully decorated by the fair hands that seemed especially created to handle these delicate creations, that were "born to blush unseen, and waste their fragrance on the desert air." Literary exercises were the order of the day. The State officials had become so enthused they could not be shaken off, and the consequence was a second edition or repetition of the scene at Clements the day before.

I believe a great deal of good can be accomplished by a live Deputy and Lecturer. Persons should be selected for their peculiar fitness for these positions. A fund should be provided, so that they may go into the fields where not especially invited and make an aggressive assault upon the community where Granges do not exist.

And now, fellow-Patrons, I only propose to separate from you in an official capacity. The rewards of a Patron seem too great in the contemplation of a movement like this. To retrograde would seem suicidal and cowardly; to remain idle and motionless, would indicate vacillation and failure; to wrap the buoyant hopes of youth about us and go onward and upward, would be the greatest blessing to the struggling farmer, and will be compounding in benefits to the future generations.

When the sun grows dim above me, and the long, dark rays cast their flickering glances about me; when hope and joy, once the cynosure of all young hearts, has fled, and gives way to more substantial things; when these limbs shall totter with age, and rely upon a staff for support; when my eyes shall fail to behold the beauties about me; when my form shall be bent with the weight of years and my voice grows faint and feeble, may my mind be clear to the last moment, and, looking at the retrospect of my life, may I be able to exclaim, if only in whispering tones, the delights and honors that I have received in an official capacity in the State Grange.

DANIEL FLINT, State Lecturer.

Overseer's Report.

Worthy Master, Officers and Members of California State Grange:—At the last session of our State Grange, I was called on for a report, as Overseer. My impression had been that such a report was not expected, consequently I was unprepared. The Worthy Master assured me I was wrong. I have since examined all proceedings of the State and National Granges within my reach, and thus far have been unable to find an Overseer's report.

Our Ritual thus defines the duties of this office: "The Overseer is to see that the orders of the Master are transmitted to the laborers, and in his absence take his place." The latter there has been no occasion for doing, as the Master has always been prompt and in his place. And not receiving any orders as Overseer, from the Master, during the interval between the last and present meetings of this Grange, I have no Overseer's report to make at this time, but will give you a condensed report of my work as Agent and Collector of the Patron; also as General Deputy of the State Grange, with power to organize new Granges and reorganize dormant ones.

Through the solicitation of Brothers I. C. Siele, Logan and Chester, I was induced to take the field in the interest of the Patron, and at their suggestion the Worthy Master appointed me General Deputy of the State Grange of California.

About the first of last February I commenced my labors. Since that time I have devoted 41 days to the work, and traveled over 2000 miles, organized three new Granges and reorganized one dormant Grange and set them to work, besides visiting many others in different parts of the State. I have collected on back subscriptions, due the Patron, \$147, and have obtained 30 new subscribers, one taking five copies.

I have found many persons receiving the Patron who informed me they had not subscribed for it and knew not why it was sent them, but supposed it was by some friend. Some few paid, but most of them ordered it stopped and refused to pay. I found another class of subscribers in arrears, who informed me they neglected to pay, as no bill had been sent nor agent called on them for money, many living remote from any place where a postal or express money order could be obtained.

I found some, who go to San Francisco occasionally, who tell me they intend to call at the office when in the city, but invariably they forget it. I am fully satisfied that we cannot make our organ a success, nor increase our membership in the Order, without Lecturers being put in the field and each of them empowered to organize new Granges and reorganize dormant ones.

There should also be a number of agents in the field to collect for the Patron and solicit new subscribers and advertisements. Without something of this kind being done I fear we will not succeed with our organ, and without it our Grange will be like a ship at sea without a rudder.

I will also state that I have been assisted in my

work by the Worthy Lecturer, Brother Flint, and also by Past Lecturer Pilkington, and by many others.

I have been kindly received by the members of all the Granges I have visited, for which I tender my sincere thanks. I have found many members of dormant Granges who seem to be anxious to again start their Granges, and I have no doubt that nearly all would reorganize if the proper course is pursued by this Grange. I believe that 50 Granges can be added to our list between this and the next annual meeting, if sufficient funds are raised to meet contingent expenses. To do this I am satisfied that the dues of the State Grange will have to be increased, as I am fully convinced that those who have been donating from their private means have become discouraged, and will cease to do so any more.

In justice to our Worthy Brothers, Steele, Logan and Chester, I will state that they each placed in the Grangers' Bank \$100 to my credit, to be drawn for expenses in this work.

Respectfully submitted,

WM. L. OVERHISER,
Deputy California State Grange.

Miscellaneous Mention.

Brother Past Master Coulter will accept our acknowledgments for a pleasant ride about the handsome suburbs of Santa Rosa. It was an additional enjoyment to be accompanied by Brother and Sister Frisbie of Yuba City. The occasion was also a pleasing reminder of a similar ride tendered Brother Webster and our "better halves" by Brother and Sister Frisbie, while attending the eighth annual session in 1880. Santa Rosa and its environments have wonderfully advanced within that time, but the hearty greetings and faithful friendship of the Patrons of Husbandry remain as kind and true as of yore. It was also a great pleasure to the writer, (now the only member of the State Grange who was present at its organization in Napa in 1873, and has since attended every session of the State Grange) to meet Bro. Nelson Carr and wife and Brother Geo. Davis at Santa Rosa, who were the only ones found present at Santa Rosa in 1887 that were charter members of the State Grange.

One of the pleasing scenes notable in the State Grange was the reading of the celebrated poem by Bryant, "The Flood of Years," by Mrs. Dr. Strentzel, one of the oldest and most faithful of California Patrons. She was thus the first to commence the literary entertainment of the session, and her reading was well received.

No fraternal body could be more justly proud of any members or officers than was the State Grange of their talented and graceful Pomona, Mrs. A. P. Roache. No Grange officer ever performed her duties in a more praiseworthy manner than has Sister Roache during the two sessions of her official career. She will long be remembered for the kindly and graceful manner in which she has presided in her leading and important position.

We shall continue our mention of State Grange proceedings in future numbers, and hope yet to hear from more correspondents who were present from different sections of the State.

(To be continued.)

The Pomona Feast, P. of H.

On the evening of the 4th day of the late session the fifth degree was conferred on a class of noble-looking Patrons seeking knowledge found only in Pomona's court.

The Feast of Pomona is always a happy and enjoyable feature of the fifth degree. It is a part that each member attending the State Grange usually has the privilege of inviting a friend outside our mystic circle to come and see some of the enjoyable things of the Order of Patrons of Husbandry.

It is really a great undertaking to describe the hall with its flood of decorations. A hasty glance through this large hall showed six tables at least 100 feet in length that were simply loaded with the fat of the land. The artistic taste displayed in the arrangement was elegant. The mammoth fruit in great abundance, so daintily arranged with a profusion of lovely flowers and handsomely decorated cakes nearly covering the tablecloths, which were of web flapping, which was very appropriate and effective, making the whole a wonder to behold. So great was the handiwork of the committee appointed by the Pomona Grange of Sonoma county to take charge that they must have been well satisfied with their toilsome efforts. When the secret portion of this evening's work was completed, and arrangements were made for the march from the hall of work to the hall of feasting, a splendid brass band was outside waiting to escort the Grange to the feast. The Patrons of California have great reason and no doubt congratulate the Patrons of Sonoma county on the grand success of entertaining the State Grange. On the 5th day the officers were installed and the Grange closed. Surely this was one of the most pleasant, profitable and harmonious sessions of the State Grange it has been my pleasure to attend. E. S. J.

Santa Rosa, Oct. 9, 1887.

BEGINNING OF STATE GRANGES.—Dr. Trimble, Secretary of the National Grange, has gleaned from the records of his office and printed in tabular form a number of facts relative to the organizing of State Granges. The names of the several States, dates of organization and names of first Masters and Secretaries are embraced in this document, which will interest many members of the Order.

Attend to the Matter.

As noticed in another local in this paper, samples of all agricultural products are solicited to be sent to the National Grange. The exhibit made last year through the efforts of Past Master Wm. Johnston and wife, although small, created a great deal of interest in the National Grange. Much correspondence was elicited from all parts of the U. S., in regard to the opportunities for purchasing land and settling in California, as a result of this initial exhibit of 1886. We recommend that each Grange discuss this subject at its next meeting. We also advise every locality to make up choice exhibit, and by subscription or otherwise—if no other means of transportation offers—see that it is properly packed and expressed to the National Grange in good season. No one wishes California, which last year took the lead in this matter, to be found wanting at this, the very next session of the National Grange.

Worthy Master Overhiser, one of our first pioneer farmers, is an earnest and active worker in all such official duties and undertakings, and will see that each exhibit is properly cared for and receives the attention its merits claim; also that California does not suffer for want of a proper setting forth by his voice.

Monument to Dr. Chandler.

A handsome monument has lately been erected in Yuba City cemetery over the grave of the late Dr. S. R. Chandler. It is described as being of marble, square, but tapering toward the top, and surrounded by a fruit-shaped ball. As the stem widens downward there are a sheaf of wheat and a sickle cut in the marble. Then follow the words:

Native of Ohio. S. R. Chandler. Died July 17, 1886, Aged 72 Years.

The shaft is about two feet square at its base, and rests on a hewn granite foundation about three feet square. The whole structure is about ten feet in height from the ground.

The Sutter Farmer says that the work, which was done at the instance of R. C. Kells, is both artistic and substantial, and adds: "Enduring as is this monument, the good accomplished by the Doctor to Sutter county in particular and to the whole State generally in demonstrating the possibilities of our soil and climate as regards agriculture and horticulture, will live beyond marble and granite. He is eminently worthy of such a monument, and it is gratifying to know that his worth has been thus commemorated."

Degree of Ceres.

The following official notice has been issued by the annalist of the National Grange, P. of H.:
514 F ST., WASHINGTON, D. C., Oct. 6, 1887.
[OFFICIAL.]

The Assembly of the Degree of Ceres will be held in Lansing, Michigan, during the Session of the National Grange.

Candidates for this, the Seventh Degree, are hereby notified to file their applications with the Annalist. The application should have, in full, the name of the applicant, the names of the town, county, and State in which the candidate now resides, and the time when and place where the applicant received the Sixth (6th) Degree. The application must be accompanied by the fee of \$2.

By order of the Worthy Priest Archon.

JOHN TRIMBLE, Annalist.

Celebrate the 4th of December.

The members of Temescal Grange who attended the State Grange reported and discussed the action of the State Grange at the meeting on Saturday last. The manner in which the Woman Suffrage question was finally carried in the State Grange seemed to meet with universal favor. A good deal of interest was manifested in debating other subjects relating to the session. On motion, Bro. Renwick and wife and Sister Dewey were appointed a committee to confer with Eden Grange in regard to holding a joint meeting commemorative of the birthday of the Order of P. of H. on the 4th of December next. A good attendance was present. The next meeting will occur on Saturday evening, Oct. 22d, when work in the second degree is expected.

THE GRANGERS' ASSOCIATION, whose warehouses are located below Port Costa, appears to be doing a large and thriving business. The Martinez Item says that they have this season built an extension to their wharves and warehouses of 625 feet in length by 50 feet in width. Now they are building an extension of 300 feet in length by 200 in width, which will make the whole length 935 feet, with an average width of 200 feet, with a storage capacity of all of 450,000 tons. A railroad track 1000 feet in length passes on the inside of the warerooms, while on the outside or water front one of 1500 feet is being built. One ship is being loaded at present, but from the amount of grain in store it will be lively there soon. At present there are about 50 men permanently employed, with an extra 50 loading ships.

As the Government lights our coast for the protection of mariners and the benefit of commerce, so it should give to the tillers of the soil the lights of practical science and experience.—President Garfield.

Grange Work and Progress.

(Prepared Weekly by M. WHITEHEAD, National Lecturer.)

From different sections of the country we occasionally hear of new organizations for farmers. Sometimes they take one form and name, then another. They flourish for a time, then pass away. They do not seem to have depth of root; the tie that binds is too loose; they accomplish local good—sometimes a State is benefited; but the great agricultural population of the nation, as a whole, is not reached by them. The Grange has done all that can possibly be done in any other or new organization, and it has accomplished more than all others put together through its action upon matters of national importance. It has stood the test of time, has lived, and flourishes years after others that started later have passed away. Americans—American farmers are no exception to the rule—seem to like change; they leave the old for the new. But if we farmers are always the "rolling stone," always changing base, always experimenting, we will never be completely organized, never all ready to act together, and will never accomplish those things that can only be brought about by a complete organization of our class, local, State and National. This organization we believe is best found in the Grange, in proof of which we point to its age, its achievements and its present growth and prosperity.

That farmers are generally feeling the necessity of an organization, and are ready for it, is proven by the various forms of united effort that are springing up here and there. It is for Patrons to see to it that the claims of the Grange, above others, are kept before their neighbors. A farmers' club is far better than no organization, but what unity of action exists between the farmers' clubs of even one State? How can they all act together upon some important measure, for or against farmers, that may be before Congress? A Grange can do everything that can be done by a farmers' club in local matters; and, besides, can handle State and National questions of importance and act on them. Members of the Grange should be very favorable and friendly to farmers' clubs and other local societies. They are all preparing the farmer for the Grange. They are the stepping-stones to the best and most successful farmers' organization the world has ever known.

Concentration is the secret of strength in politics, in war, in trade; in short, in all management of human affairs.—*Emerson.*

That those engaged in business, trades and in all professions and callings believe this, is proven by the organizations they all have and through which they concentrate their efforts. Farmers have been slow to see the power of concentration in their own behalf, but they are uniting now better than ever before. The Grange welcomes them and will help them.

I noticed not long since, some one writing about the Grange, said that it had "passed its mushroom days." So we think, and we are warranted in this thought by the sure and steady progress of the Order for the last three years, and the increased and increasing growth during the present year shows very clearly that the more the farmers think and read about it, and the more they see and know of it, and the better they understand its principles and purposes, the more readily they lay aside their prejudices against it, and the more thoroughly are they convinced that it is the greatest of the farmers' organizations; greatest in age, greatest in experience, greatest in influence, greatest in the perfectness of its system of work, and greatest numerically, and these facts account for the thousands of our best educated, best informed men and women turning into the Grange as the farmer's most reliable friend.—*W. L. Richardson.*

The brightest jewel in its crown is what the Order has done for women.

It is the first secret Order that ever admitted women to a full and free participation in its secrets, its benefits, and its honors.

In former times, and even now, where the benign influence of the Grange has not been felt, the lot of the wife and daughter of the farmer is more deplorable than that of the farmer and his son. While the farmer occasionally met his fellows at the store or the mill, or spent a social day with them at court or election, the poor wife was left at home to perform the monotonous drudgery of her daily rounds, with little of joy in the present or hope in the future.

I refrain from drawing the picture more in detail—many of you know that it could not be exaggerated.

You know that the Grange came to woman as a savior, and that its enunciation was to her full of "glad tidings of great joy." To Patrons I need not enlarge upon the advantages and pleasures that have come to our sisters through the Grange. I saw the first few sisters take their seats in the National Grange abashed by the novelty of their position. I have seen them subsequently participating in the important work of the sessions with as intelligent a comprehension of their duties, as prompt, careful and conscientious in the discharge thereof, as the most zealous of their brothers. They have always been among the most faithful and conservative members of the Order. They, too, have been educated in the school of the Grange. The future hopes of the Order rest upon the

present farmers' sons and daughters. From them must its ranks be recruited, and through them must it be maintained and made *esto perpetua*. In the words of the late D. Wyatt Aiken: "The Grange did not ask the farmer to send his wife and daughter to the Grange, but invited, yes, urged him to bring them."—*John Trimble, Sec. National Grange.*

The rising tide of prosperity has brought another new Grange paper, the *Missouri Patron*. It starts off well and is full of the true spirit of fraternity. It says: "The interests of the farmers of Maine and Pennsylvania are identical with those of the farmers of Missouri and Texas. Bad laws executed by bad men, rapacious railway and other monopolies, and oppressive business system, are alike hurtful to the farmers of all sections, and their interests are to be benefited alike by the election of honest and capable men to office, the overthrow of monopolies, the substitution of the intricate and oppressive competitive business system by the simple, fair and efficient co-operative plan, and above all by the general spread of Grange light. Our political, business and industrial systems are so broad and diversified that no class of our people can be materially benefited by local or State organizations only, and no class of any importance would restrict itself to such organizations. The merchants, the railway monopolists, the liquor dealers, all have their National organizations, and it is these that enable them to concentrate their strength and move with resistless power for the accomplishment of their objects. The farmers, of all classes, need a National organization, and the Grange, wisely and patriotically used, comes up fully to the demands of such an organization."

Progress.

The Patrons of Rhode Island are active, energetic members of the Order, and show by their deeds that they believe they have a good thing in the Grange, and want their fellow-farmers all over the State to share with them in the benefits of the Order.

Osborn's Corners Grange, No. 1079, Ohio, has a new hall ready for dedication.

Henry Whitener Grange, No. 260, North Carolina, has been reorganized, and two others in the same county have taken up the work again within a week.

Deputy Earl Oooley has instituted East Central Pomona Grange, Connecticut, with 144 charter members. Twelve subordinate Granges are included.

The display of stock of all kinds at the State Grange Fair, held at Tilton, New Hampshire, was the largest and finest ever shown in the State.

SAN JOSE GRANGE.—This Grange held an animated meeting on Saturday last. The transactions of the State Grange session were discussed with much interest, and for the most part, with a good deal of satisfaction. This progressive and leading Grange is striving to do more effective work, and after consultation, determined to change the hour of meeting from 10 A. M. to 1:30 P. M. It is proposed to open promptly at the newly-appointed hour and transact business without any unnecessary loss of time, and adjourn in order that the members may reach their homes in good season. We presume this will make the meetings brisk, more enjoyable, and more largely attended than under the old arrangement. We should like to hear from Patrons whose Granges meet in the forenoon, and those who meet in the afternoon, and have them discuss in our columns the advantages claimed for their respective hours of meeting.

There is a field for five or six more Granges in Santa Clara county, and we hope some action will be taken to cultivate the field by San Jose Grange, and that ere long some of the State officials, or deputies, will be called for to assist in the work in that rich agricultural section of California.

THE BOYS AND THE FARM.—Some of our agricultural papers are again discussing the old questions that are so often talked over in farmers' homes. "How to keep the boys on the farm," "Why do the boys leave the farm?" etc. Some recommend one thing and some another as a remedy for the exodus of the brightest and best. Some feel sure that less work and more play will do it; others that a better education will make the farm more attractive; others claim that education takes them from the farm. The true solution of the problem is to make the farm pay. Bright American boys are full of enterprise; it is in the very air they breathe; they want an occupation that will bring them dollars and cents, a home, home comforts, all the necessities and some of the luxuries of life as well. The facts prove, the census proves, that agriculture of late years does not pay anything like other callings, in proportion to the labor performed. The farm and the farmer are bearing unjust and unequal burdens; the business is discriminated against in taxes, in transportation and in laws. The boys see and feel all this; the more they are educated the more plainly they see it and understand it; and they act accordingly. Even rats, it is said, will desert a sinking ship. The Grange proposes to secure more equal laws, more equal burdens, and, therefore, to make the farm pay better. Then the question of the boys leaving the farm will be solved.—*Mortimer Whitehead.*

The Debris Wrong.

The Little Giant has not given up his harmful business, and the farmers of the Sacramento valley have had to choose between succumbing to his inroads of devastation, and pushing on to utter victory their righteous war against his pernicious industry. They wisely choose the latter, and their doings in Yuba county, since the 1st of the current month, go to show their earnestness.

On the 5th instant, the Board of Supervisors at Marysville audited claims against the county for her half of expenses incurred in anti-debris litigation, to the amount of \$11,000.

On the 10th the directors of the Anti-Debris Association adopted the following resolution, introduced by E. S. Woodruff, the famous champion of the valley interests:

Resolved, That the president of the Anti-Debris Association is hereby requested to extend to Senators Stanford and Hearst and the representatives in the lower house of Congress an invitation on behalf of this association to visit Marysville and see for themselves the destruction caused by hydraulic mining, as shown in the condition of the rivers at present.

On the 11th the supervisors of Yuba county adopted the following preamble and resolution:

WHEREAS, It is manifest to this Board that injunctions issued by the courts in the cases in which the county of Yuba is a party in name or interest, prohibiting the discharge into the channels of the Yuba and Bear rivers of tailings and debris from the mines operated by the hydraulic process, are being willfully and unlawfully disregarded and violated whenever there is a prospect of immunity from detection and conviction, notwithstanding the efforts made and expenses incurred by this board to prevent such unlawful acts. Now, therefore, to the end that the laws may be enforced and the decrees of the court obeyed, it is by this board

Resolved, That a reward of \$500 is hereby ordered and decreed to be paid to any person or persons furnishing, in open court, legal evidence sufficient to convict any of the following named mining and water companies: James Arnett mine at Brandy City; Cleveland Sierra Mining Co. at Scales' Diggings; Fairplay at Scales; Pioneer Gold Mining Co., Graves Flat; Eureka Lake and Yuba Canal Co.; Liberty Hill Consolidated Mining and Water Co.; Omega Gold Mining and Ditch Co.; North Bloomfield Gold Mining Co.; Mining property belonging to the estate of John Hickey; Sierra Union Water and Mining Co., Slate creek; Kingdon mine, Poverty Hill; South Feather Water and Mining Co., and the South Yuba Water and Mining Co., of a violation of the injunctions aforesaid, such sum to become due and payable by Yuba county, upon conviction of any of the above-named companies. The person furnishing said evidence, sufficient to convict, also to furnish the necessary affidavits to commence the contempt proceedings.

This resolution to go into effect from and after the 1st day of November, 1887.

On the other hand, it would appear from information gathered by the *Bee* last week, that the hydraulic miners of the mountains, particularly in Plumas county, are making ready to work their mines next spring for all they are worth, as soon as the snow melts. They assert that they will run their monitors and turn their slickens valleyward, though they have to meet even officers of the law with rifle-bullets. Of course, such lawlessness can lead only to final defeat, but meanwhile exciting times may be looked for, if the *Bee* is not mistaken.

Exhibits for the National Grange.

Worthy Master Overhiser wishes us to state that specimens of all agricultural products suitable for exhibition at the National Grange are solicited for that purpose, the National Grange having provided space for exhibits from all parts of the Union.

Pomona and subordinate Granges, boards of trade and all firms and individuals are solicited to send on as fine and complete samples as possible, such as vegetables, nuts, dried and preserved fruits, etc., and other products of the soil. Pamphlets and other printed matter suitable for free circulation on such occasions will be received and well cared for.

Send by express, addressed W. L. Overhiser, care National Grange, Lansing, Michigan, in time to be received by the 15th of November. Give full description in letter by mail. Also be particular to give proper description and the name and address of the contributor, and *prepay* all charges.

SACRAMENTO POMONA GRANGE will hold a regular meeting Saturday, Oct. 29th, at 1 o'clock, in Grangers' hall, Tenth and K Sts. All members are requested to attend. The fifth degree will be conferred. All Patrons who have taken the fifth degree are cordially invited.

SOUTH SUTTER GRANGE will celebrate a Harvest Feast on Saturday, Oct. 22d. Yuba City Grangers are cordially invited in a communication to the secretary, and the *Farmer* urges them to go with full assurance that they will be most loyally treated. —Grange convenes at 10 A. M.

CORRECTION.—Mrs. Ashley writes that the length of the wheat-pictured harvester, described in her "Glimpses at Stockton Fair" a fortnight since, was 18 feet 10 inches, instead of only eight feet as therein stated.

THE *Merced Express* says: Coyotes are destroying numerous small swine at the ranches near the San Joaquin. Coyotes seem to increase in numbers lately, and to be posted on poison.

Green Valley, Sonoma County

EDITORS PRESS:—Farmers here will soon be ready for Thanksgiving, at least the crops will soon be all harvested. Late potatoes turn out a good crop; corn is being husked. Huntley's drier is running full blast. The driers of Harbison, Winkler, Lappum and others have quit buying fruit for the season. J. Hunt keeps his Improved Alden drier going day and night. He employs about 30 hands and has to refuse apples for a week or two at a time in order to work off the tons of apples which collect at his drier. Lots of apples are hauled from here to the driers in Santa Rosa.

Hops.

The hop crop is harvested and mostly pressed. The Purrington yard produced about 500 bales. Talmadge, Hensel and Ross have each done nearly as well. Ridenhour, Allen, Solomon, Brain and the small yards report a good crop. The price offered at present is about 13 cents. A few carloads engaged at 20 cents have been delivered, and other growers wish they had accepted a fair price when it was offered them.

Only one hophouse burnt in this valley for the season, together with the crop of about 50 acres. "Insurance, 15 cents per pound."

Hop-growers who had made contracts with Chinese got their hops all picked for about \$1.15 to \$1.30 per 100 pounds; but those who depended on their neighbors and other whites had to pay as high as two cents per pound and then leave half their hops unpicked.

When a Chinaman wants to quit, the boss simply says: "You no moh pick, me no pay," and the Mongolian picketh; but a man who would refuse to pay our wives and daughters when they want to jump a job would not be tolerated in a civilized community. White folks don't work for wages; they only work to help people along at the rate of so much per day; and if you don't treat them right they quit. "Faith, mum, and is you the woman as wanted to git a lady to hlep'er do the washin'?"

Wine.

The ruby stream is again flowing at the wineries. There is a light crop here of most varieties of grapes. Korbell & Bros., who have a 200-acre vineyard at the beginning of the redwoods, are nearly through. Marshall & Hill employ about 60 men at their winery and vineyards; the Rosebud and Hofstetter wineries are hard at it. Martin Feusier & Co. claim to buy more grapes at their Sebastopol winery this year than all the other wineries in this valley together. All our grape-growers who work up their own grapes are busy, while tons and tons of grapes are hauled to the four wineries in Santa Rosa and shipped to San Francisco. The price paid for Zinfandels is \$14 per ton, others in proportion according to quality.

Two or three years ago I. De Turk, who makes nearly a half million gallons of wine yearly at Santa Rosa, said that he could not use Green valley grapes separately, as they did not contain sugar enough. We hear from L. C. Cnopuis, who started the first winery here, that since A. D. 1881, he has had but one lot of Zinfadel grapes come in that tested as low as 23 per cent of sugar, while the average is from 24 to 27. White grapes test from 18 to 25, according to variety, while Missions in some seasons, when there is a cold fall, contain as low as 15 per cent of sugar, but the average for them is 18 to 24.

In the report of Mr. De Turk for 1887 to the Board of State Viticultural Commissioners we read: "Rather a new district had recently been developed, known as Green valley, lying as it does on the lower part of the Russian river, adjacent and among the Redwood country west of Santa Rosa, where there are some of the finest and most promising young vineyards of the State. This country bids fair to have in the near future a reputation second to none other in the country." Thanks. Mr. De Turk, here is our *IRA*.

Green Valley, Oct. 17.

The Pears Which Were Lost.

EDITORS PRESS:—In yours of October 15th inst., Mr. Allegretti is reported to have said the pears I sent him for treatment by his cold-storage process were not of marketable quality when I sent them. In that he is mistaken. They were freshly picked and sorted. Of those sent him for treatment there was not one soft or yellow pear in the whole lot. The fact of the matter, I mistrust, is this: I think he had not room to store them when I sent them, and they were permitted to remain out of storage till he could make room for them, and thus ripened under atmospheric exposure. I have handled fruit too long and too much of it not to know when it is in proper condition for shipment and marketing. If Mr. Allegretti's process is what he claims for it, there is no way to account for my pears becoming over-ripe after delivering them on the car at Haywards except that he did not do his duty by not putting them immediately in storage when received.

My experiment with his process was rather a costly one for me. The pears were a total loss to me, and for freight, storage and package I am out in money about \$90.

WM. C. BLACKWOOD.

Haywards, Oct. 18th.



Love's Sacrifice.

[Written for the RURAL PRESS by M. B. D.]

The maid who trimmed the lighthouse lamp
That beamed above the harbor bar,
To show love's ship the seething reef
Of danger 'neath its golden star;
The fishers' wives who bravely launched
Their frail boat on the stormy surge,
To save the doomed ones homeward bound,
Yet tossing o'er d'ath's cruel verge.

These have been sung upon the harps
Touched by the poet's finger-tips,
In strains melodious and rich
As ever breathed from singer's lips.
Than these heroic deeds, oh me,
Love's sacrifice can well be more;
Though treasured not as rarest gems
Within the poet's rhythmic lore.

The mother watching all day long
The mazy ways of little feet,
Who toils with tireless hands and brain
O'er tasks that never are complete;
Keeping through endless years of care
The cheerful fireside pure and blessed,
And joyfully inviting there
The weary toiler home to rest.

Oh! soft the note of lullaby,
That comes with evening's tender light,
Yet dearer is the sleepless eye,
The gentle hand, the voiceless sigh,
That watches through the lingering night
To soothe the throbbing brow of pain;
And these heroic deeds inspire
The harps of angels with the strain
That echoes from the heavenly choir.

Pluck for me, radiant muse of song,
A plume from out your purple wing,
That I may write a golden rhyme
That half portrays this glorious thing:
A woman's love, which cannot be
Compared or measured, a device
Of strange enchantment, changing earth
To border lands of Paradise.

Let Us Have Peace.

[Original.—By EDWARD BERWICK, Hon. Secretary International Arbitration and Peace Federation.]

Wars are not of divine origin. You cannot have an immutable Deity at once God of Battles and Prince of Peace. Choose you this day whom you will serve! Just so long as the origin of wars is impiously imputed to the All-Beneficent Author of Peace and Lover of Concord, just so long will war be regarded as justifiable and inevitable. History teaches us that wars arise from motives as purely personal, as miserably mean, murderous and mercenary, as those which impel ordinary individuals to transgression and crime.

Not only is the cost of war to be estimated in dollars and cents, though that is appalling enough. I trust that all hold human life and happiness in higher esteem than untold Comstock bonanzas. Think what the reputation of one eminent military commander costs the world! It is computed that to inscribe a single name—Julius Caesar—on the historic record, there were brutally sacrificed 3,000,000 human lives; 800 towns and hamlets were devoted to destruction, while the furies of flame and famine devastated half the known world. The amount of human misery and suffering represented in that short statement words fail to picture, mind to conceive.

Now, before glancing at the cash argument, I should like to combat one or two fallacies regarding the effect of war on the world's markets. I've been told that without war the world would stagnate. As though individuals stagnated when they ceased breaking each other's heads! The one nation that has stagnated since the days of Abraham is the accursed race of Ishmael, of which every man's hand is against his fellow.

If the history of the American people for the last 20 years be a history of stagnation, heaven send us a millennium of such stagnation! Rest assured the green pastures of prosperity are perennial only by the side of the still waters of Peace!

Then I've heard it said, "I want war. I'd give \$200 to see war break out in Europe to-day. It would make business brisk, and markets buoyant." Now, as a farmer, I want to see business brisk. I want markets buoyant; but I do not want a 20-per-cent inflation to-day, and a 40-per-cent depression to-morrow. That's what war would do for us. I'll tell you why: Common sense and political economy (which is merely common sense sublimed) combine to tell us that enhanced wealth and increased consumption produce buoyancy of market. Shatter a million coat and hat-wearing bipeds with your shells and torpedoes, close a million bread-eaters' mouths with your grape-shot and bullets, and what happens then to your wheat, your cotton and your wool? Is the demand likely to be greater or less? Moreover, it is productive, not destructive

energy that adds to the world's wealth. And the world's wealth is being wasted to the tune of \$900,000,000 annually in European countries alone on warlike preparations, with armies and navies, on what is ironically called a peace-footing.

Wars are unnecessary and ineffectual. A title resting on force is always liable to be annulled by force. Two hundred years ago Archbishop Fenelon wrote thus to the Duke of Burgundy: "A treaty of peace that is made from necessity, because one party is the stronger, is like that made with a robber whose pistol is at your head." No one expects such compacts to be effectual. Not only territorial wars, but religious wars, have proved utterly ineffectual. You can't reach unity through strife. Force can never persuade men; it can only make hypocrites.

In the Netherlands, under the viceroyalty of the Duke of Alva, 40,000 persons perished for their opinions at the hands of the common hangman. Myriads on myriads more were slain in siege and sack and stricken field. What was the result? As ever, the blood of the martyrs was the seed of the church. His Most Catholic Majesty learnt that not all the terrors of his Holy Inquisition, not all his legions of Spanish musketeers, could shake the faith of those sturdy Netherlands, who kept alight and held aloft the sacred lamp of liberty in the dark night of Romish bigotry and Spanish oppression. The independence of Holland is to-day a standing monument of the ineffectuality of wars waged for religion.

As to the wars of ambition, you are all familiar with the stories of the world-conquerors—of Alexander, of Cæsar, of Napoleon. You know their successes, their failures, their greatnesses, their littlenesses and the ultimate utter collapse of their most cherished schemes. Ineffectual is the one word applicable to all their reckless waste of human life, their selfish, cruel callousness to human anguish.

Take even the last notable European war—the Franco-Prussian—entered upon by Napoleon III with "a light heart"; yes, those are his own words—with "a light heart" (*cœur léger*), to seat his dynasty more firmly on the imperial throne of France. How did that eventuate but in his own utter rejection by his nation, and the miserable, untimely butchery of his heir by outer barbarians in a howling wilderness? What would you more ineffectual?

If, then, wars be thus ruinously expensive, absolutely unnecessary and constantly ineffectual, is it not most obvious common-sense to seek some other method of settling international disputes? Possibly some will refer us to what is known as diplomacy. When I say briefly that diplomacy is a fraud, history bears me out amply. Diplomacy is a compound of affectation, bombast, chicane and duplicity! Sincerity and earnestness have no part therein! Truth, justice and righteousness know it not! "An ambassador," said Sir H. Wotton, one of Queen Elizabeth's diplomats, "is one sent to lie abroad for the good of his country." Sir H. Wotton's mistress was one of the most skillful in an age of skillful diplomats. She prided herself on having hoodwinked or outwitted every statesman in Europe by her shameless mendacity. In the profusion and recklessness of her lies, Elizabeth was without a peer in Christendom.

Her rival, Mary Queen of Scots, made a very good second in the race. "Whatever craft, falsehood or deceit (wrote an English envoy) is in all the subtle brains of Scotland is either fresh in this woman's memory or she can fetch it out with a wet finger." What diplomacy was in the golden days of good Queen Bess, such it remains to-day—a solemn humbug, a veil of bombastic ceremony vainly affecting to hide the hideousness of national treachery and criminality!

There can be no lasting peace until diplomacy is dethroned by justice, and it is to effect this desired end that the society on whose behalf I write exists. The first president of the International Arbitration and Peace Federation was that Earl of Shaftesbury whose career of philanthropy endeared him to the Christian world. This was his opinion of the I. A. and P. F.: "I know," said he, "of no society which is doing a greater good than yours." You have heard the old adage, "In the time of peace prepare for war." It is on this very adage that our society is founded. Not in the time of peace spoil for a fight, but prepare for war. Our society holds that the best possible preparation for war, the only rational preparation, is to prepare to avoid it! Here again we have for our warrant another common-sense maxim, "An ounce of prevention is worth a pound of cure." It is the ounce of political prevention our society offers. We call it "world federation."

There are various forces in nature to which, in their ordinary state of diffusion, we pay but little regard. There is the mysterious force which made possible the colonization of America! So all-pervading that it guides the tempest-tossed mariner on every beaconless ocean. Potent in its diffused state to impart motion to tons of iron; yet of its presence our senses give us no cognizance. Concentrate this unseen and unfelt force and you obtain a power irresistible to rend and tear, to smite and slay!

There is another well-known force equally diffused, equally unfelt and equally irresistible and overwhelming. I allude to the force of gravitation. Competent alike to cover earth's wintry bosom with autumn-painted leaves or to hurl headlong unnumbered myriads to a living tomb in the deadly earthquake chasm.

Our society recognizes in public opinion a moral force similar in character. Present everywhere in a diffused state, and while diffused but of small potency! Concentrate public opinion, and you obtain a power that for good or evil is irresistible.

Our efforts, then, must be united, and they must be of a practical character. As Americans we are called a practical people. I take it that means we are full of device, full of energy. If one plan fails, we don't sit down and suck our thumbs, and wait for some one to show us how. We try, and we try again, and again and again. For us, as for Richelieu, there's no such word as "fail!" I'm speaking now of things material and mechanical, where our national success is so immense, because we are such a practical people.

Now, I'm convinced that success in this peace question is just as possible if we would make it a practical and personal matter. But we don't. I'll tell you just exactly how we behave. We go to church on Sunday, and with pious faces pray to the Author of Peace to "send peace in our time." Perhaps we should be more truthful if we said "peace in our neighborhood." Having left the matter in such good hands, not one in a thousand during the week gives to the cause of peace so much as one earnest thought. That's not being practical. As business men and women we don't act so. I notice in business we all believe the old Latin proverb, that "Hard work is the best of prayers." If any one wants to start a circus, or stock his ranch with cattle, how does he pray? His prayer is that of the old hymn beginning:

"Prayer is the soul's sincere desire,
Uttered or unexpressed."

And how does he manifest his soul's sincere desire? Does he go on his knees, and drone out, "O Thou to whom belong all the beasts of the forest, and whose are the cattle upon a thousand hills, grant me wild beasts for my circus, or Shortorns for my herd?"

No. His soul's sincere desire is shown by his getting to work, with all his brain and muscle, and cash, to trap his own wild beasts and breed his own cattle. Now, our society wants just this kind of prayer from every one here to-night. We want each one to make it really their soul's sincere desire. We are persuaded that such prayer avails much. If all the young men would pray thus for peace, they would make an immense impression on future history. It would be the California brand to all time.

This is Prof. Seeley's definition of "federation": "Federation is, in one word, the calling into existence an organ of discussion and legislation for affairs common to the whole empire, and this in such a way as not to interfere with the liberty and self-government of any of its parts." This definition was given in connection with the idea of what is known as "imperial federation in the British empire." Of this there has been much talk lately, and possibly it may be the precursor of "world federation." I have followed its career with much interest. It is under the patronage of the Prince of Wales and the Duke of Cambridge, but has sketched out at present no very hopeful program. It finds advocates among military men, and its aim, a union of all British colonies for defensive purposes, appears plausible. But this plausibility thinly conceals a most mischievous idea. Nothing less than the extension to the whole of the New World of the ruinous and insensate military system of Europe. One of its chief advocates, speaking before the Prince of Wales and the English commander-in-chief, naively stated that with civil arrangements he had nothing to do. Naval and military defense was the gallant lecturer's one idea. The trouble is, the British notion of a defensive system is so notoriously elastic. The annexation of Burmah, the bombardment of Alexandria, the massacre in the Soudan, the invasion of Afghanistan, are all purely defensive measures! Poor mother Britannia was in such imminent jeopardy from the Soudanese that young Australia had to come to the rescue! It requires no keen prophetic insight to predict that a federation for such purely defensive purposes must become the curse of the world. Our society therefore puts forward its counter-proposal of world-federation. In Prof. Seeley's definition read whole world instead of whole empire and you realize our society's aim.

And common sense tells us we must come to this. "Chemists," as Prof. Hilgard writes me, "are doing a large share of our work in making war daily more and more unpleasant." "Unpleasant" is, under the circumstances, rather a mild term. With the new invention of dynamite shells, it is almost now in order for a war vessel to arrive in the night outside the peninsula, 11 miles away, and thence project into San Francisco just five dynamite shells, each warranted to devastate a square mile of territory. In the morning, San Francisco would not have one stone left upon another, nor one Christian young man to tell the tale. Now I think for such a "happy dispatch," unpleasant is a decidedly mild epithet. Perhaps such a possibility might have one good effect. It might induce country boys to stay on the farm!

Well, what are you going to do about it? There is a proposal before Congress to spend \$126,000,000 in providing ironclads and ports to protect 11 American ports. That will give a chance for a few fat contracts! But before those defenses are completed, they will be derided as useless and ridiculous toys, like the present obsolete shams. Better spend our hard-

earned cash in harbor improvements, in roads and bridges, in museums, art galleries and schools—in anything to ennoble and elevate rather than useless and debasing military toys.

"Were half the power that fills the world with terror,
Were half the wealth bestowed on camps and courts,
Given to redeem the human mind from error,
There were no need of arsenals or forts."

What need have we to fortify? No foreign power is tempted to annex our territory. We offer a slice free to all comers; and there lives not a foreign potentate but would be apt to find himself a superfluity in a land where the people are all sovereigns.

Instead of clamoring for fortifications, it were wiser to urge Congress to take action on some one of the 12 bills now before it, looking to the taking steps to provide for the establishment of an arbitration tribunal. Law is the sole bulwark needed to protect us from invasion. Our sovereign people express their will in law, and invaders must submit or go. And our society desires that all nations should find an equal defense in that same bulwark—established law. Now, does that program strike you as chimerical? The ridicule should be theirs who uphold the antiquated (would to God I could say obsolete) method of preferring wholesale slaughter to simple justice. And so it will be! Our cause cannot fail. You know that victory nowadays is apt to favor those whose guns have the longest range and project the heaviest metal. Paradoxical as it may appear, our society relies entirely on the range of its guns. We use the widest range gun known to science. It was invented ages ago by one Gutenberg. Its projectile force is the irresistible power of truth. It carries the weighty metal of conviction to the world's end. It hits men in their really vital spot—their conscience. Why, we could bring down the Czar of all the Russias with a shot from a printing-press in San Francisco were it not for the casement of flattery and adulation in which he is buried. The word is quick and powerful and sharper than any two-edged sword. The pen is mightier than the sword, and on tongue and pen is our reliance. Moreover, every one is in duty bound to assist us with tongue and pen. I want every one to feel as interested as though it were certain, did war break out, your roof-tree would be the first shattered and your loved ones the first among the slain. No one has a right to say, "Oh, it's not my business to check the world's madness!"

What business was it of the Samaritan as he journeyed to rescue him who had fallen among thieves? The priest passed by and the Levite; why should the Samaritan stay?

What business had one pale-faced, weak-eyed young man, with an obscure hole on a Boston back street for an office, and one poor negro boy for an assistant, what business had Wm. Lloyd Garrison to proclaim liberty to the captive, and the loosing of the fetters to them who were bound?

What business had one sensitive, delicately-nurtured, beautiful woman to forsake her refined home and cheerful fireside and spend her days among the loathsome outcasts, the filthy, repulsive criminals, half starved and half naked in the noisome dungeons of Newgate Gaol? What business had Elizabeth Fry to devote her life to the raising of fallen womankind from the degradation of beasthood to the level of humanity once more?

What business has any one to do anything but to grab and grub for a miserable handful of dirty dollars to leave to his heirs to fee the lawyers with? What business? You each want something more valuable than a handful of gold to offer to the Almighty as the result of your life's work! You each need some more satisfactory occupation for your leisure than the elegant and fascinating employment of puffing cigarettes. * * * Let not any false sense of personal inability or inferiority check your effort.

"Greatly begin! Though thou have time
But for a live, but that sublime!
Not failure, but low aim is crime!"

Certain cities are identified with certain schools of policy—Manchester of free trade, Birmingham of elective franchise reform, etc. It is fitting that San Francisco being the most cosmopolitan city in the world should become the center of the cosmopolitan policy of "world federation;" and that the Pacific Coast should justify its title by a consistent advocacy of Pacific policy.

Monterey, Cal.

The Iowa Corn Palace.

Among the reports of the Presidential party's movements last week, we find an account of their visit to the "Corn Palace" at Sioux City, Iowa, where a Corn Festival had been held a few days previous. The many unique fabrications of cornstalks, husks, ears and kernels had been kept in place against the coming of President and Mrs. Cleveland, and attendants were waiting to do honor to the distinguished guests.

The wax maiden, with hair of corn-silk and robe of satin husks, climbing a winding-stair of golden ears; the spider of tiny carrots lying in wait in his web of corn fibers; the map of the Union made of kernels, each State having its especial color; the huge national flag and shields, eagles and crests, crosses and emblems of the various nations, the mottoes from the dominant "Ceres Imperatrice" to the multitudinous

and varied "Welcomes," all made of the unshelled ears, were noted and admired in their turn; and then the big building itself, 200x100 feet, and 90 feet in height to the top of the dome, whose sole material, except its bare skeleton, was the product of the cornfield, was explained in detail, and its conception, history and construction described to the party and admired by them.

From the palace the visitors were conducted through the town, which seemed to be constructed in great part of corn productions. Mammoth triumphal arches still spanned the chief thoroughfares; signs made of sections of corn-ears, and awnings, verandas and in some cases the entire fronts of houses were of corn, decked out with squashes and pumpkins. The ride down the Missouri valley, from Sioux City through endless stretches of waving corn, showed the significance of the Sioux City exhibition.

Hash.

[Written for the RURAL PRESS by DAGMAR MARIAGER.]

Were all the stories that could be told about hash, without appeal to the imagination, gathered together, they would, no doubt, outdo all the fish yarns ever hatched, and even the story of the pump snake, which, my informant says, has become domesticated somewhere at the East with financial profit to the owner, who has a herd of them and uses them for pumping water from the distant river into the kitchen water-bucket, and for watering the garden and wetting down the dooryard, in doing which they have the aid of a sprinkler. True, these snakes, whether real or but living in the imagination of a dissipated genius, are, to say the least, remarkable, not only for their anatomical peculiarity of being living rubbery pipes from end to end, but for their ready accommodations in times of their immediate need, as in the case of their owner's house taking fire, they joined heads and tails reaching in a line from the river to the burning habitation, extinguishing the fire, flooding the premises and almost drowning their proud owner in their enthusiasm to serve their master.

True, hash stories are usually less startling, though always more or less shocking, as is one of which I had personal knowledge. It was connected with the boarding-house of a railroad camp, employing 50 men. And these men were, like most of us, ignorant of the mysteries of the kitchen. It is strictly unorthodox to unearth the secrets of the hash-pot, no less anywhere else than it was at the time and place of the camp in question. These 50 men had a corner in hash, or rather a corner for hash. The way they could make away with hash at the breakfast-table was really alarming. There were two cooks—women—one the bread and hash-maker, and the other handled the roasts, steaks, etc. The hash was chopped at night, after the evening meal was over, seasoned, mixed, and made ready for the pans and oven in the morning, and by getting up at five, food enough for 50 hungry laborers was made ready by six.

One morning, while the dust flew and the wind flapped the big canvas walls of both kitchen and dining-room, the sun proceeded to rise on a missing dishcloth. The big rag was wanted every moment for wiping dust out of something, but a flour sack was substituted, and little time was lost.

At the usual time, the men gathered around the lengthy table, their hair standing on end, as they had left it in shoving their wet fingers up through it while washing. The big steaming dishes were being strung along the center of the table, for each one to help himself. "Do give us some of that good hash!" called out several cheery voices, as a bit of flattery, joined with their morning's salute to the women who served both as cooks and waitresses. In two minutes the hash dishes were empty and more hash called for. Again they were empty and more hash wanted. The last baking-pan was broken into, and the big rag missing was found. In the uncertain light of daybreak, the hash had been emptied into the pan over the dust-cloth. "What shall I do?" asked the discoverer of her companion. The moment was a busy one; there was neither time for reflection nor regret. "Give it to them; scrape the rag and give it to them," was the hasty reply, and the suggestion was at once acted upon, and all hands as well satisfied as if there had been no extra seasoning in their favorite dish.

A MISSIONARY to the Indians in British Columbia took a keg of whisky and poured it over the grass in the presence of the young people. It destroyed all the herbage. The chief then told them that just as it burned the grass it would burn them if they drank it. This experiment has become a yearly ceremony with the Indians, and there has been very little trouble with the liquor question since.

HIGH LICENSE.—It is said that high license has increased Chicago's revenue from that source from \$200,000 a year to \$2,000,000, and has decreased the number of saloons.

EXCHANGE PROPOSED.—I have a limited quantity of Laburnum seeds for free distribution or exchange; also some young seedlings.—J. C. MOHR, Pleasanton, Cal.

INDUSTRY AND SCIENCE.—An international exhibition of industry, science and art is to be held in Glasgow, Scotland, extending from May to October, 1888.

YOUNG FOLKS' COLUMN.

Mamma.

[Written for the RURAL PRESS by FANNIE H. AVERY.]

Who, when small Fannie bumps her head,
Or Georgie cuts his hand instead,
Is full of loving, anxious dread?
Mamma.

Who ne'er forgets to lay away
Some sweet for both to have each day
When they come home from school or play?
Mamma.

Who for her little folks' dear sakes,
A special kind of cake oft bakes,
And nice molasses candy makes?
Mamma.

Who thinks the patter of their feet,
As they run in from yard or street,
Is music most supremely sweet?
Mamma.

Who is so sorry, but so kind,
When they forget at times to mind,
And hopes no more such fault to find?
Mamma.

Who always is at hand to hear
Their little troubles, saying, "Dear,
I'm sure 'twill be all right, don't fear?"
Mamma.

Who loves them with a wondrous love,
That is all earthly love above,
Which she would every moment prove?
Mamma.

Cheeps and Cheepa.

A Story of Two Little Birds.

[Written for the RURAL PRESS by LEITE.]

It was in the early springtime when the wild-flowers were beginning to bloom that Cheeps and Cheepa, the little red-breasted linnet and his bright-eyed little wife, built their nest. And where do you suppose they built it? Not in the tall sycamore tree behind the school-house nor in the great oak by the gate, but right up against the roof on a rafter inside of the schoolhouse. They did not seem at all afraid, though every boy and girl in school could see them. Miss Curtis told the children they might sometimes watch the little birds as they built their nest and see how carefully they worked and how kind they were to each other. Many days Mr. Cheeps and Mrs. Cheepa worked on that wonderful nest, carrying straws, strings and little sticks, until the children thought it must surely be finished. One morning, when the children were all busy studying and Miss Curtis was hearing the chart class, Bobby Jones laughed right out loud in school. Miss Curtis stopped and looked at Bobby, but Bobby only looked at the bird's nest and laughed again. Then Miss Curtis looked too, and what do you think she saw? There was something white hanging from Cheepa's nest by a long white thread. It was a pretty piece of crocheted lace, which Birdie Clark had made at noon the day before and had left on the bench under the tree when the bell rang. All the boys and girls laughed, and so did Miss Curtis. Birdie Clark called Cheeps a little thief, but Miss Curtis said no; that Cheeps did not know any better, so he could not be called a thief. Nellie Terry said that one birdie ought to be willing to give to another, and they all laughed again at that. So Birdie let Cheepa keep the lace which Mr. Cheeps had brought her, thinking, no doubt, that ladies liked fine laces.

After awhile Cheeps pulled the lace up into the nest and tucked it in very carefully and neatly; then she and Cheeps lined the nest with feathers and Cheepa sat on the nest all day, while Cheeps brought her food and sang to her his sweetest songs. Miss Curtis said there were little white eggs in the nest with tiny birds in them, and that Cheepa sat on the eggs to keep them warm so the little birds might grow strong enough to break the egg-shells and come out.

After two weeks there was great flutter and stir in the pretty lace-lined nest. Now, both Cheeps and Cheepa must go to bring seeds and worms, for there were four gray baby-birds with very large mouths and very hungry little stomachs to be fed. They were very hungry indeed, for they had worked very hard to break those hard egg-shells, and papa and mamma were very proud of them to think they had been so brave. After a few days, the children could see the little ugly gray heads raised above the side of the nest and the red mouths wide open, when Cheepa brought them food.

Cheeps and Cheepa worked very hard for a long time to feed their children, until they should grow quite strong and their little wings had feathers. Then they must be taught to fly so that they might take care of themselves. Sometimes the little birds were very lazy and very timid and would cry "I can't," when their parents called to them to fly. But mamma Cheepa would not let them give up. They must try and try until they could fly across the room. Eddie Bright said it was just like school—the way the mamma bird taught them. At last they learned to fly as well as papa and mamma, all except the large, lazy one that Birdie Clark had named Lacey. Lacey

was a very dull scholar, but even he learned by many trials to fly quite well; and by vacation time they could all leave the nest and go to live among the trees.
Los Angeles.

The Manners of Little Girls.

Little girls who wish to be agreeable must remember that as a rule it is ill-bred to act in a sullen or churlish manner, to say spiteful things, to ridicule the aged or deformed, to talk and laugh so loudly as to attract notice in public, to be petulant, to find fault with a gift, and to complain about the weather or anything else unavoidable that happens to be particularly disagreeable.

Girls, try always to be natural, to forget self, to be gracious toward every one, to cultivate an amiable disposition, and try to add to the happiness of others. If possible, learn to walk in an easy and graceful manner, without mincing or taking steps too long. Learn to use your hands, and do not sit in company with your arms tightly folded, as though they were not intended for present use. Conversation requires gestures at times. If asked to sing or play, comply at once, if it is in your power to do so. Be scrupulously neat in dress, and see that your room is always in order. Avoid all such disagreeable habits as picking the nose, ears, or teeth in company, biting or trimming the nails, yawning and appearing bored when any one—particularly an old person—is speaking. Never interrupt any one because he is telling you a tiresome story. You can bear the infliction much better than he can endure the wound his vanity will receive. Always acknowledge an acquaintance, if worthy of your respect, no matter where he is, or however shabby his clothes may be. The young girl or boy who has a polite bow, a smile and a pleasant word for every one will be blessed with many friends. Above all, learn to be true-hearted and sincere.

A silly, fickle-minded person, with no opinions and principles worth defending or retaining, is at best a worthless member of society, and one who will never have much influence for good. He may attain the mere outward polishing of manner, but his mind and soul will never shine. Such politeness may make a fop or "dude" or a "dudine," but it will never make a true gentleman or lady.

Will not our young readers strive to attain the courtesy that begins at the heart's core and not at the lips? It is worth trying.—Exchange.

GOOD HEALTH.

EFFECT OF AN IMAGINARY INJURY.—A circumstance, showing the wonderful effect of the imagination, recently occurred in Savannah, Georgia, which is related by the *News* of that city substantially as follows: Early one evening of a late date, several persons made an unceremonious entrance into a drug store, bearing between them the body of a companion, who, they stated, had been shot and was dying. The shot-ridden victim emphasized the declaration of his friends with a moan, as they carefully laid him down. The doctor asked where the wound was, and the supposed-to-be-dying man indicated by a feeble wave of his hand his left hip. Immediately it was bared, but no clots of gore met the doctor's anxious glance. The man's body was then carefully examined, but no wound could be found. "I think you are all right," finally said the doctor, with an amused smile. "I don't see a scratch. How did it happen?" The corpse recovered his vitality suddenly, and, leaping up, made the gaslights turn blue by the violence of his feeling, while his friends roared at the comical ending of what they supposed to be a tragedy. It seems, as one of them explained, they were near the market-house and got into a row with several other persons. Verdier must have been hit on the hipbone, the blow giving him a sharp shock. He thought he had been shot and fell to the ground. His friends picked him up and carried him to the drug store, while the assaulting party fled. Verdier's wrath was great over the joke at his expense, and he vowed that he would see the fellow who struck him and make him suffer.

THE STABLE CURE.—A correspondent of the *Boston Post* writes as follows: "I was not a little startled the other day at meeting on the street, in the best of health, apparently, an old acquaintance whom I had supposed to be filling a consumptive's grave long ere this. In answer to my inquiries he told me that when the medical men had exhausted their resources he determined to put in practice a plan of his own. Accordingly, he journeyed by easy stages to the Blue mountain region of Virginia, where he established himself in a farmhouse, and bought a horse. He spent the whole day in the open air, taking care of the steed himself, and riding him about the neighborhood. At first, he told me, his weakness was such that he could not stay in the saddle more than 15 or 20 minutes at a time, and he had to pull very soon if the horse broke into a trot. Every day, however, he became a little stronger, and in a couple of months he was able to ride 10 or 20 miles on a stretch, with very little fatigue. He attributed his recovery in part to the fact that he not only rode but groomed his horse, and busied himself an hour or two in the stable every day. In this opinion he confirmed what I remember hearing

an old physician say years and years ago, that a 'horse-barn,' as he called it, was one of the healthiest places in the world. For those who love horses the stable cure would be such a pleasant one that a physician who prescribed it might be sure that his directions would be followed to the letter."

CREMATION AT QUARANTINE.—In view of the approach of Asiatic cholera and the apprehension thereby aroused on the Atlantic Coast, it is proposed to establish a crematory at quarantine. This, the N. Y. Health Officer avers, would effectually solve the problem how to dispose of the bodies of those who die of contagious diseases, and at the same time save the overworked employees at the station a deal of hard and disgusting labor. The proposal is sensible and timely.

WOMEN AS DOCTORS.—The proportion of men to women in the medical profession is 35 to 1. There are now 2500 women holding first-class medical diplomas, and all of them have won their sheepskins since 1850.

DOMESTIC ECONOMY.

Household Hints.

Capital buns, that the children will delight in for lunches, can be made by the following recipe: Take three cupfuls of new milk and half a cake of dry yeast and mix with flour for a sponge. When light, add three-quarters cupful of sugar, one-half cupful of lard and a bit of salt. Knead well and long, and set to rise until very light, when roll out an inch thick; spread with butter, sprinkle thick with sugar and cover with ground cinnamon; ball up like jelly-cake, making the rolls about three inches in diameter. Cut off from this slices 1½ inches thick; set the cuts on end in rows in the baking-pan (allowing for the rising), and, when risen, bake.

A very nice breakfast dish is creamed chipped beef made thus: Shave beef very thin, freshen by placing in cold water and bringing to a scalding heat, pour off water, add a piece of butter washed free from salt, a little pepper, let fry a few minutes, then add one-half teacup of sweet cream, in which you have stirred one teaspoon cornstarch. Simmer five minutes and serve very hot.

Grilled kidneys are a cheap and appetizing dish. To make them, cut three sheep's kidneys in half, dip them in an egg previously beaten up with salt and pepper; then sprinkle with bread crumbs; put a piece of butter the size of an egg to melt; when melted, dip in the kidneys and pass them again in bread crumbs, then grill over a slow fire and serve with sauce or a rich gravy. Before being dressed in any way kidneys should always be plunged in boiling water for a minute or so.

A simple and favorite dessert is a bird's-nest pudding. Fill a deep pudding-tin or dish with apples cut in thin slices; sugar and cinnamon, or lemon, to sweeten and flavor to taste, and a little water; cover with a thick crust; bake until apples are tender; serve hot with hard sauce or with cream and sugar; be sure to cut air-holes in the crust to let the steam escape.

To have hockeac of the genuine Southern flavor, make a very stiff batter of water and cornmeal. Salt the batter just a trifle. Grease a griddle with lard or pork drip; when hot drop on the batter to make a large cake to cover the griddle; put it down smooth, cook slowly; when browned, turn it over and brown the other side. Set on the table on a large plate, and let each individual break off his own piece while hot.

DUMPLINGS.—Make the dough as for biscuits, with sour milk and soda, then add one teaspoonful of baking powder and roll out as thin as pie crust; spread with butter, fold and roll again, cut into inch-squares and drop in the boiling pot.

CREAM SPONGE CAKE.—One cup flour, one-third cup of sugar, one-half cup of cream, two eggs, one-half teaspoonful of soda mixed in flour. Beat the eggs, sugar and cream together, then add the flour, beat lightly and bake at once.

WHITE FRUIT CAKE.—One pound of flour, one pound of sugar, one pound of butter, one pound blanched almonds, three pounds citron, one grated coconut, whites of 16 eggs, two teaspoonfuls baking powder; flavor to taste.

SWEET PICKLES.—Ten pounds of fruit, four pounds of sugar, one quart of vinegar, four ounces cinnamon, one ounce cloves. Boil fruit tender and drain, scald vinegar and spices together three mornings and pour on hot.

FIG CAKE.—Three pints of flour, one cup of butter, one cup sweet milk, two and one-half cups of sugar, whites of 16 eggs, three teaspoonfuls of baking powder, one and one-half pounds of figs flavored and cut in strips.

CANNED GRAPE.—Pick carefully from the stems, being careful not to tear the skins much; put in a kettle with a little water; stir carefully; when well heated through, remove from fire and put in cans.

POTATO PIE.—Beat together two tablespoonfuls of sugar, one of flour and two eggs; add one small cup of finely mashed potatoes seasoned with salt and butter and enough milk to make two pies.



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W. B. EWER.

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Poultry—R. G. Head, Napa, Cal.

Cards—A. B. Hines, Cadiz, Ohio.

Spray Pumps—Cal. Fire App. Mfg. Co.

Cattle—Smiths, Powell & Lamb, Syracuse, N. Y.

Optical Goods—Hirsch, Kahn & Co.

Seeds—R. H. Shumway, Rockford, Ill.

See Advertising Columns.

The Week.

One of the most obvious lessons of this year's experience in fruit is being quickly learned. Among the many other booms which are claiming attention is cannery building. It is a good idea. Several places which almost secured a cannery last spring had reason to regret their failure before the season was over. The sale of canned fruit this year teaches that our production can be vastly increased if good fruit is put up. Canneries should be well distributed over the State, so as to be near to the orchards and so as to utilize the labor supply of young people and women in our smaller towns. We would like to see at least a dozen canneries arranged for this winter.

The storm which we noted last week as having laid the dust in Southern California seems to have extended eastward and to have made floods at some points in Arizona. Since our last issue there have been heavy downpours in New Mexico. So far, California north of Tehachapi has gone dry and nothing at present but the wild geese promise rain. It is just as well, however, to have the rains begin late. It gives a chance to gather the grapes, and is likely to secure a continuous growth of feed if the water does not come too early.

The course of justice in this city seems to be

progressive. The rogues of whom we spoke last week are being hunted close, the grand jury is still in session, and it seems likely that we may secure reform in the municipal affairs of San Francisco.

Poultry in California.

EDITORS PRESS:—One thing I cannot understand, how is it that eggs and poultry are so high in your splendid climate, unless people can make more money at other things? Certainly at the prices you receive for eggs, averaging 32½ cents per dozen (or 15 cents the lowest and 50 cents the highest), you should acquire wealth even at the lowest figure. We can make money here at 10 cents per dozen. Your chickens average \$5 per dozen. There must be money in it at these figures. Here we make something at \$1.50 per dozen. It must be that your markets are not overstocked or no such prices would be paid for chickens and eggs. How is it?—**READER, St. Louis, Mo.**

Our correspondent states the facts about as they are. His average price for eggs here is too high, but his extremes are right. Of course, most eggs are marketed while the price is low, and for that reason the price is low. But the average price for California eggs is higher than anywhere else in the country, and, besides, California makes a market for trainloads of eggs from Nebraska and neighboring States.

There is money in poultry in California if the fowls are well kept. The business thrives according as personal care and attention is given. Our impression is, that fowls may not do as well if left to shift for themselves here as in some other parts of the country. The climate favors the rapid increase of vermin, and where fowls are kept in large flocks without proper attention, there are contagious diseases which are very destructive. These evil factors are, however, easily kept in check if the grower knows how and is willing to put forth the effort. We know that people who do this, and who understand the times and seasons for doing things in this climate, make a very profitable business with poultry.

One reason the poultry industry has been neglected in this State is, the tendency of the California mind after big things. The little industry of the poultry flock which adds so much in the aggregate to the comfort of the farmer's home at the East seemed to the Californian to be too small to occupy his attention. He can have his great farm producing his wheat by the shipload or his fruit by the carload, and, of course, he has no time for poultry and his family does not take to the fowls because there is money enough without trying to win it by the method the Eastern farmwife employs. But, as we have said, those who do like to get money this way, and are content with a moderate amount of it and are able and willing to give their fowls proper attention, do make money and are benefited by the high prices in our markets.

The application of the California idea of farming to poultry growing has not proved successful. The figuring of the produce of a few hens, multiplying it by 2000 or 3000 and then "going into hens" on a large scale, has not, as a rule, succeeded in this State. The reason why so many failures have been experienced, in our opinion, is that proper care has not been given, and proper arrangements made for the birds. Poultry will not stand huddling together in this State. The elegant buildings which are pictured as constructed at the East for sheltering thousands of fowls would soon be tenanted in California. Going into the business "on the large," has in the main proved a failure in this State. At the same time we believe there is opportunity for much more profitable work with fowls in this State than has been done. If one will work well with a few until he learns the local points of the business, the proper way to provide shelter, the times for setting, the treatment for vermin and administration of preventives from disease, the furnishing of proper food, including plenty of green food in the dry season, abundance of pure water, and having learned all these things with a few fowls, extends his interest just as fast as he can keep the business well in hand and no faster, we believe that nothing in the range of our agricultural branches will pay better than poultry-growing.

It is to be expected that this branch of California farming will increase in the future more rapidly than in the past. The incoming of many frugal families, and the necessity of securing a livelihood from moderate-sized farms, will call in the feathered race here as in the older States. We believe the secret of success

on our small farms will be mixed farming and the choice of the higher-priced products so as to realize wages for the time put forth to secure them. There is much satisfaction in well-kept fowls in this State. As with other animals, their growth is rapid, maturity early, and the long idle season of the East is absent. We believe that far wider attention should be given to the fowl, that enterprise and necessary investment should be put forth to secure the very best breeds, and then the business should be pursued with care and intelligence. With such facilities and such disposition, there is good pay in poultry for the time and investment employed.

We would like to hear from our readers on this subject, whether they have succeeded or failed, and how and why.

Wool Interest and the Tariff.

We notice that Hon. John Minto, who went East as a delegate of the Oregon Board of Agriculture to attend a meeting of the National Association of Wool-Growers, made a report during the recent State Fair in Oregon. He gives a sketch of some of the statistics set forth at the meeting which are certainly very significant, both of the injury worked by the revised tariff law and by the abuses which are practiced under the law. It was shown that, as a result of the change made in the tariff of 1867 by the law of 1883, wool-growing had diminished in all the States except Oregon; that in the single State of Texas the falling off in wool production had been 19,000,000 pounds, and in that of Ohio 4,000,000 pounds.

It was claimed that, in addition to the crushing out of American production to the amount of 40,000,000 pounds, by the change in tariff made by the law of 1883, there is now being admitted by under-valuations and fraudulently as ring waste, and tops (forms of partially manufactured wool), the equivalent of 40,000,000 pounds of raw wool against the spirit and intent of that law.

It was claimed that as one-twelfth of the male population of our country is directly engaged in wool-growing, and 100,000 more are dependent upon it for employment, and that indirectly its welfare is intimately connected with the entire industrial system and real independence of our country, wool-growers are justified in asking the co-operation they will freely give to keep its industrial life above the level of the ill-paid labor of European countries by judiciously enacted and faithfully executed protective laws.

ARIZONA DATES.—Major O. F. Thornton of Phoenix recently sent to the Department of Agriculture a bunch of dates which grew in Phoenix, which so interested Mr. Van Deman, the pomologist of the department, that he has had a painting made of it, of which a copy was sent to the grower of the dates. We hope the fact that dates have successfully fruited both in California and Arizona will lead the department to make an effort to secure from abroad plants of the best varieties for trial here. So far we have only seedlings from the date of commerce. It is almost certain that by testing a number of improved varieties we can get some fully adapted to our climate, and if so we shall have the material for the establishment of another profitable industry.

TEXAS FRUIT LAW.—We read that affidavit forms are being prepared by the Southern Pacific Co., to be filled out by shippers of fruit destined to Texas points. These affidavits will set forth the fact that fruit so shipped is the product of California, in which case it is permitted to enter Texas. This peculiar regulation is in accordance with a law recently enacted in the Texas Legislature, which excludes all fruit save that shipped from this State. Though the affidavit form may prove somewhat of an inconvenience, a counterbalancing advantage arises from the fact that this State has a monopoly of the deciduous-fruit supply of Texas, all others being excluded under this new ordinance.

ARIZONA.—C. Meyer Zulick, Governor of Arizona, in his annual report, estimates the population of the Territory at 90,000—an increase of nearly 50,000 over the census estimate of 1880. The aggregate assessed valuation of taxable property for the present year is \$26,313,500, an increase of nearly \$6,000,000 over 1886.

Silk Culture.

The Ladies' Silk Culture Society is now proceeding upon an active campaign upon the Society's property at Piedmont, in Alameda county. The \$5000 appropriated by the U. S. Government now comes into the hands of the Society, and with it the work will be carried on. The president, Dr. Gibbons of Alameda, expressed his views regarding the proper course to be pursued in preparing the land for the experimental station at Piedmont. He thought the work could be pushed along so as to allow of the planting of from 10,000 to 20,000 young mulberries during the coming rainy season. He also announced that 500,000 silkworm eggs were ready for distribution. On motion of Professor Davidson a contingent fund of \$100 was ordered taken out of the Board's funds and placed at the disposal of Dr. Gibbons. Professor Hilgard was authorized to communicate with the American Consul at Samoa, in order to obtain specimens of the various silkworms and mulberry trees.

As silk culture is being promoted in California by two organizations, the Silk Culture Society, with the funds from the United States, and the State Board of Silk Culture, with an appropriation from the State of California, it will be of interest to note the progress of silk manufacture in this country. This subject is treated in a special statement from the U. S. Bureau of Statistics, in which it is estimated that since 1879 there has been an increase of at least 235 per cent in the output of silk fabrics by American manufacturers. It is probable that New Jersey's output of silk fabrics will equal \$30,000,000 for the present year. In 136 New Jersey establishments there was invested at the close of 1886 a capital of \$11,543,000, the produce of which was about \$2.46 per \$1 of investment. In 1881 the return was \$2.50 on each \$1 of invested capital. The introduction since 1882 of what is known as the "Grant system" of reeling has effected a saving in the cost of labor to silk manufacturers for soft silk winding of from 62 cents per pound to 12 cents. In one of the largest factories the introduction of this improved system of reeling has resulted in a reduction of the cost of labor in this department amounting to \$40,000 per annum, and the silk is received in much better condition than formerly. Another result of the improvement is that a large number of hands are transferred to the weaving department, thus adding to the production of goods. Weavers now operate two looms, where a few years ago one man was constantly employed on each loom. The close competition for trade and consequent reduction in values have thus been provided for in a great measure. Ten new firms began business in New Jersey in 1876, but five have removed out of the State, four to Pennsylvania and one to Massachusetts. Ten firms operate two, four three, and three four mills each. Nine firms also have branches in Pennsylvania. Some of these annexes are used for throwing silk, which is then returned to the main establishments to be woven.

The Fair at Vallejo.

Among the score of fairs, district and otherwise, which have been held in California the past three weeks, it is somewhat of a puzzle which to notice first and within what limits to confine our observations. Time and space alike forbid our doing anything like justice to these numerous, interesting and valuable expositions; but we hope at least to touch upon them all, sooner or later.

The fair for the 25th Agricultural District, which includes Napa and Solano counties, was held at Vallejo, Oct. 4th to 8th. People in the northern part of the latter county took no interest in the matter, and although a few stout helping hands were stretched out from Napa, the work was nearly all done by dwellers in and around Vallejo. Despite all disadvantages, the enterprise and energy of those who did take hold of it in earnest rendered the fair, both at the stock-grounds and in the pavilion, a notable and glorious success.

The list of awards appears on page 328.

HORTICULTURAL APPOINTMENT.—The Governor has placed W. C. West of Fresno on the State Board of Horticulture, as Commissioner for the San Joaquin district, in place of W. M. Williams, declined.

Report of the College of Agriculture.

The last report of the College of Agriculture of the State University is now being mailed to California farmers who may apply for it to Prof. Hilgard at Berkeley. It is a document of unusual interest and its 167 pages are well filled with matters of local importance to our greatest industry. In his formal report Prof. Hilgard describes the work of his department in instruction and in experiment station work, which is increasing at a wonderful rate, which must be gratifying as signifying the popular interest and the general disposition to turn the University agricultural forces to the fullest practical account, although it entails a vastly increased amount of work upon Prof. Hilgard and his assistants. The report mentions ways in which the facilities of the station must be increased to meet this demand. First, in the securing of a competent specialist in entomology who shall give instruction to students and at the same time serve as an expert to whom horticultural organizations and individuals can submit obscure matters for determination—in short, a specialist who shall act as professor of entomology in the University and as State Entomologist. At present the entomological work is looked after by Mr. Wickson, who does as well as he can, but does not claim to be a professional entomologist, and he takes this in addition to other duties only until an expert can be provided. The report shows also that more room is needed for office work for botanical collections for laboratory investigation, etc. This, it is expected, can be secured in the near future. Another chemist is also needed, for at present it is impossible to keep abreast of the analytical work which is pressing. As the experiment station work may be largely increased under the Hatch bill, if Congress makes the necessary appropriation, better propagating houses will be required and a better heating apparatus for those now used. The planting of an arboretum for forestry observation is also needed and underdrainage is essential for the fields now used for culture experiments. As with most California institutions, the College of Agriculture is growing in amount of work and in the requirements made of it, and it is outgrowing its facilities.

The report has seven appendices. The first fills 54 pages and is written by Prof. Hilgard himself. It is a discussion of the work done in the general laboratory, including examinations of soils, waters and miscellaneous substances. We find that upward of 27 samples of soils have been fully analyzed and practical deductions drawn therefrom. These samples are taken here and there over the State, and add to the great fund of information about California soils which has been accumulating from year to year during the 13 years of Prof. Hilgard's work in this State. The same is true of the analyses of waters, to determine their potable and irrigable qualities. There are 9 artesian-well waters, 14 surface-well waters and 8 spring and drainage waters discussed in the report. The concluding 20 pages of the appendix are occupied with analyses and discussion of rocks, marls and fertilizers, commercial alkalies for insecticides, citrus fruits from different parts of California, etc.

The second appendix is by Mr. Wickson, and is a report on grasses, forage plants and cereals, the data being in the main derived from re-

sults reported by those who have tested the seeds and plants sent out by the University. The reports of about 300 individual experimenters in different parts of the State were used in the preparation of the report. The plants most fully reported upon are evergreen millet, Schrader's brome grass, Hungarian brome grass, millet grass, snail clover, Australian salt bushes, etc. An interesting series of experiments on the University grounds with the growth of different varieties of sorghum is described. There were several cuttings made during the summer and the comparative weights noted. A list is given of the grasses which form the chief meadow and pasture growths of the Sierra mountain region; also the grasses and clovers which can be seen growing in the experimental garden at Berkeley. Another branch of the report relates to the trials of various cereals, including a very interesting statement by Gen. Bidwell of the varieties tested on Rancho Chico.

Another appendix is by W. G. Klee, now State Inspector of Fruit Pests. Mr. Klee reports upon a host of industrial plants which have been sent out from the University, and gives in condensed form the result of several

Dwarf Peaches.

Rev. Dr. O. C. Wheeler gives us very interesting information of a "Dwarf" variety of peaches which he found on the farm of Mr. Maybe, near Carbondale, Placer county. He had quite a small orchard of them, and they delighted Dr. Wheeler so much that he induced him to spare two of the seedlings. They have been in Dr. Wheeler's garden, in Oakland, two years or more and have fruited finely. They do not appear to have been dwarfed by working upon other stock, but to be a distinct variety propagating itself from seed. The tree attains a height of four to six feet, with straight stem and symmetrical head. The leaves are of rich green color, very long, turned up at the sides so as to form a curved semi-tube, and are very abundant on the limb, thus presenting a beautiful effect to the view. The tree is a good and regular bearer. The fruit is large and handsome, slightly oblate globular, apex full and sometimes protruding, basin distinct, broad and deep, suture elevated but not prominent; surface downy, pale yellow with a faintly red cheek to the sun; flesh free from the stone, greenish-yellow, fine-grained, very tender and

A Glimpse of Castroville.

As the times in California are most full of industrial progress, the illustrated reflection of the popular thought deals rather with farm and village scenes than with portrayal of natural scenery. People who used to talk of nothing out-of-doors except our grand mountains and lakes, big trees and Yosemite, may now be heard eagerly discussing fertility of soils, average rainfall and nearness to market, all of which are features of the industrial rather than the natural situation. So, too, the artists are working upon orchard and vineyard scenes, views of growing towns and the like. It is just as well for a change to have it so for a few years. When we begin to get used to the rapid growth of our industries we shall return again to the quiet old mountains and the babbling brooks and other things which do not have the jingle of the dollar about them.

We give on this page a scene in a part of our State which is sharing in the forward movement of our agricultural properties—Monterey county. It is a view of Castroville with its environment of fertile fields. This promising little town is situated at the head of the great Salinas valley, nine miles from the county seat and about 110 miles from San Francisco. It was founded in the year 1864 by Mr. J. B. Castro, Mrs. J. C. Merritt and Mrs. M. A. Sanchez, the owners of the Rancho Bolsa Nuevay Moro Cojo, and they showed excellent judgment in the choice of a site. Immediately surrounding it is as rich an agricultural section as there is in the State, backed by large tracts of fine grazing lands. It is only 2½ miles to the water-route shipping point, Moss Landing, on Monterey bay, where are located capacious warehouses belonging to the Pacific Coast Steamship Co. Possessed of these and other natural advantages, Castroville seems destined to become an important town at no distant day.



VIEW OF CASTROVILLE, MONTEREY COUNTY—LOOKING FROM THE EAST.

years' comparative study of the fruit varieties in the standard orchard at Berkeley. This appendix will be read with great interest both by the grower of ornamental plants and by the fruit-grower. From it can be ascertained which apricots, apples and pears are most likely to give good results in the coast region of California and many other points of wider application. Another appendix gives entomological notes, the full record of the Hessian-fly experiment, etc., by Mr. Wickson. Another gives details of the distribution of seeds and plants and donations of the same to the University.

Besides this pamphlet, there are two others which are appendices also, but published separately. One is the Viticultural Report and the other the Report on Alkali Lands and Drainage, which were issued last January. The whole report indicates a large amount of work by the college staff, and the results, as set forth, are a valuable contribution to our agricultural literature.

SAN DIEGO, according to estimates in last week's Union, has had 45,000 passengers brought to her by rail and steamer since the 1st of January. They claim that quite 30 per cent of the arrivals have remained, thus adding 13,500 to the population.

THE National Bureau of Statistics estimates the wool clip this year at 70,000,000 pounds, and the number of sheep in the country at 40,000,000, an increase of 5,000,000 since the last census.

full of juice, with vinous, sub-acid flavor—in all respects most desirable for the table. Its keeping qualities or value for canning have not been tested, but Dr. Wheeler designs to make these tests next year. For a small place and for a combination of beauty and utility he regards it with high favor.

INVESTIGATING THE WOOL INDUSTRY.—We learn from the Washington Republican that R. M. Bell, Esq., formerly of Brighton, Ill., one of the most successful practical shepherds in the United States, is now connected with the Bureau of Animal Industry, and is making a thorough investigation relative to the wool and mutton growing interests of this country. Mr. Bell is now making a tour of observation, and his conclusions will form a most useful and valuable compendium on the sheep husbandry of America. The securing of the services of Mr. Bell by the present commission of agriculture is another evidence that Mr. Colman is wide awake to the importance of sheep husbandry. We hope to see Mr. Bell in California in pursuit of his inquiry.

DEATH OF CHARLES LEFRANC.—We regret exceedingly the death of Charles Lefranc, a pioneer citizen of Santa Clara county and prominent vineyardist. He was killed recently at his home a few miles from San Jose while attempting to stop one of his teams which was running away. He was held in high esteem by those who knew him best, and his death is widely and deeply regretted.

THE NEVADA CATTLEMEN.—There has long been considerable feeling among some of the Nevada cattlemen concerning the way the railway managers have treated them. We notice now that they propose to drive their cattle from Elko to Reno for shipment in case the Central Pacific Company continues to refuse them the privilege of laying the cattle off at Reno to feed. They say they can better afford to do that than pay two rates by making the stop at Reno. The proposition is to establish a trail and dig wells where necessary. They claim, according to the Reno Gazette, that they can drive the cattle from Elko to Reno at a cost of \$1.50 per head.

GONE TO CANADA.—John A. Benson was one of the most prominent persons indicted some months ago by the U. S. Grand Jury for perjury and conspiracy in fraudulent surveys of public land. The indictment against the alleged conspirators was dismissed, on account of the looseness with which the document had been drawn up, but with the expectation that another would soon be found against them. Meanwhile Mr. Benson left the Pacific Coast and is reported to have joined the Dominion colonists.

STOCKTON seems likely to have a large cannery running next year at the old Houser Agricultural Works. Chas. M. Weber has been up there, from San Jose, pushing the project and meeting with great encouragement.

Fair Awards.

The following awards for the products of agricultural and allied industries were made at the several fairs designated:

Nevada State-Reno.

HORSES.

THOROUGHBRED—Best 4-yr-old and over mare, F. A. Cooks of Bellevue, Idaho, "Clara L.," 1-yr-old do., Theo. Winters, Washoe City, "Ogzele;" 4-yr-old stallion, T. Winters, "Jumbo;" 1-yr-old do., W. D. Hardins, Reno, "Toby;" 1-yr-old mare, Joe Frey, Reno, "Ione."

ALL WORK—Best 4-yr-old and over stallion, Joe Hennen, Elko, "Sam;" 3-yr-old do. and 2-yr-old do., Jesse Harris, Fort Collins, Col., not named; 1-yr-old do., A. J. Smith, Reno, "Telephone;" 4-yr-old and over mare, same party, "Nel S.;" 3-yr-old mare, Jas. Gault, Reno, "Minerva;" 2-yr-old mare, same party, "Maud;" single gelding 4 yrs. old and over, same, "Alex;" do., 3 yrs. old and over, Gov. C. C. Stevenson, "George S."

DRAFT—Best 4-yr-old and over stallion, J. A. Steiner, Reno, "Royalty;" 3-yr-old do., E. C. Hardy, Toano, "St. Laurent;" 2-yr-old do., same, "Hammond;" 4-yr-old and over mare, T. G. Herman, Wadsworth, "Queen;" 3-yr-old do., A. J. Smith, Reno, "Lady Maud;" family (sire, dam and three colts), J. Gault, Reno, "Jim," "Nellie," "Lucy," "May" and "Frank."

ROADSTERS—Best stallion, 4 yrs. old and over, Wm. H. Collins, Reno, "Arthur C.;" do., 3 yrs. old, E. P. Smith, Taylorville, "Engineer;" gelding, 4 yrs. old and over, E. L. Hubbard, Reno, "Johnny Golong;" horse, mare or gelding, 2 yrs. old, J. P. Sweeney, Carson, "Pat Reddy;" horse, mare or gelding, 1 yr. old, T. Herman, Wadsworth, "Mollie H.;" 4-yr-old and over mare, O. C. Ross, Reno, not named.

SADDLE—Horse, mare or gelding, H. Douglass, Reno, "Dude."

JACKS—B. C. Platt, Reno, "Bourbon."

SWEEPSTAKES—Best stallion, any age or breed, Jesse Harris, Fort Collins, Col., "Blooming Heather;" mare, any age or breed, A. J. Smith, Reno, "Lady Maud."

CATTLE.

SHORTHORNS—Best 4-yr-old and over bull, Vail Bros., Fort Churchill, "Prof. Mike;" 2-yr-old bull, W. J. Marsh & Son, Fort Churchill, Imported "Duke of Waterloo;" 1-yr-old, E. W. Crutcher, Winnemucca, "Sylvia's Waterloo 39th;" 4-yr-old and over cow, same, "Lulu Watson;" 3-yr-old, same, "Felicia;" 2-yr-old, same, "Claudia 3d;" 1-yr-old, W. J. Marsh & Son, Fort Churchill, "Wild Eyes Duchess 12th;" best herd of 1 bull and 4 heifers, under 2 yrs., shown by owner or breeder, thoroughbred cattle, raised in Nevada, or counties of California and Oregon as admitted, same party; best herd of thoroughbred cattle over 2 yrs. old, to consist of 1 male and 4 females, owned by one person, Vail Bros., Fort Churchill.

HEREFORDS—M. Polk, Halleck, all-premiums.

JERSEYS—Best 4-yr-old and over bull, B. C. Platt, Reno, "Grey Knight;" 4-yr-old and over cow, same party, "Princess Montgomery;" all other premiums, Gov. C. C. Stevenson, Carson.

POLLED ANGUS—Best 3-yr-old bull, E. W. Crutcher, Winnemucca, "Orlando;" 4-yr-old and over cow, same party, "Gretchen."

POLLED GALLOWAYS—Best 4-yr-old and over bull, Vail Bros., "Black Knight;" 3-yr-old bull, E. W. Crutcher, "Spring Water Monarch;" 1-yr-old bull, same.

HOLSTEINS—Best 4-yr-old bull, M. Gulling, "Prince of Nevada;" all other premiums, Stanford.

CROSS-BRED FULL BLOODS—Best 3-yr-old cow, B. C. Platt, "Lily of the Vale."

GRADED—Best 1-yr-old bull, M. Polk, Halleck, "John Henry." Cows—Best 4-yr-old and over, same party, Roan; 1-yr-old, Vail Bros., "Compromise."

SWEEPSTAKES—Best 1-yr-old bull, M. Polk, Halleck, "Homestretch;" cow, any age or breed, same, "Patch." Best bull with five calves under 1 yr., Vail Bros., "Prof. Mike;" "Shoshone;" "Princess;" "Pawnee Girl;" "Apache Chief;" "Sioux Boy;" "Comanche Chief."

E. W. Crutcher was awarded the W. O. H. Martin prize for the best Nevada exhibit in the first department.

Mrs. A. Longley gets 1st prize for best calf under 1-yr-old. Hallock Cattle Co. 2d prize.

SHEEP AND SWINE.

Spanish Merino ram, 2-yr-old and over, E. C. Hardy, Toano, "Merrimac." **French Merino ram** 2-yr-old and 1-yr-old, Theo. Winters, Berkshire boar, sow and pigs, A. C. Hill, Reno.

POULTRY.

Best Plymouth Rocks, A. C. Hill; **Asiaties**, B. C. Platt; **Brown Leghorns**, same; **Houdans**, A. C. Hill; **B. R. games**, W. M. Starling, of Carson; **bronze turkeys**, A. C. Hill; **Muscovy ducks**, J. Gault; **Pekin ducks**, Ben Peck; **geese**, Mrs. J. Gault. **Sweepstakes**—Best trio fowls, any age or breed, W. M. Starling.

DAIRY PRODUCTS.

Best 10 lbs. cheese, and best and largest display of cheese, Mrs. Theo. Winters; **best 10 lbs. butter** in rolls, Mrs. J. Gault; **best firkin or jar butter**, 20 lbs., Mrs. W. W. Morton.

FRUIT, VEGETABLES, ETC.

Best doz. varieties apples, Wm. Riley; $\frac{1}{2}$ doz. do, Mrs. J. Gault; **display pears**, Wm. Riley; **peaches**, C. H. Symonds; **plums**, Wm. Riley; **quinces**, same; **grapes**, C. H. Symonds; **5 lbs. dried apples**, J. S. Towles; **exhibit fruits in variety**, Mrs. Wm. Riley; **dried vegetables**, C. Stoddard; **dried apples**, dried peaches, dried plums, Miss C. Graff.

Best var. vegetables, A. Winters; **2d coll. vegetables**, Guy Flint; **100 lbs. early rose potatoes**, Geo. Alt; **100 lbs. any var. vegetables**, T. G. Herman; **best doz. parsnips**, carrots, long blood beets, turnip beets, G. Alt; **10 lbs. tomatoes**, Mrs. J. Gault; **drumhead cabbage**, G. Alt; **other variety**, L. Capurrow; $\frac{1}{2}$ doz. cauliflower, G. Alt; **lettuce**, W. Riley; **yellow onions**, G. Alt; **narrow squash**, Mathews; **Hubbard squash**, I. P. Johnson; **pumpkin**, O. C. Ross; **sweet corn**, B. Peck; **mammoth**

squash, Mathews; **watermelons**, O. C. Ross; **cantaloupes**, Mrs. J. Gault; **white beans**, royal beans, chestnut beans, cucumbers, W. Riley.

Display of honey, E. A. Moore.

Best and largest collection of flowering plants in bloom, Mrs. D. B. Boyd; **best coll. ornamental foliage plants**, Mrs. J. L. Flint; **best display cut flowers**, Mrs. A. H. Manning; **best disp. hanging-baskets** containing plants, Mrs. T. K. Hymers.

Vallejo—25th District.

HORSES.

THOROUGHBRED—All premiums to B. C. Holly, Vallejo.

ALL WORK—4-yr-old stallion, "Rigoletto," F. Brughelli, Napa; 4-yr-old mare, "Hattie P.," Mrs. S. S. Drake.

GRADED—4-yr-old stallion, "Coligna," Cal. Reams, Suisun.

DRAFT—4-yr-old stallion, "Frenchy," E. J. Upham, Collinsville; 4-yr-old stallion, "Samson," H. D. Deming (special); 3-yr-old stallion, "Gladstone," P. D. Walsh; 4-yr-old mare, "Nellie," H. B. Deming; 3-yr-old gelding, "Frank," J. W. Farmer.

ROADSTERS—4-yr-old stallions — "Woodnut," B. C. Holly and —, T. Smith; 4-yr-old mares — "Nellie," A. J. McPike, Vallejo, and "Flora Belle," Mr. Skinner, Napa; 2-yr-old mare, "Ramona," F. H. Sanderson; gelding, "Acme," A. J. McPike.

CARRIAGE AND SADDLE HORSES—Double team, "George" and "Ed.," S. Corcoran. Single buggy mares, "Pet," Mrs. L. A. Starr, and "Maggie," G. H. Pease, Napa; 4-yr-old stallion, "Hambletonian, Jr.," F. W. Loeber, Napa; 3-yr-old stallion, "Free Willie," H. B. Starr; 4-yr-old mares, "Matamore," Mrs. Skinner, Napa, and "Alice P.," M. Kemper; 3-yr-old mare, "Jordan Beauty," Mrs. Skinner; 2-yr-old mare, "Hattie G.," J. W. Farmer; suckling colt, "Aggie K.," and 2-yr-old gelding, "Starr K.," M. Kemper.

CATTLE.

DURHAM BULL—"Roscoe," J. Hunter & —, A. K. Brown.

ALDERNEY BULL, "Abe Lincoln," Joseph Wilson. **JERSEY BULLS**, "Gold Digger," B. C. Holly, and "Cable Fawn," J. M. Grogan, Napa; cow, "Pailful," J. Wilson.

HOLSTEIN BULL, "Waterloo," and cow, "Submonte Princess," J. Wilson.

SHEEP AND SWINE.

SOUTHDOWNS AND SHROPSHIRE—W. Middleton, Napa. **Cotswolds**—W. Watson, Suscol. **Leicester**—back and grades—P. D. Walsh. **Berkshire**—boar, sows and pigs, F. Sanderson.

POULTRY.

TURKEYS—Black, White, and Game Leghorns, and best exhibit poultry, E. McLees. **Wyandottes**, **Black Polands**, and **Game Bantams**, Mrs. Starr. **Plymouth Rocks**, D. W. Harrier. **Ducks**, H. B. Deming. **Best graded poultry**, Commodore Belknap.

PAVILION EXHIBITS.

GRAIN AND VEGETABLES—Barley and oats, F. H. Sanderson; corn, C. B. Deming; potatoes, F. Brughelli; squashes, Mrs. Graves; pumpkins, J. Soanes; corn, growing, J. Hunter.

FRUIT, GRAPES AND NUTS—Exhibit fruit, C. B. Deming; ex. apples, F. De Carlow; single var. and 6 var., Mrs. R. E. F. Moore; pears, same; plums, Miller Ranch; quinces, Mrs. D. Smith; oranges, Dr. Anderson; lemons, P. Grimes; watermelons and muskmelons, J. R. Simmons; grapes and raisins, C. B. Deming; ex. grapes (special), H. W. Crabb; figs, D. C. Snyder; almonds, F. De Carlow; canned fruits, Mrs. J. W. Farmer and (special), Mrs. C. B. Deming; dried apples and dried fruit, Mrs. C. B. Deming; California wines, 1st, H. W. Crabb; 2d, M. M. Estee; California brandy, H. W. Crabb.

DAIRY PRODUCTS—Butter, 1st, F. Brughelli; 2d, J. W. Farmer; cheese, D. W. Harrier.

IMPLEMENTS, ETC.—Gang plow and cultivator, E. Topham; pruning shears, Briggs & Jacobson; butter box, J. W. Farmer.

FLOWERS AND SHRUBBERY—1st prem., P. Hassitt; 2d, Miss E. Maguire; house plants, Mrs. J. C. Browne; blackberry vine, Jos. Byrle; floral exhibit, Miss F. Deming; roses and pot plants, Mrs. H. Englebright; pot plants (spec. prem.), Ray Cassidy.

Fire in Lodi.

About noon on the 11th inst., the Novelty Planing-Mill at Lodi was found to be on fire, and in less than an hour the chief business block of the town, bounded by Sacramento, Pine, School and Elm streets, was almost entirely consumed. The only buildings left standing in it were the Grangers' store and two dwelling-houses in the northwestern corner.

The saving of the Grangers' building, and probably of two whole blocks beyond, was due to a somewhat singular occurrence. A house close in the rear of the store was just catching fire, when the joists supporting the full tank gave way, and the contents deluged the premises, dashing against the house and extinguishing the blaze. E. Lawrence, manager of the Grangers' Co-operative Business Association, estimates the damage to their building and stock, mostly by water and smoke, at \$2500, fully covered with insurance.

The total loss was estimated at \$70,000, not more than a quarter of that amount being covered by insurance. It is thought, however, that one good will result from the conflagration, namely, the organizing of a fire department.

"INJURIOUS INSECTS."—In our issue of 8th instant Matthew Cooke's large illustrated work on entomology was mentioned as costing \$30. Mr. Robert J. Cooke writes us that that was a mistake and the price is \$4 per copy. At the latter figure, however, we regard the book as affording the practical farmer and orchardist an opportunity which he should not neglect, for investing a small amount of money to great advantage. We have a few copies on sale at this office. Price \$4, post free.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

GOPHERS' GARNER.—Irvington Reporter: E. H. Frick, while excavating in the cemetery last week at a depth of three feet beneath the surface, came upon a cavity made by gophers that was filled with 135 bulbs of the narcissus flower plant, growing 35 feet from where found. This shows the destructive habits of the rodent and that a subterranean wall a foot or two deep will not shut them out of a lot. In order to protect against them it is necessary to sink walls as much as four feet deep.

WHEAT IN WAREHOUSE.—Haywards, Oct. 17: Grain has been pouring into the warehouses steadily, and even with the additions it has been difficult to accommodate all who wished their grain stored. All the grain will probably be in by the last of next week.

Amador.

MORSELS FROM MIDDLE BAR.—Jackson Dispatch, Oct. 15: Dr. Chambers has a ranch on the hillsides which he can either irrigate or cultivate. His fruit trees, though young, show what this country can do. He also has a large fish-pond. Mr. Crannin, at the Bar, has the largest fig tree in the county, and one of the largest outside Mission San Jose. Mr. Sanguinetti, just above, has a ranch with the finest of fruits and vegetables. Passing along the river, up and down, you not only find the citrus fruits, but all others, particularly apples, grapes and pears, which we only need a railroad to make a success of.

FOREST FIRES.—An extensive fire has been raging in the neighborhood of Clinton, N. Y. Ranch and Pine Grove for several days past, and has done considerable damage, destroying feed, wood, fences, houses, barns, etc. Nearly every farmer in the neighborhood has suffered more or less, but the heaviest loser is Mr. T. Gianini, who lost his dwelling-house, barn, two wagons, harness and farming implements, and also about 65 tons of hay. Wm. Scharenbroch, we understand, lost about \$1000 worth of mining timbers. J. D. Mason lost about 100 cords of wood. A. Douet, at the Esperance tunnel, lost his dwelling-house, blacksmith-shop, tools, provisions, etc., amounting in the aggregate to about \$600, and many others lost wood, fences, etc.

Butte.

CANNERY PACK.—Chico Enterprise, Oct. 7: H. G. Hulbard, Supt. of the cannery, gives us the following figures of the season's work: Apricots, 73,335 cans; blackberries, 2129; cherries, 8607; green peas, 1250; peaches, 154,732; pears, 40,000; apples, 2000; plums, 12,000; tomatoes, 6000; grapes, 16,000; nectarines, 2000; miscellaneous, 2000; total number of cans, 320,053. Of the above, seven carloads have been shipped to St. Louis and six to Chicago. There are 20 carload lots yet to be shipped East on orders, besides a large growing trade has sprung up in Northern California and Oregon which has to be supplied. Early in the season orders for the Chico cannery fruit came in so thick and fast that the agent at the East had to be recalled and many orders canceled. The fruit was plenty, but could not be handled. Had the capacity of the cannery been larger and help plenty, the above figures might easily have been doubled. As high as 250 hands have been employed at one time during the past season. Work will soon be commenced to enlarge the building, so that more can be accomplished, if the help can be secured, next season.

IN THE BURNING FOREST.—Chico Enterprise, Oct. 14: Grant Seward & Eugene Gifford, on their trip to Nimsheaw yesterday, noticed the fire raging on the hillsides above, but did not think it would burn down to the road before their return. On driving back, the dense smoke they encountered they thought came from the hillsides. They drove by a burning pine tree, and, in passing, saw it was ready to fall. When a short distance past the tree, it fell with a mighty crash across the road, and effectually barred all escape in that direction until it was burnt up. They were now in the midst of crackling flames, blinding smoke and falling limbs, with a thoroughly scared team. Gifford got out and led the horses, while Seward lashed them with the whip. After struggling through this terrible ordeal for 15 minutes, they reached a dell in the road that the flames had not yet penetrated, and threw themselves, almost blinded and suffocated, by the wayside, panting for breath. After a few minutes' rest, they started the horses through on a dead run, and escaped without further mishap. The young men show traces to-day of their hard trip, and are considerably scorched and blistered. They report that the fire is raging with great fury near Nimsheaw, and a large territory has been burned over and valuable timber destroyed, with seemingly no effort made to check it.

Contra Costa.

GRAPES HIGH AND LOW.—Antioch Ledger, Oct. 15: We have received generous samples of Rose Peru and Muscatel grapes from the Oak Point ranch, raised on the reclaimed tule land; and the samples noted had all the excellent qualities for which these varieties of table grapes are valued. As showing the wide range over which grapes may be successfully grown, we mention an instance where the conditions of growth are as dissimilar as possible, although

the result is equally satisfactory. On Chris. Nagle's place in the high chaparral, and almost without cultivation, a two-year-old vine has yielded this season 75 pounds of fruit.

Fresno.

TEMPERANCE RAISINS.—Fresno Republican, Oct. 14: Sam Littlefield will get about 14 tons of raisins from less than 12 acres of vineyard this year in Temperance Colony.

USEFUL TO RAISIN-PACKERS.—The patent recently granted to T. C. White of Raisina vineyard is one of great utility to raisin-packers. Hitherto the great trouble in packing raisins in the boxes for shipment has been to give the top layer the smooth, even and regular appearance that those of foreign countries have. To do this it has always been necessary to put this layer in by hand, and a great deal of time was consumed in doing it. With Mr. White's plate it can be done without trouble and very quickly, while the appearance of the layer is greatly enhanced.

Humboldt.

VEGETABLES IN VARIETY.—Eureka Standard, Oct. 15: We are in receipt of fine samples of vegetables raised on the farm of Mr. R. L. Waite, near Springville, which it would be hard to excel anywhere in the State. In the lot we observe as most worthy of mention one head of cabbage, which weighs 22 pounds, two large beets weighing 8 or 9 pounds, which excel anything in their line for table use, six onions of 10 pounds weight, and as fine a lot of large potatoes as can be found in any market.

VORACIOUS VERMIN.—G. O. Barber of Grizzly Bluff has lost 80 sheep during the last month by the ravages of coyotes and wildcats, and the same general complaint is universally heard from sheep-owners on Mad river and other ranges throughout the county during the past season.

Inyo.

WATER STORAGE.—Bishop Creek, Oct. 13: A Nevada company has located a series of lakes in the mountains east of this place, with a view to impounding the waste water in the early spring. Some 1200 acres of hitherto valueless land will be made available for location and cultivation. Surveys are being made and the work of constructing dams will be commenced at once.

Monterey.

FOOTHILL FRUITS.—Monterey Democrat, Oct. 15: J. P. Pugh, whose place is located in the foothills west of the Salinas river, between Gonzales and Soledad, sent this office yesterday a box of magnificent grapes, which excel in flavor and size of the bunches any we have seen. The box contained three varieties—Flaming Tokay, Muscatel and Black Hamburgs. Besides grapes, the Pughs, father and son, raise the choicest varieties of peaches, apricots, almonds, nectarines, prunes, plums and apples in abundance. They have demonstrated that the foothills west of the Salinas river are capable of producing fruit as fine as can be grown in any part of the State. We have kept a few bunches of these grapes, and those who desire to see what can be produced in Monterey county can call at our office and see them.

Napa.

THE FIRE ON HOWELL MOUNTAIN.—St. Helena Star, Oct. 14: From Mr. Angwin, who has large possessions there, we learn that it swept over about 2500 acres of forest. Among the heaviest losers are A. C. Donnell of Oakland, one barn and seven tons of hay, also a lot of farming tools and one-quarter of a mile of picket fence. Edward Haast, house and barn, 50 cords of wood and one-quarter of a mile of fence. Mr. Ross, one-half mile of picket fence and 30 cords of wood. Mr. Culter, 75 cords of wood. Captain Dunbar, one-quarter of a mile of fence, and Messrs. Holihan one-quarter of a mile of fence. Angwin's summer resort was in danger, and the ranch of E. M. Hall, Jr., was also threatened. Colin Ross' property stood in great danger also. Tuesday the fire was completely under control in this section.

San Benito.

ARTESIAN WATER.—Free Lance, Oct. 14: J. G. Hamilton's well, bored on his grounds in the center of Hollister, has attracted a great deal of attention. Three streams were struck between a depth of 80 and 174 feet from the surface. Not content with this, although the flow of water was abundant and rose to the height of two feet above the ground, Mr. Hamilton went still deeper, until at a depth of 220 feet the drill struck solid rock. Having all the water he could use, and in fact enough to supply the town if necessary, Mr. Hamilton stopped drilling, and is now running pipes from the well all over his large grounds. The only other well in Hollister is that on the grounds of W. I. Reed, which was bored by Thos. Yost some years ago. It is now thoroughly demonstrated that artesian water can be obtained anywhere in Hollister at a depth averaging 170 feet. The wells thus far have been bored by hand, and the process is therefore rather slow and laborious. The water is clear and cool, and as pure as can be. Coming from 170 feet below ground, there can be no surface water in the pipe.

PROLIFIC PEAR TREE.—On the corner of Williams and Monterey streets is growing a pear tree of the Spanish Mission variety, planted by Col. Hollister over 17 years ago. For the last 10 years it has been utterly neglected, the soil in the lot in which it is situated has not been tilled, neither have the branches been trimmed. Not a drop of water has touched its roots other

than that which fell from the heavens. In spite of this neglect the tree has grown and thrived. This year over a ton of pears have been gathered from it, and a large number are still left. The fruit is large and sound, and admirably adapted for preserving. It is easily worth two cents a pound, or \$40 for this year's crop.

HAY AND GRAIN.—As an instance of what has been done in this county without irrigation, we give the results of cultivating 1100 acres farmed by Robert Osborn, in the Quien Sabe valley, 10 miles east of Hollister. Hay, 600 tons, valued at \$6000; wheat, 4300 centals, valued at \$5500; barley, 2500 centals, valued at \$2250. Total value of crop this year, \$13,750. These are not fancy figures, but show what is recurring every year in various portions of Central California.

San Bernardino.

IRRIGATION HEAD-DITCH.—*Ontario Record*: J. W. O'Bryan is manufacturing some sections of his patent head-ditch, and the invention promises to be of great service to the fruit-growers of Southern California. The same combination of cement, sand and gravel is used as for making cement pipe, and the mold is constructed on the same general plan. A cross section of the pieces would have about the shape of the letter U. The joints are two feet long, about two inches thick, 12 to 15 inches wide and about 12 inches deep. The ends match so that the laying can be rapidly done, and provision is made for turnouts at proper intervals, an iron plug being used in the model. This ditch will certainly be a great improvement over the common dirt one.

CANNING 'COTS AND PEACHES.—*San Bernardino Index*, Oct. 15: The Lugonia cannery shut down for the season last Saturday night. They began June 7th and have used up 100 tons of peaches and 60 tons of apricots. They have employed an average of between 75 and 100 hands, and the entire pack has been shipped to fill orders from Eastern buyers.

San Joaquin.

SECOND-CROP APPLES.—*Stockton Independent*, Oct. 15: Thomas Smith has an apple tree growing in his yard, at the corner of Church and American streets, that has distinguished itself by producing a second crop this year. This tree is of the red Astrachan variety, and six years of age. In June last the first crop ripened and were picked. In the latter part of July the tree put forth new blossoms, and a few days ago Mr. Smith picked two fine, large, ripe apples, the first installment of his second crop.

San Luis Obispo.

MOUNTAIN VINES AND PRUNING.—*Josephine Cor. S. L. O. Tribune*: No frost reaches us, nor is there any continued low temperature, and all fruits prosper exceedingly. Considerable progress has been made, particularly in grape-growing. Mr. A. York has about 40,000 vines, 20,000 of which were set out last year, the others planted in successive seasons for the past eight years, embracing all the fine varieties. Adjoining him, Mr. Dover has from 5000 to 6000 vines, mostly of the Mission and Malvoisie varieties. The yield is very large, averaging quite 50 lbs. to the vine, some of the vines bearing over 100 lbs. A rather peculiar and suggestive fact is, that the vines bearing most heavily were pruned, leaving a growth of three feet or more, instead of as usual only a few inches. The old growth is a solid mass of grapes. We would like to hear what experience teaches elsewhere. Mr. York tells us that his conviction is, that the usual close pruning is a mistake, and that he intends to prune differently in the future, leaving longer vines.

Santa Clara.

FRUIT SENT EAST.—*San Jose Times*, Oct. 14: Yesterday the largest shipment of green fruit ever made from this place to the East in one day took place from the S. P. depot. It was in nine cars, each containing from 10½ to 12 tons, and aggregated over 100 tons, principally pears and grapes, addressed to Chicago, Louisville, New York, St. Louis, Minneapolis, Kansas City, Omaha, Cincinnati, Denver and New Orleans.

Santa Cruz.

VITICULTURAL.—*Pajaronian*, Oct. 13: Last spring Judge Gaffey distributed several thousand grape-cuttings among farmers who desired to experiment in viticulture. With scarcely an exception, the reports therefrom have been gratifying as to the growth of the vines. The valley upland and the foothills of this township are adapted for the grape. The vineyards of John Rossi, F. Ceschi and others in the vicinity of Corralitos are in fine bearing this year, and the table grapes from that section are as good as those shipped from Napa. In the northeastern foothills A. Mendia has a thrifty young vineyard that promises well. Experts claim that along the foothills in the vicinity of Mr. Mendia's home the grape will mature as perfectly as at St. Helena.

Sonoma.

RESISTANT RIPARIAS.—*Sonoma Tribune*, Oct. 15: John H. Wheeler, Chief Viticultural Officer of the State, and Chas. Krug of St. Helena recently visited the vineyard of Mr. J. Dresel, one mile east of Sonoma, to examine the resistant vines. Mr. Dresel's vineyard, one of the finest and most thrifty in the State, is grafted almost entirely on riparia roots to resist phylloxera, and is the earliest effort conducted on an extensive scale made in this State. The committee, Mr. Wheeler states, is

able to report a perfect success for Mr. Dresel; and in their report will call the attention of the viticultural public to his generous example, as that gentleman has spared neither time nor money in successfully demonstrating that phylloxera can be resisted. Mr. Dresel's vineyard, the committee say, is not only notable for its resistance, but also for the large crop which it has produced since coming into bearing.

LOCAL ITEMS.—*Santa Rosa Republican*, Oct. 13: Farmers and sheep-raisers in the sparsely settled parts of the county complain of the ravages made upon their flocks by coyotes. Supervisor O'Hara has lost a number of sheep, and it seems almost an impossibility to kill the ravenous animals. The cannery closed Saturday. The boys and men who were engaged in the cannery can find plenty of work in the vineyards. W. Hotel of Sebastopol brought to this office a watermelon weighing 42 pounds. A sunflower measuring 15 inches in diameter has been left at this office by N. P. Dibble of Forestville.

Shasta.

TAKING UP LAND.—*Redding*, Oct. 13: A colony of 70 Germans from the southern part of the State have entered all the Government land in Hat Creek valley. Thirty of the company are on the ground, and the remaining 40 will arrive in a few days. The hotels the past week have been crowded with parties taking up timberland on the headwaters of Cow, Clover, and Montgomery creeks. The land office at Shasta has more applications for land than at any previous period of its existence.

Ventura.

BEANS AND SPUDS.—*Democrat*, Oct. 13: Immense beanfields yet unthatched are seen on both sides of the railroad between this town and Santa Paula. On a trip up the valley Saturday last only one thrashing machine was seen at work, and a heavy rain, which might happen now almost any day, would do great damage to this crop. One day last week Mr. J. V. Alvord, a successful farmer on the Colonia, left at the *Democrat* office 13 potatoes of the Peerless variety, white-skinned, oblong in form and weighed in the aggregate 33 pounds. The largest of the lot weighed 4½ pounds, were firm throughout and of excellent flavor. If Mr. Alvord has many such he should be able to take premiums at all fairs in the State.

Yolo.

ANYTHING TO KILL COYOTES.—*Woodland Democrat*, Oct. 13: Geo. Chapman, J. Briggs, Scott & Lowe, Duncan Bros., W. Levy, N. Sweitzer, D. Woigamott, Pace & Cramer, G. Vallmer, R. M. Aucker, J. P. Goodnow and J. R. Parker, all sheep-raisers along the line of the foothills bordering the west side of Yolo county, have contracted to pay \$1 each into a common fund in order to pay a reward of \$15, in addition to the \$5 bounty awarded by the county, for every coyote scalp captured on their ranges. Doc Duncan of Capay has been chosen treasurer, to whom the coyote scalper must apply, swear to the locality in which the coyotes were captured, and receive his reward. If the coyotes in that section are as plentiful as they are represented to be, a good hunter might do well in the business.

MARKETING POULTRY.—*Yolo Mail*, Oct. 15: For the past few weeks Wells, Fargo & Co.'s wagon has been heavily laden every day with enormous coops of chickens, all of which were sent to S. F. and Sacramento. The demand for the Yolo birds still continues, and yesterday some 20 dozens of chickens and turkeys were shipped to S. F. The present is an excellent time for our producers to sell their poultry, as prices are quite high. Many ranchers make a practice of reserving their chickens until the holidays begin; but then the market is glutted and prices are much lower.

NEVADA.

ALFALFA AND OATS.—*Reno Journal*, Oct. 8: E. W. Powell, manager of the Russell & Bradley ranch, on the English mill property, brought in a specimen of oats and alfalfa that was planted in July. The growth is vigorous, the oats being about four feet high. It shows conclusively what soil here will do when water is used freely.

CARSON FAIR.—*Reno Gazette*, Oct. 8: The first District Fair of Ormsby, Storey and Douglas counties ended Saturday. The exhibits of live-stock and ranch produce were highly creditable, and made the old '49er realize that the State was good for something besides its stores of precious minerals in the mountains. It has been proven beyond a peradventure, by both the State Fair and Carson exhibits, that our soil is exceedingly productive when irrigated. As an instance, Mrs. Stewart, wife of our United States Senator, exhibited at the Carson pavilion 40 Snowflake potatoes weighing a fraction over 60 pounds, raised in her garden this summer. President Lee said the fair was in every sense more of a success than was expected by the most sanguine, larger and better exhibits, greater attendance and the results financially were gratifying. The fair was self-supporting, with the exception of probably about \$400, which will be covered by life-membership fees.

BREEDING HEREFORDS.—*Gazette and Stockman*: There is a ranch in Nevada at which the raising and breeding of Hereford cattle from the choicest strains is made a specialty. Joseph Scott & Co. of Halleck, Elko county, are, so far as is known by the writer, the only firm in the sagebrush country engaged in breeding the

"whites." The farm proper is nine miles from Halleck, and is under the superintendency of Mart. Polk, whose experience and enterprise entitle him to be placed upon the list of progressive breeders. There are at present fully 100 head of pure-blood Herefords, Devons and Durhams on the farm, the former being closely allied to the famous lines over which Grove 3d and Lord Wilton have shed so much distinction. At the recent State Fair the firm exhibited a number of Herefords, among them being the famous bull "Homestretch," who has been for a long time, and still is, the monarch of their herd. "Sagebrush Bull," exhibited by Hunter Bros. of Elko, was first owned by Scott & Co., and the success attained by him as a sure "getter" has proved a winning card to his breeders, who have disposed of many head to Nevada stockmen on account of his good record.

SHEEP AND WOOL.

The Mono License on Grazing.

A decision of considerable importance to counties largely interested in the sheep industry was handed down recently in the Supreme Court. The decision was made in the matter of ex-parte Mirande on habeas corpus. The petitioner was convicted on a charge of violating the provisions of an ordinance of the Board of Supervisors of Mono county relating to the business of "raising, grazing, herding of sheep" in said county. The ordinance required persons engaged in the above business to obtain from the tax-collector an annual license, as follows: Those owning or having under their control 5000 sheep or more, \$250 for the first 5000 and for every additional 1000 \$50; 4000 sheep and less than 5000, \$200; 3000 sheep and less than 4000, \$150; 2000 and less than 3000, \$100; 1500 and less than 2000, \$75; 1000 and less than 1500, \$50; less than 1000, \$25. The petitioner objected that the ordinance was not passed at a regular meeting; was invalid and conflicted with the State Constitution and the Fourteenth Amendment of the Federal Constitution. The Supreme Court sustains the ordinance and remands the prisoner. The decision in effect upholds the constitutionality of the Act of the Legislature of March 14, 1883, known as the "County Government Act," Subdivision 27 of Section 25 of that Act, defining the powers and duties of supervisors, reads as follows:

To license for purposes of regulation and revenue all and every kind of business not prohibited by law and transacted and carried on in such county, and all shows, exhibitions and lawful games carried on therein; to fix the rates of license tax upon the same and to provide for the collection of the same by suit or otherwise.

In the course of the decision the Court says:

Herding or grazing stock is or may be a business, and it is upon such business that the license is imposed. That property used in any particular calling is subject to and has paid a property tax, ad valorem, as in this case, does not interdict the right to impose a license upon the business in which such property is used. The Constitutional provision in relation to uniformity of taxation does not apply to prevent such license tax for such reasons.

The opinion is written by Chief Justice Searle, and is concurred in by Justices Thornton, Temple, Paterson, McFarland and McKinstry.

HORSE BREAD.—Horse bread is still commonly made in Sweden. It is also commonly made and used in Tyrol and in certain parts of Switzerland—the Engardine, for instance. Your driver stops at a roadside inn, and, before he buys anything for himself, he buys for his horse a large cake of brown oatbread, circular, flat-tish, the size and shape of a Yorkshire yule cake. The strong, quiet, steady horse—or mare, very likely—knows well what all this means; looks on with eager eyes as he slices the cake into strips; munches slice after slice with keen enjoyment; and finally, perhaps, lays its lips upon his palm, to suggest the possibility of another loaf. Some drivers, indeed, themselves desirous of a meal, are content to crumble the bread into a trough, and in that case the horse will not only eat all the larger pieces, but will, with teeth and tongue, take up every morsel and crumb that strews the floor of the trough. Such are his views as to the merits of oat bread.

TRAIN ROBBERS KILLED.—On the G. & S. A. railroad, near El Paso, last Friday night, two scoundrels armed with revolvers and dynamite bombs boarded and attempted to rob an express train; but Ernest Smith, Wells-Fargo's messenger, shot and killed them both, thereby earning the thanks of his employers and the gratitude of people generally.

The new two-cent postage stamp is green; the three-cent is vermilion; the four-cent carmine instead of green; the five-cent has been changed from chocolate-brown to blue, and has the head of Grant upon it instead of that of Garfield; the 30-cent stamp is brown and the 90-cent is purple instead of carmine.

A PHILADELPHIA dancing-master rebuked a rowdy thus: "Pardon abruptness, my dear fellow, but I must insist on perfect decorum," and then he kicked the rough downstairs.

IS THERE ANY HOPE?

NEW AND IMPORTANT OPINIONS OF PULMONARY EXPERTS!

Can the Universal Consumption be Successfully Treated?

Dr. Borgeon, a leading French doctor, has a new treatment for consumption!

He gives an enema of carbonic acid and sulphuretted hydrogen gases, the latter gas carrying the former into every part of the throat and lungs.

This treatment, too, is directed at effects—the cause remains undisturbed.

What this cause is has been stated by perhaps the highest pulmonary authority in the world, i. e., the Brompton Hospital for Consumptives, in London, Eng.

This malady every year carries off from one-seventh to one-fifth of the entire population of England!

Dr. Payne, M. D., M. R. C. P., London, is authority for this statement.

The same or a greater proportion of deaths obtains in America.

Dr. Payne also says that one-half the total number of deaths from all other causes have seeds of this disease in the system which only require some irritant to develop!

Dr. Hermann Brehmer, an eminent German authority, says that consumption is caused by deficient nutrition of the lungs, by poor blood.

These authorities cannot be disputed. The medical world recognizes them. The uric acid is the irritant in the blood that causes the development of the seeds which Dr. Brehmer says lie dormant in the blood.

Every particle of blood which passes through the lungs and heart also goes through the kidneys, and if they are in the least deranged they cannot rid the blood of its killing poison. The thousand little hair-like sewer tubes of the kidneys very easily get blocked up and diseased; and when they do, they corrupt instead of purifying the blood. Kidney disease may exist, and yet no pain occur in that organ, because it is deficient in nerves of sensation.

Dip your finger in acid every day and it soon festers and is destroyed. Send acid-poisoned blood through the lungs every second, and they soon give way.

The Brompton Hospital investigation showed that 52 per cent of the victims of consumption were afflicted with deranged kidneys, which permitted the uric acid poison to remain in the blood and irritate the lungs. This uric acid is always fighting every vital organ, and if there be any inherent weakness in the lungs it inevitably causes pneumonia, cough and consumption.

The real cause of pulmonary troubles being so authoritatively shown to be faulty even though unsuspected action of the kidneys, explains why, in order to master the dreaded consumption, one must rid the blood of the uric acid irritant which inflames and burns up the lung substance. For this purpose there is nothing equal to that great specific, Warner's safe cure. This remedy has now the favor of medical men all over the world purely on its merits. We have no doubt that if the kidneys are kept in natural action, consumption and a great many other diseases, caused by uric acid, will not only be cured, but will be prevented.

When the kidney is healthy, no albumen appears in the water, but albumen is found in the water of more than half of those who die of consumption!

This, then, is the condition of things that always precedes consumption: First, weakened kidneys; second, retained uric acid, poisoning the blood; third, the development of disease in the lungs by the irritant acids passing through them. Then there is a little cough in the morning; soon thick, yellow matter is spit up, followed by loss of flesh and strength, with dreadful night sweats; and when the patient goes to his school physician for help, he is put on cod-liver oil which his stomach, weakened also by uric acid in the blood, cannot digest. Because there is no pain present in the kidneys, the patient does not think they are affected, but the kidney acid is doing its work every minute, every hour, day and night, and by-and-by the disease of the lungs has advanced until pus is developed, then come hemorrhages, and at last the gassy state which denotes that the end is near!

A post-mortem examination of such cases shows that the terrible uric acid has completely destroyed the substance of the lung.

It is impossible to cure lung disease when the blood is poisoned with uric acid.

NEXT to Mt. St. Elias, in Alaska, Mt. Tacoma is the loftiest peak in the United States. Its ascent is very difficult, and the scenery is extremely wild. An illustrated account of a climb to the highest attainable point will be given by C. D. Hendrickson in the November *American Magazine*.

ONE PACK May 10 D. Home Cards, Goodies' Favorite Cards, One Pack
Favorite Cards, One Pack Holiday-Showing Cards, Three Stars-Angle,
#1, World's Greatest Cards, #1, #2, #3, #4, #5, #6, #7, #8, #9, #10, #11,
and Value Cards, All Five 2-Cent stamps, Banner Card and Co., Ltd., U.S.

FUN AND FLIRTIATION CARDS A book of finest Stamp Cards ever offered, with Agents
Outfit for 2 cts. A. R. HINES, CLEVELAND, OHIO.

Monterey District Fair.

The Eleventh Annual Fair of the Seventh District Agricultural Association took place at Salinas October 4th to 8th. The district is composed nominally of the counties of San Benito and Monterey, but practically almost the whole showing devolves upon the latter. There was a very creditable display of horses and cattle, the latter particularly being more and better than a year ago. The weather was favorable and the attendance good. While the exhibit in the pavilion was not so large as on some former occasions, it was deemed the best representative showing ever made of the agricultural resources of the region. An inspection of the appended list of awards will give an idea of the scope and variety of the products displayed.

Awards—Seventh District.

HORSES.

THOROUGHBREDS.—Stallions—3-yrs.-old, C. Cockrill, "Ironclad;" 2-yrs.-old, M. P. Kelly, "Round-out;" 1-yr.-old, C. Luce, "Sorrel Charley;" Suckling colt, J. D. Carr, no name. Mares—3-yrs.-old, C. Cockrill, "Daisy D;" 2-yrs.-old, M. H. Kavanaugh, "Kitty C;" 1-yr.-old, J. B. Iverson, "Herculean."

ROADSTERS.—Stallions or geldings—4-yrs.-old, C. F. Langley, "Black Duke;" 3-yrs.-old, P. Kilburn, "Capt. Kidd;" 2-yrs.-old, J. H. Harris, "St. Patrick;" 1-yr.-old, J. D. Cochran, "Jim Mulvaney;" mares—3-yrs.-old, A. A. Watson, "Laurina;" 2-yrs.-old, P. Kilburn, "Lunetta;" 1-yr.-old and under, M. H. Clark, "Maud C."

ALL PURPOSES.—Stallion or gelding, 4-yrs.-old and upward, J. C. Storm, "Nonpareil;" Stallion, 3-yrs.-old, M. H. Clark, "Louie;" 2-yrs.-old, J. R. Hebron, "Glenwood;" suckling colt, Jas. Storm, "Roger;" mares—4-yrs.-old and over, P. Kilburn, "Maud;" 3-yrs.-old, M. Lynn, "Nelly;" 2-yrs.-old, J. W. Patton, "Lizzie Dunbar;" 1-yr.-old, W. Parsons, "Gipsy;" gelding, J. B. Iverson, "Kingsley;" mare, 4-yr.-old and over with colt, C. F. Langley, "Nelson."

DRAFT HORSES.—Stallion, 4-yrs.-old and over, J. Storm, "Revier;" graded stallion, 4-yrs.-old and over, J. Storm, "Ripper;" stallion, 3-yrs.-old, G. W. Theuerkauf, "Col. Bill;" mares—4-yrs.-old and over, J. R. Hebron, "Fannie;" 3-yrs.-old, J. B. Smith, "Flora;" suckling colt, J. B. Iverson, "Susie."

CARRIAGE HORSES.—Span, J. D. Carr, "Jackson" and "Pilot;" single buggy horse, Wm. Vanderhurst, "Charley V."

SWEETSTAKES.—Stallion with 4 colts, M. Lynn, "Pirex;" stallion, any breed or age; 1st, J. C. Storm, "Nonpareil;" 2d do, C. F. Langley, "Black Duke;" mare, any breed or age, 1st, M. Lynn, "Maggie;" 2d do, J. B. Iverson, "Lady Jones;" gelding, any breed or age, J. B. Iverson, "Kingsley;" colt, any breed, foaled in 1887, J. C. Storm, "Daisy."

CATTLE.

DURHAM.—Bull, 1-yr.-old, J. Storm, "St. Nicholas;" Cows, 4, 3, 2 and 1-yr.-old, and calf, P. Kilburn. Graded—bull, Ben Hitchcock, "Tom Tinker;" cow, 3-yrs.-old and upward, J. Storm, "Scotty;" herd of cattle, J. Storm, "St. Nicholas;" "Rosie," "Bride," "Scotty" and "Lady Mac."

OTHER ANIMALS.

Sheep—Ram and ewe, J. W. Patton.
Swine—Boar and sow, W. T. Gilkey.
Poultry—Bronze turkeys, Blk Spanish and Br. Leghorn fowls, J. W. Patton.

FARM AND GARDEN PRODUCTS.

Sack wheat, J. Storm; barley, M. Williams; oats, J. W. Patton; rye, J. B. Hickman; corn, W. T. Gilkey; flax, J. B. Hickman; hops, Mrs. Gilkey; hams, R. N. Windsor; 10 lbs. lard, Mrs. Hickman; honey in comb, and strained, Mrs. Gilkey; pickled olives, Mrs. Gilkey; sack potatoes, R. Porter, "Blanco;" dried beans, W. T. Gilkey; melons, S. O. Pugh; cucumbers, Mrs. Hickman; 20 lbs. turnips, W. S. Hunt; 20 lbs. tomatoes, radishes, peanuts, Mrs. Hickman; sugar beets, Mrs. Conklin; pumpkins, J. R. Hebron.

FRUITS.

GREEN.—Best display of all descriptions; collection pears, nectarines, nuts, coll. oranges and lemons, W. T. Gilkey; 12 var. apples, single var. pears, plums, R. N. Windsor; single var. apples, W. S. Hunt; peaches, Mrs. Hickman; coll. foreign grapes, coll. wine grapes, S. O. Pugh.

DRIED.—Exhib. domestic dried fruit and 5 lbs. each of prunes and plums, apples, pears, apricots and peaches, Mrs. Gilkey.

PLANTS AND FLOWERS.

All premiums to P. Zabula, except the following: Cut flowers, Mrs. Dixon; named varieties dahlias, Mrs. Hickman.

MISCELLANEOUS.

Cheese, Z. Hebert; butter, C. Reynolds; wines, M. Cartier; silkworms, Mrs. P. Kilburn; harrow and "Common Sense" sulky harrow, J. V. Lacey. Designs of farm barn and of granary, J. B. Hickman.

SPECIAL MENTION.

Exhib. oranges, lemons, nuts, etc., from H. Escolle's place, too late to compete; J. Mayer's corn and apples; to apples from orchard of H. L. Davis, averaging 1½ lbs.; large watermelon raised by F. M. Jolly of Paraiso Springs, without irrigation; conserved and sugar-cured fruits by Mrs. W. T. Gilkey; quinces of R. N. Windsor, W. S. Hunt and W. T. Gilkey; S. O. Pugh's raisin grapes, J. R. Hebron's big pumpkins, and W. M. R. Parker's grapes, pomegranates and peaches.

FIFTY illegal squatters and cattlemen have been removed from the Mescalero Indian reservation, in New Mexico, by United States troops. Most of those removed were wealthy stockmen who had set up fraudulent claims to Government land. Fifteen settlers, who proved to have bona fide claims, were left unmolested.

Two inches of snow has fallen on Siskiyou mountain, which is rather early in the season.

The Central Pacific Railroad.

The Result of the Year's Traffic.

The annual report of the Board of Directors of the Central Pacific Railroad Company, for the year ending December, 1886, has been issued. The report is signed by Leland Stanford, President, who submits figures and statements showing the result of the year's traffic. Particular attention is drawn to the effects of the transcontinental rate-war. Rates, says the report, have been excessively low and in many cases unreasonably so.

The common interest of all is best subserved by rates which are fair and reasonable, as these only can be permanent and uniform.

With passenger traffic, however, the extremely low fares that have prevailed during the rate-war have had an indirect effect of great value to the company's lines. The travel encouraged by these fares has brought to the knowledge of a great number of persons the unequalled advantages of the Pacific Coast as to climate and productiveness. This has led to an unprecedented immigration to California from the older Eastern States of well-to-do citizens, which is having a great influence in the development of the coast.

The capital stock authorized is stated at \$100,000,000; the capital stock outstanding is stated at \$68,000,000.

The total indebtedness, not including the capital stock, is \$171,719,527.37. It is made up as follows: Funded debt, \$61,697,000; less sinking fund of the company, \$9,543,022.83; unclaimed dividends, \$9263; due trustees land grant mortgage, \$52,153,977.17; to be used to redeem land bonds, \$1,413,361.18; sinking fund uninvested, \$986,995; United States bonds, \$27,855,680; interest on United States bonds, accrued but not due, \$30,970,497.01; less repaid by transportation and cash, \$9,670,245.99; balance of interest payable to United States at maturity of bonds in 1898, \$21,300,251.02.

The total assets are set down at \$203,342,049.86. Balance of assets over capital stock and total indebtedness, \$31,622,522.49. In the assets \$153,557,630.45 is put down for all railroad and telegraph lines, ferry steamers, wharves, depots and station buildings. The equipments are placed at \$8,529,938.84. Another item is cash due from the United States over all requirements to December 31, 1886, \$756,992.16. The company's real estate in Mission Bay, Oakland water-front and Sacramento water-front, \$7,750,000. Unsold lands are estimated at \$23,500,000.

Reduction of Debt.

The report goes on to say that the net floating debt of the company has been reduced during the past year \$1,228,873.35. Its total is now \$1,306,375.71, of which \$822,035.98 represents the amount due the Southern Pacific Company, less amounts due from said company on accounting net profits for the year.

Up to April 1, 1887, 133 bonds, at a cost of \$139,982.50, have been redeemed.

The net funded debt of the company on December 31, 1886, was \$47,756,548.53. On December 31, 1886, it was \$49,623,958.04, showing an increase during the year of \$1,867,409.51. With deductions from the floating debt this total is reduced to \$638,536.16.

The Sinking Fund.

The amount in the sinking fund in the company's treasury on December 31, 1886, was \$8,276,076.17. This fund has been increased by \$1,266,946.66, making a total in the fund of \$9,543,022.83. Cash assets from the proceeds of land sales used for the redemption of land bonds, \$2,530,019.13. The total sums provided

for payment of the bonds of the company now amount to \$15,195,273.06.

The total income is as follows: Net profit from operation of lines under lease to Southern Pacific Company for the year, as shown in the accompanying report of the secretary, table No. 4, \$1,324,998.31; dividends on investments, \$7200; interest earned on sinking funds, \$463,446.66; land sales used to redeem land bonds, \$60,000; received from Southern Pacific Company account of sinking funds payable from income, \$778,500; sinking fund, etc., in United States Treasury, requirement for the year paid by the Southern Pacific Company, \$418,271.56; total, \$3,052,416.53.

The expenditures amounted to \$2,098,424.37, showing a surplus of \$953,992.16 applied to the payment of the floating debt. Total transportation charges for the year incurred by the United States amounted to \$849,037.86.

The gross earnings of the Central Pacific and associated lines were \$15,206,136.55.

The expenditures amount to \$13,881,138.24, the principal items of which are as follows: Operating expenses of railroad, \$7,096,105.14; operating expenses of Sacramento-river steamers, \$146,561.79; taxes, railroad, \$430,368.78; rental for leased lands, \$1,222,643.35; interest on floating debt paid, \$191,829.17; interest on Central Pacific Railroad Company's bonds, \$3,588,120; Central Pacific railroad sinking funds, \$778,500; Central Pacific railroad United States requirements under Thurman Act, \$418,271.56; net earnings of Stockton & Copperopolis Railroad Co., payable on floating debt of that company, \$1361.36; balance, net profit due Central Pacific Railroad Co. under lease, \$1,324,998.31.

General Manager A. N. Towne's report shows the amount of earnings over the operating expenses were \$7,970,696.29. The percentage of operating expenses for 1885 was 43.84 per cent, while for 1886 it is 47.10 per cent.

Plant Olives.

An exchange says: "Plant olive trees along your roads and highways, and wherever you have a piece of land you consider worthless, plant olives. With a little care in the start they will grow and in a few years produce more wealth than any other fruit on the farm. They live longer and with less care after the second year than any other fruit tree, and when in full bearing will produce bigger profits. They are an evergreen, and one of the handsomest trees that can be planted for ornamental purposes. Make your children happy by planting olive trees, and they will in the near future bless you for having done so."

Information concerning the planting and culture of the olive can be had in the book just prepared by A. Flamant, a well-known olive-grower of Napa, which can be had from this office for \$1 per copy.

JAPANESE ORANGE TREES.—We are informed of an importation by the Oriental Importing Company of 6700 Unshiu, Canton Hybrid and Satsuma orange trees in good condition on steamer Oceanic, which arrived about 10 days ago. We are told the trees came in elegant condition, and 1300 have been ordered already from the wharf by parties in San Diego county. At the agricultural fair the Oriental Importing Company received a premium of \$2.50 for best Unshiu orange trees and tea plants. There were also received a fine lot of palms, camellias and orchids.

SAN BERNARDINO is the banner railroad county in the State, at least so far as mileage and assessments are concerned, says the *Courier*. There are nearly 400 miles of roadbed within its borders, and the companies pay assessments on \$4,991,250.

A LESSON WITH A MORAL.

When Will Our Eyes be Opened to the Great National Calamity?

The year 1886 played sad havoc with many prominent men of our country.

Many of them died without warning, passing away apparently in the full flush of life.

Others were sick but a comparatively short time. We turn to our files and are astonished to find that most of them died of apoplexy, of paralysis, of nervous prostration, of malignant blood humor, of Bright's disease, of heart disease, of kidney disease, of rheumatism or of pneumonia.

It is singular that most of our prominent men die of these disorders. Any journalist who watches the telegraph reports, will be astonished at the number of prominent victims of these disorders.

Many statements have appeared in our paper with others to the effect that the diseases that carried off so many prominent men in 1886, are really one disease, taking different names according to the location of the fatal effects.

When a valuable horse perishes, it becomes the nine days' talk of the sporting world, and yet thousands of ordinary horses are dying every day, their aggregate loss is enormous, and yet their death creates no comment.

So it is with individuals. The cause of death of prominent men creates comment, especially when it can be shown that one unsuspected disease carries off most of them, and yet vast numbers of ordinary men and women die before their time every year from the same cause.

It is said if the blood is kept free from uric acid, that heart disease, paralysis, nervous prostration, pneumonia, rheumatism, and many cases of consumption, would never be known. This uric acid, we are told, is the waste of the system, and it is the duty of the kidneys to remove this waste.

We are told that if the kidneys are maintained in perfect health, the uric (kidney) acid is kept out of the blood, and these sudden and universal diseases caused by uric acid will, in a large measure, disappear.

But how shall this be done? It is folly to treat effects. If there is any known way of getting at the cause, that way should be known to the public. We believe that Warner's safe cure, of which so much has been written, and so much talked of by the public generally, is now recognized by impartial physicians and the public as the one specific for such diseases.

Because public attention has been directed to this great remedy by means of advertising, some persons have not believed in the remedy. We cannot see how Mr. Warner could immediately benefit the public in any other way, and his valuable specific should not be condemned because some nostrums have come before the public in the same way, any more than that all doctors should be condemned because so many of them are incompetent.

It is astonishing what good opinions you hear, on every side, of that great remedy, and public opinion thus based upon an actual experience, has all the weight and importance of absolute truth.

At this time of the year, the uric acid in the blood invites pneumonia and rheumatism, and there is not a man who does not dread these monsters of disease; but he need have no fear of them, we are told, if he rid the blood of the uric acid cause.

These words are strong, and may sound like an advertisement, and be rejected as such by unthinking people, but we believe they are the truth, and as such should be spoken by every truth-loving newspaper.

EYE-GLASSES or spectacles are great conveniences and comforts to some of us, and Hirsch, Kahn & Co., the opticians, whose business card appears elsewhere in this paper, make a specialty of their adaptation.

GEN. FRANCIS A. WALKER, of the Massachusetts Institute of Technology, will have in the November *Scribner's* an economic and social essay, entitled "What Shall We Tell the Working Classes?"

The revenue of the Santa Rosa postoffice has increased within the last three years threefold.

A New Spraying Outfit.

The engraving on this page shows a new style of spraying outfit furnished by Woodin & Little of 509 Market street, S. F., the well-known dealers in pumps and all appliances for insect destruction. The engraving shows clearly the manner of mounting and operating the outfit, and it is evident that rapid and effective work can be done with it. The pump is a new double-acting force pump, especially arranged for the distribution of insecticide substances, by throwing a constant and powerful stream. The pump can be made to throw one or two streams as desired. It has only metal valves and patent packing which are free from injury by corrosive substances. Woodin & Little issue full descriptive circulars which are sent on application.

The *Ventura Democrat* says: Arrivals of vessels at this port are of such frequent occurrence of late that there is not wharf room to accommodate them, and numbers lie and wait for their turn to unload their freight like Western farmers at a grist-mill.



A NEW SPRAYING OUTFIT—GOULD'S NEW DOUBLE-ACTING FORCE PUMP

Songster Slaughter.

In spite of the earnest protests of the humane, of the remonstrances of economists, and the laws of many States, the cruel slaughter of our feathered songsters still continues. The mortality among birds by ordinary accidents, depredations and slaughter, nearly counterbalances their increase, and such special havoc as has of late years been committed among them upsets the balance of nature and leads to the speedy extinction of whole species. Within the last half dozen years so disastrous has been the slaughter of many whose bright plumage and glad some song beautified and thrilled country places, that ornithologists estimate that even if the slaughter were at once to cease, several generations must pass before the evil effects of the recent reckless destruction would be effaced. Entomologists estimate that the annual loss in food and fiber plants caused by insects amounts to fully \$300,000,000 in this country alone. At a very low estimate, 5,000,000 birds are annually slaughtered for feminine adornment, and it is calculated that the death of every insect-eating bird causes an actual and consequential loss equivalent to four bushels of grain. What an enormous tax the country is paying to gratify the cruel demand of a fashion set by a notorious Parisian profligate and maintained by thoughtless vanity! While the reckless vanity of woman is the chief cause of this baneful butchery, man's gluttony and greed are powerfully aiding woman's vanity. Every year the rapacious pot-hunter and the inconsiderate school-boy are abroad heedlessly decimating the most destructive foes of the fast-multiplying myriads of insect pests that cause agriculture annual losses high among the millions. Several of the States have lately passed salutary laws for the protection of insectivorous birds; but scarcely any of them have provided suitable means for their enforcement. Recent events have shown that the wishes of the farmers of the country, emphatically expressed, have powerful influence with our legislators, and on what subject should their wishes be expressed more emphatically than on the necessity for prompt and effective legislation for the protection of friends whose graceful, melodious presence beautifies the country, gladdens their homes and greatly aids to save their crops from destruction?—*Rural New Yorker*.

Engraving Improvements.

The Dewey Engraving Company has lately issued a proof sheet, giving an idea of the remarkable work it is now prepared to produce by methods combining all the advanced ideas in the arts of engraving and photography. The company makes engravings from photographs, drawings and original designs, for book, card or job printing. Also fac-simile printing plates of letters and legal documents, portraits and maps, and fine pictorial engravings.

The company has for sale over 3000 engravings, many of which are fine and picturesque illustrations, including historical scenes and views of this coast and other parts of the world, and portraits of notable men, of which enterprising publishers will doubtless avail themselves. Proof sheet No. 1 contains 40 engravings, and proof sheet No. 2, just issued, about 20 more. Copies may be obtained, with further information, by addressing DEWEY ENGRAVING CO., 220 Market St., S. F.

August, 1887.

Don't Fail to Write.

Should this paper be received by any subscriber who does not want it, or beyond the time he intends to pay for it, let him not fail to write us direct to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to any one who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

Money Loaned

On Country Real Estate in large and small amounts at lowest rates, by A. Schuller, 106 Leidesdorff St., room 3.

SPRAY PUMPS.

Now is the time to buy. Do not waste money on poor pumps with leather valves, but buy the "CUMAX SPRAY PUMPS," the only pump having all its parts made of non-corrosive metal, and the very best Spray Pump in the market.

Send for circulars and prices. Hose furnished to farmers at wholesale prices.

CAL. FIRE APPARATUS MFG CO., 18 California St., S. F.

BEST TREE WASH.

"Greenbank" 93 degrees POWDERED CAUSTIC SODA (tests 90-10 per cent) recommended by the highest authorities in the State. Also Common Caustic Soda and Potash, etc., for sale by

T. W. JACKSON & CO.,

Manufacturers' Agents, 104 Market St. and 8 California St., S. F.

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Agents for Growers and Manufacturers. Charterers of Vessels for all Trades. Agents for the Mexican Phosphate and Sulphur Company's Products. General Insurance Agents.

Have correspondents in all the chief cities of the United States, Europe, Australia, India, China and the principal islands of the Pacific. Purchase goods and sell California products in those countries.

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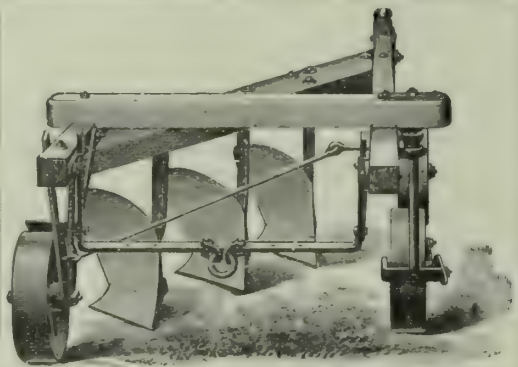
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Money advanced on Grain in Store at lowest possible rates of interest.
Full Cargoes of Wheat furnished Shippers at short notice.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

E. VAN EVERY, Manager.

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H. C. SHAW PLOW WORKS,
—MANUFACTURERS OF—
Reversible and Slip-Share
PLOWS.

WRITE FOR PRICES.

HANFORD, August 31, 1887.

H. C. SHAW, Esq.—I used one of your Improved Slip-Share Gangs in a piece of salt grass land, perhaps the toughest in the county, and found that it clung to the soil better and left it in better shape than any plow I ever used, besides running one horse lighter.

C. W. CALLAHAN.

365 and 367 EL DORADO ST.,

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The WHITE IS KING
FOR FAMILY USE,

Dressmaking, Tailoring and Gen-

eral Manufacturing.

IN ITS GREAT RANGE OF WORK IT
STANDS WITHOUT AN EQUAL.

THE LIGHTEST RUNNING,
THE MOST DURABLE,
THE FINEST FINISHED,
THE BEST SATISFYING.

WHITE SEWING MACHINE COMPANY,

108 & 110 POST ST., S. F.

A Treatise on the Horse and his Diseases
By B. J. KENDALL, M. D.

35 Fine Engravings showing the positions and actions of sick horses. Gives the cause, symptoms and best treatment of diseases. Has a table giving the doses, effects and antidotes of all the principal medicines used for the horse, and a few pages on the action and uses of medicines. Rules for telling the age of a horse, with a fine engraving showing the appearance of the teeth at each year. It is printed on fine paper and has nearly 100 pages, 7x5 inches. Price, only 25 cents, or five for \$1, on receipt of which we will send by mail to any address.

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Fruit Engravings, The finest, best and cheap est Photographs and En-
PHOTOGRAPHS, ETC. Engravings of Fruits, Vegetables, Houses, Farms, Landscapes, etc., made by S. F. PHOTOGRAPHING CO., 659 Clay St., S. F.

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THE BEST
is the
CHEAPEST
HIS OWN
MILLER

Use the Halladay Standard Geared Wind Mill, I-X-L Corn Sheller and I-X-L Iron Feed Mill and do your shelling and grinding at home, thus saving toll and teaming to and from the Grain Mill. This work can be done rainy, windy days, when outdoor work is suspended on the Farm. The same Mill will cut corn stalks, saw wood, run churn and grind-stones, pump water, etc.

We manufacture the Halladay Standard Geared and Pumping Wind Mills, I-X-L Corn Shellers, I-X-L Iron Feed Mills, I-X-L Stalk Cutters, Horse Powers, Jacks, Saw Tables, Standard Hayting Tools, consisting of Anti Friction, Reversible, Swivel and Roll Hay Carriers, Harpoon and Grapple Horse Hay Forks, Pulleys and Floor Hooks. Also a full line of Tanks, Tank Fixtures and Pumps for Farm, Ornamental, Village and Railway purposes. Send for catalogue and prices. Reliable Agents wanted in all unassigned territory.

U. S. WIND ENGINE & PUMP CO., Batavia, Ill.

AMERICAN EXCHANGE
HOTEL,

319 & 321 Sansome St., San Francisco.
One door from Bank of California.

The above well-known hotel offers superior accommodations to parties visiting the city.

The table is kept at top grade and the prices are within the reach of all.

RATES—\$1.00, \$1.25 and \$1.50 per day
Free Coach to and from the Hotel.

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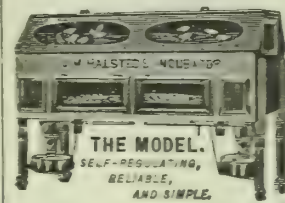
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Sale of Standard Trotters.

A sale which will no doubt attract much attention is that of standard trotting brood mares, colts and fillies, bred by G. Valensin of the Arno stock farm and property of R. B. Milroy. The young animals are chiefly the get of Sidney, son of Santa Claus and Sweetness. They include near relatives to the great stallion Valensin and Shamrock. There are also colts and fillies by Buccaneer and Crown Point. The catalogue includes fine brood mares, one six-year-old stallion, "Arno," three three-year-olds, ten two-year-olds, and eight yearlings. Horsemen describe the lot as one of the most superior ever offered, and no doubt their sale will attract a large attendance at the Bay District track, S. F., Nov. 2d, at 11 A. M. Mr. Milroy announces that to show Sidney's value as a getter he will show several of his colts in harness at the sale. The sale will be by Killip & Co., and the advertisement in another column states where catalogues may be had.

WHAT LOCOMOTIVE WHISTLES MEAN.—One long blast of the whistle is a signal for approaching stations, railroad crossings, and junctions. Oneshort blast of the whistle is a signal to apply the brakes—stop. Two long blasts of the whistle are a signal to throw off the brakes. Two short blasts of the whistle are an answer to the conductor's signal to stop at the next station. Three long blasts of the whistle are a signal that the train has parted. Three short blasts of the whistle when the train is standing are a signal that the train will back. Three short blasts of the whistle when the train is running are a signal to be given by passenger trains, when displaying signals for a following train, to call the attention of trains they meet or pass to the signals. Four long blasts of the whistle are a signal to call in the flagman. Four short blasts of the whistle are the engine-men's call for signals from the switchmen, watchmen and trainmen. Two long, followed by two short, blasts of the whistle are a signal for approaching road-crossings at grade. Five short blasts of the whistle are a signal to the flagman to go back and protect the rear of the train. A succession of short blasts of the whistle is an alarm for persons or cattle on the track, and calls the attention of trainmen to danger ahead.—Ex.

DANGEROUS FLIES—STRANGE AFFLICTION.—Charles Griffin, a farm hand, about 26 years of age, working near Belleville, Missouri, has had a singular experience the past few weeks. He worked on a farm in Texas, and one day he lay on the hay in the fields to take a nap. While asleep he was attacked by poisonous flies, which had crawled over his face and into his nostrils, where they laid their eggs. Griffin came North about 10 days ago. He had been suffering for weeks with a dizziness in the head, and for the past few days with a terrible pain, which nearly blinded him. Besides that, he found it very difficult to breathe. Yesterday he consulted a physician, who once in his practice had a similar case. He ejected a liquid into Griffin's nose, and in 15 minutes the latter passed from his nostrils over 100 worms, from a quarter to half an inch in length, so hard that it was almost impossible to break them with a hammer. The man was very much relieved, but it is supposed that his head is still full of these worms. The worms eventually develop into flies. These flies seldom come further north than the southern line of the State of Kansas.

COPYRIGHT DECISION.—Judge Levy has rendered a decision of interest to all authors and playwrights whose works may be infringed upon. A suit was brought by William and Lizzie Vegoreux against an actor in this city for bringing out a play on which they held a copyright, and an injunction was asked for, he having obtained no permission from the authoress. In sustaining a demurrer to the complaint, Judge Levy states that Section 711 of the Revised Statutes of the United States vests in the courts of the United States exclusive jurisdiction in all suits at law and in equity under the patent and copyright laws of the United States. It is said that irrespective of the copyright the author has an ownership in his production upon which a stranger cannot trespass. Sufficient answer to this is that the plaintiff sues on the grounds of an infringement of copyright and not for an infringement of her common-law rights. The action was dismissed.

HEAVY TRAVEL.—The traffic on the line between Santa Barbara and Los Angeles has increased lately to so great an extent that the company is now figuring on doubling the service. Should this be done there will be two trains per day between Los Angeles and Santa Barbara instead of only one as at present. The local traffic on the Southern Pacific line south of Los Angeles has grown tremendously lately, and the evening train is now accompanied as far as Mojave by a chair car, which returns with the morning train. It is invariably full of passengers.

RECLAIMING THE SAHARA.—With the aid of science even the desert of Sahara is becoming inhabitable and colonization is encouraged. The Lower Sahara is an immense basin of artesian waters and the French are forming fresh oases with skill and success, so that the number of cultivated tracts is increasing rapidly. After a period of 30 years 43 oases have 13,000 inhabitants, 120,000 trees between one and seven years old and 100,000 fruit trees.

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.]

DATE.	Portland.				Red Bluff.				Sacramento.				S. Francisco.				Los Angeles.				San Diego.			
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.
Oct. 13-19.																								
Thursday.....	.00	58	E	Cy.	.00	72	SE	Cl.	.00	70	SW	Cl.	.00	61	NW	Fr.	.00	68	S	Cl.	.00	66	NW	Cl.
Friday.....	.11	58	NW	Cy.	.00	66	SE	Cy.	.00	66	SW	Cy.	.00	61	W	Fr.	.00	72	W	Cl.	.00	66	W	Cl.
Saturday.....	.00	56	NW	Cl.	.00	72	N	Cl.	.00	66	NW	Cl.	.00	63	E	Cl.	.00	66	SW	Cy.	.00	66	E	Cy.
Sunday.....	.00	52	NW	Cy.	.00	76	N	Fr.	.00	72	NW	Cl.	.00	68	E	Cl.	.00	64	W	Cy.	.00	66	NW	Cl.
Monday.....	.00	52	NW	Cl.	.00	80	N	Cl.	.00	72	NW	Cl.	.00	70	W	Cl.	.00	68	SW	Fr.	.00	64	NW	Cl.
Tuesday.....	.00	52	S	Cy.	.00	82	N	Cl.	.00	82	NW	Cl.	.00	80	NW	Cl.	.00	84	SW	Cl.	.00	72	NW	Cl.
Wednesday.....	.00	50	NW	Cl.	.00	82	N	Cl.	.00	84	N	Cl.	.00	81	E	Cl.	.00	88	W	Cl.	.00	76	NW	Cl.
Total.....	.11				.00				.00				.00				.00				.00			

EXPLANATION.—Cl. for clear; Cy., cloudy; Fr., fair; Fy., foggy; — indicates too small to measure. Temperature. Wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

Inducements to Subscribers.

To favor subscribers to this paper, and to induce new patrons to try our publication, we will furnish, to those who pay fully one year in advance of date, if requested the following articles (while this notice continues), at the very greatly reduced figures named at the right:

- 1.—The Agricultural Features of California, by Prof. Hilgard, 138 large pages, illustrated, cloth, with colored maps (full price \$1). \$0.25
- 2.—World's Cyclopaedia, 794 pages, 1250 illustrations; (exceedingly valuable).50
- 3.—Dewey's Patent Elastic Binder (cloth cover), name of this paper stamped in gilt.50
- 4.—Niles' Stock and Poultry Book for Pacific Coast, pamphlet, 120 pages, illustrated.25
- 5.—Kendall's Treatise on the Horse and Diseases, 59 pages, instructive illustrations.05
- 6.—To New Subscribers, 12 select back Nos. of the RURAL PRESS, "good as new". Free
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3. If subscribers neglect to or refuse to take their periodicals from the office to which they have been directed, they are held responsible till they have settled their bill and ordered their paper discontinued.
4. If subscribers remove to other places without informing the publisher, and the papers are sent to the former direction, they are held responsible.
5. The courts have decided that refusing to take periodicals from the office, or removing and leaving them uncalled for, is prima facie evidence of intentional fraud.
6. Any person who receives a newspaper and makes use of it, whether he has subscribed for it or not, is held in law a subscriber.
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Sold by Dewey & Co., Publishers "Pacific Rural Press."

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FOR THE WEEK ENDING OCTOBER 11, 1887.

371,411.—BLAST GOVERNOR FOR GRAIN CLEANERS.—Daniel Bist, San Leandro, Cal.

371,420.—LATCH.—W. B. Cantrell, Portland, Oreg.

371,489.—CALIPERS.—Jas. H. Culver, S. F.

371,319.—PICTURE SUPPORT.—C. Hinsberg, S. F.

371,338.—FRAME FOR READING AND NUMBER CARDS.—Fannie L. Matson, San Jose, Cal.

371,468.—CARPET WEAVER.—Mary A. McMaster, Antioch, Cal.

371,213.—INHALER.—B. R. Peyton, S. F.

371,356.—ELECTRO THERAPEUTIC BELT.—W. L. L. & W. J. Pierce, S. F.

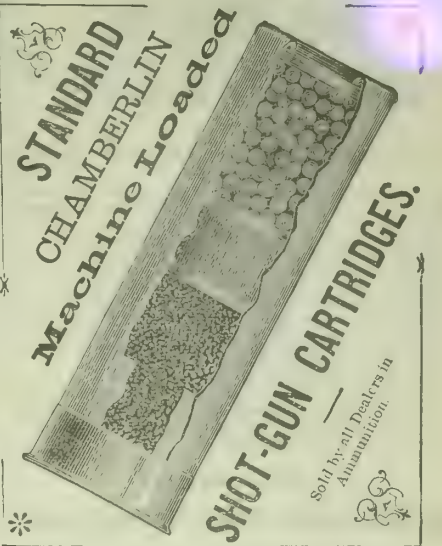
371,364.—CABLE GRIP.—Geo. Rischmuller, S. F.

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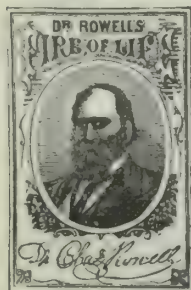
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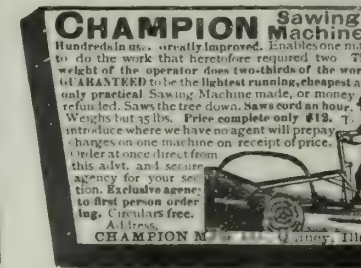
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Never Mind Them.

What a silly practice it is to fret, fume and worry over what the world thinks of one, and live in a state of chronic discomfort because some choose to underrate us or to view us through the green goggles of envy or suspicion. We would not advocate entire indifference to the world's estimate, for all should strive to do right, and thus earn its confidence and respect. But no matter how near the line some may walk, there are some natures who delight in talking. To chase these slanders would be as foolish as stopping an important mission to fight a mosquito, or to catch every little dog that barks from the wayside as we pass. If a person would devote the time to catching these little lies and unworthy suspicions set in motion by small natures, there would be little time left for life-work. We would not counsel indifference to serious misstatements or great slanders that threaten disaster—such should be traced to their source and their cowardly originators exposed and promptly punished. We simply hold that it is worse than useless to try and bridle every wagging tongue, and most of the little doubts and insinuations belong to the insect tribe and are not worth tracing up. Let them alone and they will soon bite at some one else, and the richer the character the better they will like it. Great natures strong in their sense of justice and right should scorn to notice them, or to spend time in hunting gnats when nobler game awaits them. They are not great annoyances, and all people must expect to be stung by them occasionally; consequently, the wiser way is to take their pin-like punctures in a philosophic spirit, and to pursue the way that wisdom marks out regardless of their puny importance. Life is too short and its real duties too many to be neglected for the sake of catching and killing these fussy and foolish little verbal flies.—*Lower Lake Bulletin.*

Growing Umbrellas for the Market.

The *Tulare Register* professes to have received a letter from an Easterner, asking what kind of an opening there would be for him in Central California to go into the cultivation of the umbrella tree he has heard about, and how much can be realized from an acre of them. The *Register* informs him publicly that there is nothing in the umbrella business here. Nearly everybody has one or two umbrella trees, from which he not only raises all the umbrellas he and his family can use, but has them to give to new-comers until they get a start. It is a beautiful sight to see these trees in bearing; to see the little umbrella shoot forth in the incipient stage and gradually develop into the full-blown, ivory-handled umbrella of commerce. There is a species widely grown in Fresno county which produces the fragile six bit umbrella, but they do not thrive in this glorious climate. The umbrella tree bears two crops a year, one in May and one in November; so we have the summer umbrella to protect us from the heat of the sun and the heavy winter umbrella that sheds the heaviest rains and never blows inside out in the fiercest gale. Umbrella-stealing is unknown here, for if you mislay or lose one, all you have to do is to step out into the yard and pick another. That is all we can tell you now about the umbrella tree. There are plenty of openings here for an energetic young man. Come ahead, and if you are anxious to lay up something for a rainy day, the first thing you want to do is to plant an umbrella tree.

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Ammonia.....	1.87 "
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University of California, College of Agriculture. BERKELEY, Nov. 20, 1886.

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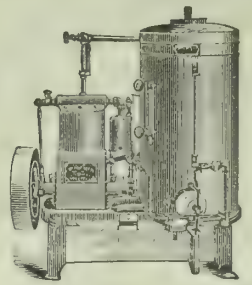
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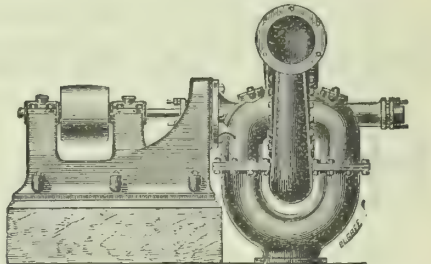
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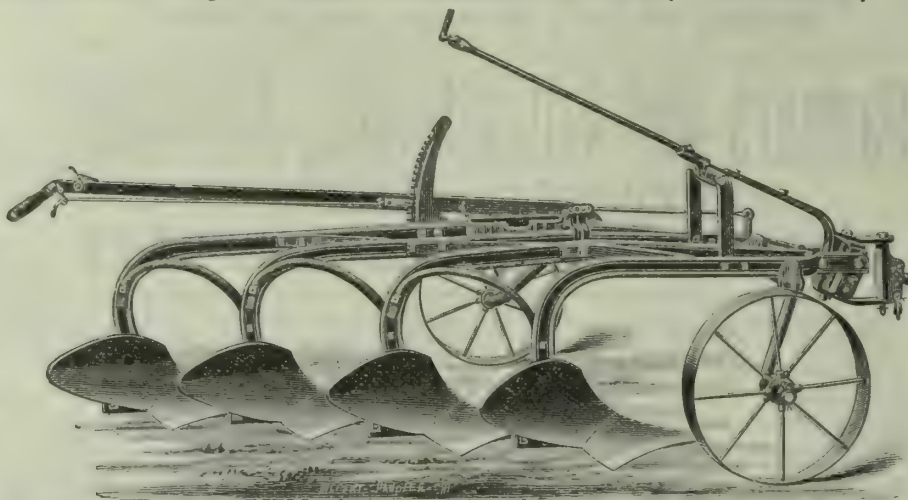
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Vol. XXXIV.—No. 18.

SAN FRANCISCO, SATURDAY, OCTOBER 29, 1887.

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Beet Sugar.

We can but call the attention of all readers to the significant announcement of Mr. Spreckels' intentions with reference to beet sugar, which appears upon another page of this issue. Mr. Spreckels evidently means business upon a broad and deep plan. He has his machinery contracted for—machinery to be the most capacious and excellent in the world. He has his seed arranged for to arrive at an early date. More than this, he has brought to this coast a German chemist and beet-sugar expert of the highest rank, who is now actively at work informing himself upon local conditions in order that the enterprise may be intelligently directed. This expert has already been in consultation with Prof. Hilgard, and has expressed himself highly pleased with the data available at the State University concerning our soils and beet analyses. All these things, and the meeting of farmers called in Watsonville for November 5th, show that immediate work is intended by Mr. Spreckels. As is expressly stated in the article on another page, the location for operations is not yet decided upon. There is really a vast area of this State which can grow good beets—beets with a sugar percentage and purity coefficient, very gratifying to the sugar-maker, and if the industry is promoted, as now seems to be intended, and as there is field for, it will be a grand thing for the bringing in of wealth to this State and for diversifying our industries splendidly. The sugar and by-products of the beet should take a wide area from our grain-fields and aid our orchards and vineyards in spreading verdure over our too-yellow summer landscape.

Beet sugar is gaining ground all over the world. There has been some question as to its fitness for fruit canning, but this has not rested upon any good foundation. It is quite interesting, on the other hand, to see it stated that beet sugar is prepared in India for the special purpose of fruit preservation. A New York dispatch, Oct. 26th, says that a Singapore correspondent of the *Commercial Bulletin* writes that for the last year and a half the Germans have been exporting sugar to Singapore, which, as is well known, is close to the great sugar-producing countries. There are three manufactories of preserved fruits in Singapore, and the managers assert that they find it more advantageous to use German beet-root sugar than the production of Penang and Java. In the year 1886 these works imported 400 bags of 100 kilos up to the end of June.

It is not likely that there is any intrinsic superiority in sugar from the beet, but probably the German sugar is better refined or something of that sort. The conclusion is, however, just as strong that beet sugar properly made is good for fruit preserving. California fruit put up with California sugar is an idea both poetical and practical, and we believe practicable also.

CHESTNUTS IN SONOMA VALLEY.—The *Courier* says that Col. Hooper has growing on his farm a grove of chestnut trees. They are the regular chestnut of the Eastern States and now in bearing. They grow rapidly and add much to the beauty and attraction of any place.

HOP SHIPMENTS overland are becoming very heavy. Great quantities are consigned direct to London.

THE ISTHMIAN CANAL.—We have not heard much of late of the enterprise of De Lesseps at Panama. It is now announced that active work at the Nicaragua project will be taken up. A. G. Menocal, chief engineer, is credited

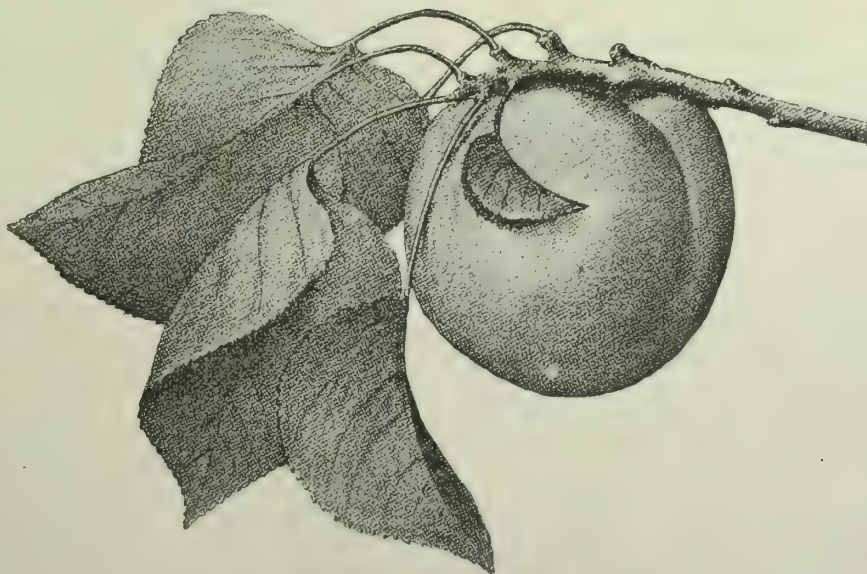
BEANS FOR THE EAST.—As another indication of the growing outlet for our field products of the garden persuasion, to which we have frequently alluded, the increasing Eastern shipment of beans is significant. It is an-



CACTUS AND AGAVE AT MARYSVILLE.

with such a statement in New York this week. He states that arrangements have been made to send out eight engineering parties, who will leave Greytown either on the 29th or 30th of November. The preliminary surveys are com-

nounced that 18 carloads of beans will be shipped this week to Hannibal, Mo. There is a very large bean tonnage now on the way East. Orders from Chicago, Philadelphia, New York and bean-eating Boston are numerous this sea-



THE BLENHEIM OR SHIPLEY APRICOT.

pleted, and their work will be to locate the route of the canal, including dams, sites of locks, etc. They will be equipped with boring machines, and will ascertain the various strata to be excavated. Mr. Menocal expects that their work will be completed in eight months, and that by July 13th, if not before, the work of excavation will begin. The total cost will be about \$65,000,000. After completion, it is calculated that one-half the revenue of the canal will come from California, Oregon, and British Columbia products.

SONOMA VALLEY is overrun with tramps.

son. The California white bean is growing in favor with the Easterners on account of its superior flavor. Low rates enable our dealers to lay beans down in Eastern cities at prices that meet local competition.

HEREFORDS IN ARIZONA.—H. C. Hooker of Wilcox has imported from Illinois 43 Hereford bulls, which are to be turned loose with his huge herds on the San Pedro. Stock-raising is on the advance in the Territory.

L. U. SHIPPEE is the Republican nominee for Mayor of Stockton.

The Blenheim or Shipley Apricot.

We give herewith an engraving of the Blenheim or Shipley apricot because of late this variety has made considerable progress in winning the esteem both of growers and canners. The engraving is from a drawing made of a specimen from the University orchard at Berkeley. In the University collection of apricots of trees all planted at the same time, and including nearly 20 prominent varieties, the Blenheim trees are the largest and most constant and heavy bearers. This has been the case for a number of years. Mr. Klee, who had charge of the orchard for four years previous to his engagement as State Inspector of Fruit Pests, pronounced the Blenheim the best variety tried, and the two crops since then have borne out Mr. Klee's estimate. The fruit ripens early; in Berkeley sometimes as early as July 1st. The trees began bearing the fourth year after planting, are vigorous and healthy, and one tree has several times borne from 200 to 300 pounds of fruit. The fruit in the engraving is rather above the average size as grown in Berkeley, the average being about seven to the pound, when properly thinned.

The Blenheim is well regarded by the canners. It probably will run a little larger than the Royal in size. It ripens evenly and has splendid color. At one of the Horticultural Society meetings last summer, Mr. Hathaway of San Lorenzo stated that a prominent fruit-canner had told him that he looked upon the Blenheim as the coming apricot. We are not aware how far its adaptation extends over the State, but from experience at Berkeley and elsewhere, it succeeds admirably in the coast region.

Eastern fruit authorities seem to give the name Shipley the prominence; here, Blenheim appears to be the favorite. Thomas says the variety is of English origin; Downing does not mention its source. Thomas' description is: "Large, oval, surface orange, flesh deep yellow, juicy, rather rich; stone, roundish, not perforate; kernel, bitter; inferior to Moorpark, but rather earlier."

Warm Weather Plants.

It is rather fashionable to use illustrations to show the extent of the semi-tropical area of California, and the thrift of arid region flora over the greater part of our valley country. Such a purpose is served by the little engraving on this page which is reproduced from a photograph taken in the vicinity of Marysville, California. The planter seems to have been seized with the idea of making a hedge by alternating cactus and agave, which would certainly give his ground rather a queer boundary. The cactus, which is native to the desert area of Southern California and Arizona, seems to thrive in the higher latitude, as it is overtopping the fence. The figures in the engraving must be taken for a party of tourists, for they have rather an air of abandon which can only be pardoned on the plea of an undue amount of globe-trotting.

The shores of San Luis Obispo bay, especially below Port Harford and Cape Landing, are covered with dead sardines, and the sea is continually washing them ashore. In some places, the dead fish lie a foot deep and several feet in upon the sand.

THE DAIRY.

Drouth and Dairy Feed.

It is not often that we can draw deductions from Eastern growths which are of value in California, but occasionally there are conditions at the East which somewhat resemble ours. There was a very long and grievous summer drouth in the Mississippi valley last summer, and the behavior of forage-plants during its progress may give a hint of adaptation to our customary conditions.

The Illinois experiment station is located in what was the very center of the drouth district in that State last summer, and this gave Prof. Morrow an excellent opportunity to study the effect of dry weather on various grasses and clovers. The result of his observations and conclusions was promptly given to the public, whereby the farmers of not only his State alone, but of all the States, are given much light on this very important subject. The professor says:

"Alfalfa, or lucern, has made the most continuous growth and remained most fresh and green during the time of the greatest heat and drouth. The stems are more harsh and woody than in favorable seasons.

"Red clover ranked next to the alfalfa in growth during the worst period of drouth, and is counted a much more valuable plant for this region. Its presence in pastures and meadows has been a great help. Clover sown last spring made a fair growth, while timothy sown last autumn and this spring failed entirely.

"Of the more commonly grown grasses proper, orchard grass stood easily first in quickness of starting growth after cutting, or after rain, and in the quantity of food furnished during the driest weather.

"Timothy well illustrated one of its weakest points, showing little sign of growth for three or four weeks after being cut, and not responding readily to the first rains.

"Bluegrass stopped growth probably first of all the pasture grasses, and for a time seemed lifeless. After moderate rains it quickly revived and has made a fair growth.

"Rarely has there been a better illustration than that given this year of the good effects from allowing a good growth of grass on the pastures in spring and early summer as a safeguard against drouth, or of the much better growth even during dry weather, on fertile soils in good condition.

"In a noticeable degree grass was nutritious during the dry weather, cattle doing fairly well on very short pasturage. In an equally noticeable degree the first growth of grass after rains had the 'washy' character of the first growth in spring.

"The check to evaporation by the shade of trees in many cases was such that the grass on the north side of the trees remained green, while on the south it was parched, apparently lifeless. On the other hand, the great quantity of moisture drawn from the soil by the roots of trees was clearly shown by the lessened growth of corn within 20 feet of a row of trees running north and south.

"The astonishing ability of corn—a true grass—to resist drouth, if once well established on fertile soil, has not often been better shown. With the soil so dry that seeds would barely germinate and young plants make but feeble growth, the field corn continued to grow and perfect ears in a surprising manner.

"Among the lessons retaught farmers by this drouth are these: It is well to give red clover a prominent place in seeding lands for pasture or meadow if the hay is to be used on the farm. Orchard grass has not been so well appreciated as it should be. It may well be tried more extensively. Blue grass does badly during great drouth, but its fine quality, permanence, thick sod, early growth in spring and late growth in autumn make it very valuable. No substitute of equal value has been found for timothy as a grass for hay, but the yield per acre and feeding value per ton is greater if clover is grown with it. Grass suffers more from drouth in cases where the fields have been closely grazed early in the season than when a fair growth has been allowed to remain, serving as a slight shading to check evaporation partly or fully counterbalancing the increase of evaporation from the leaves, and certainly this better growth enables the plant to more successfully resist unfavorable conditions."

Use of Corn Fodder.

Prof. Henry, Wisconsin's efficient agricultural experimenter, writes to *Hoard's Dairyman* concerning corn fodder. The following are extracts from his letter:

How Fine to Cut.

Here, as in most other matters in this world, we cannot give exact advice, for the conditions constantly vary. I should say out to such length as experience shows will get the stock to eat the fodder with the least waste. This length may be as short as a fourth of an inch, but I have known of the largest per cent of fodder being consumed where the stalks were cut in two-inch lengths. By varying the length of cut and noting the amount of waste fodder left in the manger, one can settle the

question for himself. Experience will show that the rule for cutting a fodder with a soft, watery stalk like Stowell's evergreen sweet corn, will not apply to a mammoth corn like the B. and W. Southern ensilage.

Does It Make Sore Mouths?

Here we have the most varying experiences. We have had yearlings' mouths get sore on succulent ensilage when cows and other stock fed on the same showed no such trouble. That the mouths of cattle often get sore when fed on cut cornstalks is a fact, and farmers should watch closely to note such effects. It can be detected easily when one is watching for it, by the dainty, nervous way in which the feed is pushed about by the cow that is hungry for a good meal but is forced to pick out the soft parts and leave and avoid the sharp, hard points that will injure her tender mouth. Just as soon as trouble is detected, change the length of cut, cutting longer or shorter as judgment dictates, and as a rule the trouble will pass away.

Is the Lower Half of a Cornstalk of any Value?

Certainly it is. Chemically, it grades higher than oat-straw, and we cannot afford to throw it away after raising it and handling it any more than we can waste our oat-straw which we are forced to raise, cut and handle in order to get the grain.

Proper Feed to Go with Cornstalks.

Cornstalks provide the heat and fat forming elements, but are lacking in those adapted to muscle and nerve-making; hence we must pay close attention to what we feed with them. For other roughness, clover hay leads in the list, while any kind of straw is the poorest to go with cornstalks. For grain ration, bran and shorts lead, and corn comes last in the list. One must pay attention to these matters if he wishes to get good results.

How Much Do We Save by Cutting Our Cornstalks?

From three years experimenting I should say that the extremes of the amount saved vary from the minimum of 7 per cent with soft, fine fodders to 40 per cent with the coarse mammoth varieties. For common field corn grown for ears which have been husked, we may save over 30 per cent by passing the fodder through the feed-cutter. By this, I mean that 100 pounds of cut fodder will be worth rather more than 130 pounds of uncut fodder. We are not done with this question yet, and our figures are subject to revision.

One of the Benefits of the Drouth.

The drouth this season has not been an unmixed evil. Our farmers have learned that Indian corn is the safest, most reliable crop we can grow. The short hay crop is forcing farmers to care for their cornstalks, and they will come to see in them a value such as a dozen years of ordinary prosperity would not have taught. I anticipate lively discussions at the institutes this winter, on the best ways of raising, harvesting and feeding this, our grandest of all food plants.

THE STABLE.

Glanders in California.

The *Oakland Enquirer* says that up to Oct. 8th 14 horses had been shot in Oakland because they were infected with glanders, and owners of fine teams are beginning to inquire with some alarm what degree of danger they are to fear for their animals. So far as the Sanitary Inspector knows, this is the first visit of the disease to Oakland, though it prevailed to a considerable extent in San Francisco some years ago. There does not appear to be any veterinary authority in Oakland who feels capable of saying precisely what the degree of danger is or what—besides shooting the afflicted animals—ought to be done toward extirpating it, and therefore the best recourse we have is the treatises on the subject to be found in reports of the Department of Agriculture and other books.

An Experience in Benicia.

The worst outbreak of glanders that has yet occurred on the coast was one among the United States Army horses at the post in Benicia, which occurred about 1875. There were nearly 200 animals there, and before the presence of the disease was discovered it had thoroughly permeated the drove. On application from the post-commander, the Government sent out a skilled veterinary surgeon from the East, and his method of ridding the place of the presence of the disease was effectual if not economical. He had the horses taken out in platoons and shot, continuing the process till not an animal was left alive. Then he had the stables gutted, the racks, mangers, partitions and bedding, and the saddles, bridles and other accoutrements collected and made a big bonfire of them. There was no more glanders in the Benicia barracks after that, but it cost the Government a neat little sum to remount those companies of cavalry. Whether such heroic methods were really necessary may be doubted, however, for glanders has been extirpated in other places before now without shooting the well horses with the sick ones. Before this slaughter at Benicia

took place, one man had already died there from the bite of a glandered horse.

Glanders is a contagious, but not an epidemic, disease, and therefore it does not sweep over a district and in a short time affect all the horses in it. Its spread is rather slow, and it sometimes remains in a city for as much as five years, affecting a horse here and there. But, on the other hand, it is always fatal, for the glandered horse never recovers, though he may live for several years in cases where the disease is chronic. Ordinarily the run of the disease is only from two to four weeks.

The American authority has this account of the symptoms: "The symptoms of glanders are not always well defined, but the three principal ones are: Ulcers of the membrane lining the nose, a more or less continuous sticky discharge from the nostrils and a swelling of the glands beneath the jaw. When all these conditions are present there is no difficulty in making out a case; but the disease may be present without all these symptoms, and its detection prove most difficult. The first symptom to attract attention is usually the continued discharge. This may take place from both nostrils, if both are affected with ulcers, or from one only if the ulcers are confined to that side. This discharge does not differ greatly from catarrh. It is less thick, not so yellow, and flows in a thin stream from the most dependent part of the nostril. But the discharge is not constant, and in a dry climate, such as that of California, it may be so slight and infrequent as scarcely to attract attention. An aid to diagnosis is the temperature of the animal, which in nearly every instance will be above 110 degrees F. The most reliable symptom of the disease is the 'glanders nodules' or of the 'glanders ulcers.' Before the ulcer forms there appears in the membrane a small lump or nodule, varying in size from the head of a pin to the size of a pea. As a rule, the nodule is yellow in color, and, while small, can be more readily felt than seen. Oftentimes the development of the nodule is preceded by the appearance of a yellowish-red streak, which looks as if made by drawing a camel's-hair pencil, dipped in blood, across the membrane."

Hard Drivers.

In taking them to task the *National Stockman* justly says:

It is one of the peculiarities of many of those who use driving horses that they never get in a hurry until they get started to go somewhere. It is also noticeable that the faster their horses can go the greater the hurry. In other words, there are many men throughout the country who are naturally hard drivers. They are not generally aware of the fact, but such men kill more horses than they wear out, and the haste thus made turns out to be a waste, and frequently one that amounts to something. The average life of driving horses is not much longer than that of street-car horses, and were all the horses in such hands as what are known to be hard drivers, the difference would undoubtedly be in favor of the streeters. It is nothing uncommon to see a strong, promising young driver get into the possession of a man who is in the habit of letting no grass grow under his horse's feet, as the saying goes, and within a year or two get banged up so badly that he is fit for nothing, except for the tread-mill or bone-yard. Fast driving is simply a habit, a bad habit, and one which those who indulge in generally pay well for the privilege. If a certain point is to be reached by a certain hour, why not start soon enough to reach it without hurting your horse? When a horse is able to go fast when called upon, there is a greater reason for saving him than if he were a plug, and too slow for either pleasure or profit. A good, free driver is one of the greatest pleasures to be enjoyed by those who have much driving to do, and therefore should not be driven to death before his days of usefulness would be half over under proper treatment. It is always the good drivers that are abused. No one ever heard of lazy horses being hurt by men who are in the habit of driving fast. They seldom use that kind of a nag. It is the best kind only that suits them, and the better the horse the quicker he is put upon the retired list on account of being stiff and broken down from the effects of hard usage. There may be no law to prevent men from doing as they like in regard to driving fast or slow, but there is a law to prevent the practice of cruelty to dumb animals, and were that law strictly enforced there would be fewer horses broken down and useless at that period in their lives when they might be in their prime. The slaughter of a valuable horse every few years means a small fortune in the average lifetime of a man.

UTILIZING SEAWEED.—An English chemist has found a way for turning to account the practically illimitable quantity of seaweed that the ocean supplies, or at least as much of it as may be desired. He boils the weed with carbonate of soda, and treats the filtered solution with sulphuric acid, obtaining from it in this manner a substance that has more viscosity than starch, or even gum-arabic, and that can be profitably employed in stiffening various textile fabrics. It is also said to be excellent adapted for the making of syrups and for certain culinary uses. From the cellular and fibrous matter left after the extraction of that material—to which he has given the name of "algin"—a very good quality of writing paper can be cheaply made.

THE FIELD.

Great Enterprise in Beet Sugar.

For some months the statement that Claus Spreckels, the great sugar king, had been won over to the idea of home-grown sugar has been discussed in the public press and has attracted much attention. There seems no doubt remaining that Mr. Spreckels is really upon the eve of establishing a great beet-sugar enterprise in this State. Last week there was organized an incorporation to be called the Western Beet Sugar Company, with a capital stock of \$500,000, actually subscribed, with E. B. Pond, Jas. B. Stetson, Louis Sloes, M. P. Jones, John L. Koster, Meyer Ehrman and Claus Spreckels as directors.

Rumor has located the probable place of Mr. Spreckels' enterprise in the Pajaro valley, and we are glad to find in the *Pajaronian* of Watsonville of Oct. 20th, a very well written article, giving the history of a previous undertaking in that valley and outlining what may be done in the future. We reproduce the article as follows:

Historical.

In 1877 the California Beet Sugar Co. purchased a mill plant in Alameda county and located it at Sequel, in this county. At that time the cultivation of the sugar beet in European countries had been demonstrated to be a successful industry, and as the United States was mainly dependent on imported sugar for its supply of that necessary article, much attention was being paid to sugar-beet culture; and from its successful development was expected to result a relief from foreign sugar importations, and at the same time build up a great enterprise that would ultimately open a vast field for labor and give farmers the opportunity to produce something more profitable than cereal crops. The factory at Sequel ran three years and failed. The machinery was crude, the management was inexperienced, the factory was quite a distance from the beet-fields and the cost of freight on the beets was heavy. These and other reasons contributed to the failure of the factory. The beet-fields were in Pajaro valley. As the capacity of the Sequel factory was very limited, only about 500 acres of land in this valley were cultivated in beets. The methods of cultivation were far cruder than those in use in Germany, France and Austria, yet the yield was from 10 to 32½ tons per acre, and the average yield on good valley land was from 15 to 20 tons. The price paid for the beets was from \$4 to \$5 per ton. Sugar beets were a more profitable crop than cereals, and Pajaro farmers felt that the failure of the Sequel factory was a hard blow at the most promising industry of this section. The beet production of Pajaro valley was restricted by the capacity of the Sequel factory. Prior to its closing down the farmers sought to have its capacity enlarged so that a larger acreage in Pajaro valley could be devoted to beet culture each year. The failure of the factory was due to itself, not to the beets. The ability of Pajaro land to produce immense crops of first quality beets was clearly shown, and from that time up to the present the farmers of this section have been extremely anxious to see another beet-sugar factory located in or near this valley. There is enough land here that can be devoted to beet culture to assure a season's work for a large factory.

Mr. Spreckels' Foreign Studies.

The interest in beet-sugar culture has been strongly revived by the recent publication of interviews with Claus Spreckels of San Francisco, one of the largest sugar refiners in the world. Mr. Spreckels has spent several months in Germany and Austria, and during his stay on the continent closely devoted his time to a careful study of sugar-beet culture and the process of extracting the sugar from the beet. He was so thoroughly satisfied with his investigations, and was so confident that the enterprise could be equally successful in California, that he ordered a \$300,000 beet sugar mill plant, and it will soon be shipped from Germany to California. He also ordered many tons of seed to be shipped about Dec. 1st. The location of the sugar factory in California was not determined upon. These facts were stated by Mr. Spreckels in interviews at Southampton, New York and San Francisco. Upon the publication of the first interview, the *Pajaronian* called attention to Mr. Spreckels' plans, and suggested that the people of this town and valley appoint a committee of citizens to wait upon Mr. Spreckels, on his arrival home, and lay before him the results in beet culture in this valley, and present the many advantages this locality offers as the site of his beet-sugar factory. The suggestion was considered good, and street talk was plentiful. Every one wanted to see such an enterprise located here, and believed that steps should be taken to lay the claims of this valley before Mr. Spreckels. While this plan was under consideration Mr. Spreckels arrived in San Francisco—Wednesday last, we believe. On Friday evening he passed through this valley for his country residence at Aptos. On Sunday a representative of the *Pajaronian* called and had an interview with Mr. Spreckels on his European investigations and the great enterprise he was about to establish in this State. Mr. Spreckels is a hale, vigorous man, accustomed to active commercial

life, and the conduction of vast enterprises, and has the indomitable energy and clear judgment that are the essential characteristics of a successful man.

Mr. Spreckels stated that he had visited Germany for the purpose of carefully investigating every detail of beet culture and sugar-beet manufacture. It had been 17 years since his previous visit to the Fatherland, and the changes made in that time were many and the development great in the sections devoted to beet culture. The production of beet sugar in the German Empire had grown to enormous proportions, and now aggregated 1,000,000 tons per annum, of which a large proportion was sent to the United States. Mr. Spreckels said that when in Great Britain, the vast "dumping-ground of the products of the world," as he tersely expressed it, the farmers were unable to till the soil and market the products thereof in competition with the grain shipments from America and India, and he was satisfied that, before long, Great Britain would be compelled to protect her farmers against American products by a restoration of the tariff on certain articles. Germany had refused American hogs and grain. When the great European markets would be closed against American cereals the recourse to other forms of agriculture than those now in vogue would be compulsory if the American farmer did not wish to fall into the condition of the farmers of Great Britain. The sugar consumption of this country was enormous, and the sugar was mainly imported. If Germany would not have our hogs and grain, then we should endeavor to do without German sugar. In pursuance of this thought he had visited that country, and had become firmly convinced that the sugar needed for American consumption could be produced in this country, thereby giving variety of crops to farmers and providing the means for more labor. The millions of dollars sent to Germany for sugar each year could be kept at home and go into the pockets of American farmers and American laborers. He then explained at length the process of selecting the beet seed, planting, cultivating, etc. Mr. Spreckels has evidently been a careful student among the German beet-growers and sugar-makers, for he minutely described the process from the planting of the seed to placing the sugar on the market. In Germany over 30 tons of beets per acre are raised, but this is only by careful fertilizing and cultivation. Rotation of crops is practiced, and wherever Mr. Spreckels locates his factory he will require the same system to prevail. Half of the land in beets every year, the halves changing, is the plan he will require. In favored localities in this State he thought the yield would run close to 30 tons per acre. By a new process, invented by an Austrian (the patent is controlled in this country by Mr. Spreckels), the salts are separated in the process of sugar manufacture and become articles of commerce. This gain is an item of considerable importance to beet-sugar manufacturers. In Germany the soil washed from the beet, with lime added, is replaced on the land as a fertilizer. The pulp from the mills is fed to stock, and the German beet-growers have fat stall-fed cattle for market all through the year. No part of the beet is wasted in the process Mr. Spreckels will introduce in this State. The improvements in machinery, and the large percentage of saccharine matter in the quality of beets he will introduce, assure him that his enterprise will be successful from the start.

Mr. Spreckels' Intentions.

As to its location he has not determined. The ability of the Pajaro soil to produce good beets was known, but whether farmers would engage in it was unknown to him. The factory he would start next year would employ from 150 to 200 men, would handle 350 tons of beets per day, and make 40 tons of sugar daily. It would begin work Sept. 1st and run perhaps five months. It would handle in the run nearly 45,000 tons of beets, and he would require at least 2500 acres of good land in beets each year in the section where the factory was located. For the beets he would be willing to pay a price that would make beet culture a far more profitable business than cereal growing. (Mr. Spreckels named the price, and it is a figure to which the pioneer beet-growers will take no exception.) He stated that he had thought of this valley, that he knew the quality of land was here, but that of the quantity he would have to be assured wherever the factory was located. Santa Cruz county had an abundant supply of wood and lime, shipments could be made by rail or water, and the Pajaro valley had the requisite quality of soil. On his Aptos ranch he could place a large tract in beets. The San Andreas hills would pay better in beets than in grain; so would the upland near Freedom and the farms near the mountains, while the valley lands should produce big crops. In response to the inquiry, "What do you wish the people of Pajaro valley to do in the direction of having the factory located there?" he replied: "Call the farmers together—say on Saturday, Nov. 5th; have them from all parts of the valley; get every farmer there; I will come there, meet them, talk to them, and ascertain if they want a beet-sugar factory and are willing to go into the cultivation of beets to the extent needed." The interview touched upon many other points, but Mr. Spreckels will be here on Saturday, Nov. 5th, and discuss them with the farmers of our valley. From all parts of the State Mr. Spreckels is in receipt of letters, asking the location of the factory at

many different places; but he is anxious to meet the farmers of Pajaro valley and learn their desires in reference to locating a beet-sugar factory in their midst. The matter is in their hands. On Saturday, Nov. 5th, every farmer in the valley should attend the meeting at the Rink. Circular letters will be mailed to-day to the farmers; but if any should fail to receive them, the omission will be an error and they are expected to be on hand on Nov. 5th. Mr. Spreckels has shown a most praiseworthy spirit in offering to come here and meet the farmers, and he should be met with a spirit equally as frank. The establishment of his factory in this valley would give a great impetus to the development of this section, would create a large field for labor, would increase the variety of profitable crops, would save nearly \$75,000 per year to farmers in thrashing, freight and storage expenses, and would be the beginning of a most prosperous era. The prices assured for beets guarantee a profit. Mr. Spreckels aptly puts it that one acre in beets will return as much profit as three acres in grain. Pajaro valley is a most desirable location for a beet-sugar factory, and its location here is a matter that will depend mainly on the meeting of Nov. 5th. Every friend of progress should attend that meeting.

FORESTRY.

Forests in Santa Barbara County.

H. C. Ford, the well-known artist and naturalist of Santa Barbara, makes the following important communication to the *Press* of that city:

It will perhaps be a surprise to some citizens of Santa Barbara to learn that at a distance of less than 20 miles in an air line from their city are forests of resinous trees, the individual specimens of which rival in dimensions and height their congeners in the Sierras and the more northern portions of the Coast Range. These trees were discovered recently by Mr. James O'rd, and brought more into notice last year by Mr. John Spence, who collected specimens of the foliage, cones and bark of many of the species, some of which found their way into the museum of this society. Although so near "as the crow flies," yet the best part of four days were spent with pack animals in reaching the principal body of timber. At an elevation of 7000 feet, on the highest portion of the San Rafael range, we found the first trees, with trunks and limbs quite stunted, twisted and gnarled from the height and exposure. As we descended the northern slope through this forest the trees grew larger, the more dense growth following the deep-cut ravines, at the bottom of which the snow lay in masses in the early days of June.

At a height of 6300 feet in a basin of rich soil through which flowed a stream of cold, pure water, we found the most extensive body of timber, and here we observed the largest individual specimens consisting of the following species: *Pinus ponderosa*, *P. Coulteri*, *P. Sabiniana*, *P. Lambertiana*, *Librocedrus decurrens*, *Pseudotsuga Douglasii* var. *macrocarpa* and *Abies concolor*.

In measuring several of the heavy yellow pines (*Pinus ponderosa*), we found them to be over 19 feet in circumference and an estimated height of from 150 to 200 feet. This tree has very thick, reddish-brown bark, deeply furrowed and split in large plates. The cones of those in the Coast Range are much smaller than those of the Sierras. This pine is known throughout the West as the yellow pine from its heart-wood, which is yellow, heavy and very resinous. It is considered among the best timbers of the Pacific. The thickness of the bark in the largest trees is from three to four inches, and the sap wood is also very thick. The leaves are not deciduous until about the end of three years, therefore forming brush like tufts at the end of the small branches. In the older trees, the trunks are without branches to the height of from 75 to 100 feet, rendering them, for lumber purposes, free from knots. The trunk generally rises true as a line and rarely forks.

Fine examples of the Sugar Pine (*Pinus Lambertiana*) are scattered through this forest and along the ravines leading down from higher elevations. One measured 15 feet and 7 inches in circumference, but there are others of larger dimensions. It was formerly supposed that this noble pine was not found south of the Santa Lucia mountains of Monterey county in the Coast Ranges, but we find it here apparently as vigorous as farther north and in the Sierras, its conspicuous form, with widespread upper branches, rising above the spruces and firs. Its cones are of greater length than those of any other species, one in my collection from the Sierras measuring 22 inches in length. From one to five of these long, cinnamon-brown cones are borne at the end of the branches, and many of these we find on the ground before maturing, cut from their stems by the beautiful gray squirrels who covet the rich nuts therein contained. The sweet and aromatic nuts were much prized by the Indians, who laid in large stores for future use. The timber closely resembles the white pine, being soft, light and white, and is of equal value, if not superior. The name of sugar pine comes from a manna like sugar that concretes from the oozing sap, sometimes crystalline, like beet sugar, very sweet and without a pine-resin flavor, and,

according to Dr. Kellogg, contains laxative and balsamic properties that commend itself to the medical profession if it could be found in sufficient quantities. To the artist its sparse, widespread upper branches present a striking contrast to the pointed and pyramidal contour of its neighboring conifers, and the warm, neutral tint of its bark affords a pleasing variation in color. In its best estate, it rises to the height of 300 feet and 15 or 16 feet in diameter, one of that dimension being found between the two forks of the Stanislaus river.

The Great Coned Coulter Pine (*Pinus Coulteri*), a tree peculiar to the coast ranges, is sparsely scattered here among other members of the family. This so closely resembles Sabin's Pine (*Pinus Sabiniana*) that it is often confounded with it, both being nut pines and having somewhat similar cones, the latter of both species having the scales armed with spurs; but the seeds and wings always distinguish them. The spurs of the *Sabiniana* are somewhat longer and more incurved, and the cones are shorter and thicker. The foliage of Sabin's pine has a soft sea-green tint, bark of ashen gray, and a little more open branched than Coulter's species. The bark of the latter is very thick and rough and the cones cling tightly to the branches and are loth to open, while those of Sabin's are loose and shed the seeds easily. Both are nut pines. The timber of each is little used.

The White or Incense Cedar (*Librocedrus decurrens*) is represented by noble specimens, the largest of which measured nearly 24 feet in circumference. It has a conical trunk with cinnamon-colored, thick, spongy bark not unlike that of the Sequoia, and this led the first observers of this forest to call them redwoods. Specimens of the bark were obtained last season by Mr. Spence and may now be seen in our collection. Irregular sutures in the shreddy bark extend longitudinally along the trunk. The wood has a delicate salmon tint and is fragrant like most of the other cedars. It is durable under cover. The expanded base of the trunk renders them able to resist storms, yet we saw many weakened by fire that had been blown prostrate.

There also we found the Great White Silver Fir (*Abies concolor*), which Dr. Kellogg calls the most stately, elegant and useful fir of the Pacific. The specimen under which we made our camp and whose branchlets made our springy and fragrant beds, was 13 feet in circumference three feet from the ground. In the young trees this fir is exceedingly symmetrical, the whorled branches spreading horizontally, and would make a very desirable specimen for the lawn or park, and should be generally introduced. The bark of the old trees is gray, and that of some of the younger ones nearly white, as are the upper portion of the more mature trees, and for that reason it is called the California White Fir. Although this tree has not a general reputation for timber, Dr. Perry says it makes excellent railway ties, and it is said to make choice ceilings, shrinking but little and taking less paint than any other lumber. If used for butter kegs or boxes, no taste or odor would be imparted to the contents, and in the mining camp it is famous as being the stiffest and strongest of the mountain timbers for bridges and strong floors. We found a few trees growing on the summit of the highest peak of the San Rafael at an elevation of 7000 feet, and in the Sierras it thrives at 8000 feet.

The Douglas Spruce (*Pseudotsuga Douglasii*, var. *macrocarpa*) is found on the sides of the rocky canyons near this forest, and we also observed it on the northern slopes of the Santa Ynez river, and at other points along the Mono creek and its tributaries. The variety is a smaller tree than the typical species, having larger canes that are fringed. It is found at a lower elevation than most of the coniferous trees, growing often among the oaks, is rarely more than 80 feet in height, having long spreading branches.

Of the species above mentioned, we found trees of all stages of growth, from seedlings upward, and if fires could be prevented the forest would be renewed by nature's processes. Evidence of former and quite recent devastation was plentiful, some of the finest specimens having been weakened at the base until prostrated by winds, or, if still standing, their vigor is greatly impaired or they are left blackened skeletons. Forestry legislation may not reach such remote districts as this, but it is hoped that an enlightened sentiment will prevail that will protect without enforcement of law. The habit of stockmen in burning the chaparral from the hillsides in order that the grasses may spring up in its place may be profitable to the grazer, but such fires spread to invaluable tracts of timber, destroying the young growth and greatly impairing the vigor of adult specimens.

There are other bodies of timber in the neighborhood of the one visited, some of which are said to be of considerable extent, but all are like the one described, practically inaccessible at present for utilitarian purposes, being situated at the head of canyons along which roads could only be constructed at an expense over-balancing the value of the timber reached.

To the list of forest trees of Santa Barbara county read before the society Dec. 29, 1885, I am obliged to add the variety of the Douglas Spruce and the Great Silver Fir and *Pinus monophylla* discovered by Mr. Spence last year.

RAILWAY CARS.—There are about 900,000 railway cars in the United States and over 26,000 locomotives.

SHEEP AND WOOL.

A Sheep-Shearing Machine.

Our foreign exchanges contain accounts of the trial of a sheep-shearing machine in Australia that, it is stated, proved quite successful. It is predicted that this machine will come into general use there where such large flocks are raised. The following gives some particulars that will prove of interest:

For some weeks back various statements, couched in more or less vague terms, have been going the round of the agricultural papers respecting a new sheep-shearing machine, which was said to be capable of shearing 10,000 sheep per day. Flock-masters in general received these statements with a very considerable grain of salt, for, although the present is an age of inventive wonders, yet practical men were inclined to think that such statements almost defied belief. It appears, however, that the capabilities of this new invention have by no means been overstated. The machine consists of a length of shafting facing the shearing floor, driven by a small engine. On this shafting and five feet apart are cast-iron wheels two feet in diameter, each wheel having one side of its flange slightly beveled. Six feet six inches above the shearing floor, and attached to each post by back screws, and five feet apart, is a cast-iron bracket with an extension of three feet of light angle iron. On each bracket is a small leather wheel four inches in diameter, with a bevel of one and a half inches, corresponding to the bevel of the iron wheel above. This wheel, which rotates on a spindle, is formed by compressing several layers of leather between brass plates. On the end of the spindle is a steel hook, and outside the bearing is screwed a brass coupling, which is attached to a flexible tube six feet six inches long. Inside this tube is a piece of round gut half an inch in diameter, with a hook at one end and an eye at the other. The eye is placed in the hook at the end of the spindle carrying the small leather friction wheel, and the hook is placed in the eye at the end of the universal joint forming part of the shearing machine. The connection is made complete by a thin brass coupling slipping over a light brass ferule on the end of the flexible tube and screwed to the end of the universal joint. By pulling a small cord hanging from the bracket a spring liberates the catch, and instantly the bevel leather-wheel is pushed into position and contact with the bevel of the iron wheel revolving on the shaft, and thus it communicates a rotary motion to the core inside the flexible tube, and so to the small rods working the crank inside the casing of the machine. This crank moves from side to side of the cylinder, and thus causes the fork with cutter attached at the end to reciprocate over the comb, and as the comb is pushed into the wool, so does the small cutter cut. An eight-horse power engine will drive 100 shears, one man attending each, and their construction is not so complex but that a shearer of ordinary intelligence can learn to work them in a few hours. The time required for the shearing of one sheep is from 3½ to 5 minutes.

The Melbourne *Australasian*, from which the above particulars are taken, states that Mr. Wolseley's sheep-shearing machine was lately tested as against an experienced hand-shearer in presence of a large gathering of flock-masters and wool brokers. The sheep selected for the occasion were a very difficult lot to shear, being thick in the wool, very low in condition, and the wool on the majority of them was full of sand. The trial was for half a dozen sheep each, and the hand-shearer got through his lot in 48 minutes 22 seconds, while the machine-worker required 63 minutes 28 seconds for his half-dozen. But, although the shearer beat the machine in point of speed, yet in every other respect the advantage rested with the machine. The shearer, although one of the best hands in the colonies, could not help cutting the sheep in his anxiety to shear close to the skin, while the machine-shorn sheep presented an even surface, closely shorn, and with the skin intact. From the hand-shorn sheep, the machine cut 6½ ounces of good, clean wool, while the shearer only got 2½ ounces of very sandy wool off the machine-shorn sheep, and in getting this quantity he made numerous small cuts in the skin. Another hand-shorn sheep was run over by the machine, and six ounces of clean wool was taken off it. The general opinion of those present was, that although a highly skillful shearer had beaten the machine in the time test, yet for closeness of shearing, freedom from second cuts in the wool and cuts in the skin, the results were decidedly in favor of the machine. It was evident that in a flock of wethers, as usually shorn, the machine would take from 8 ounces to 12 ounces more wool than a hand-shearer would, and that is an advantage which flock-masters will not be slow to appreciate.

THE FAN PALM.—Rev. B. C. Henry states that the fan palm of China grows only in the San U district, 20 miles long by 10 miles wide. The trees do not yield leaves suitable for fans until six years old. Some trees are said to be over 100 years old, but the tallest measure only about 12 feet. From April to November the leaves are cut monthly, from one to three being taken from each plant. From 10,000 to 20,000 people are employed.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

The State Grange.

We continue the publication of official documents and resume of proceedings at the recent session of the State Grange. The Treasurer made the following report:

Treasurer's Report.

To the Officers and Members of California State Grange:—There has been in the treasury within the Grange year \$142.01, as shown by the accompanying statement and vouchers. All other moneys belonging to the State Grange have been collected and disbursed by the Secretary, to whom I must refer you for the account. The National Grange dues have been paid by the Secretary, except one quarter, not at the close of each quarter, as the law of the Order requires, but within the succeeding months, as I am informed. I would also refer the Grange to the Worthy Secretary for an explanation of the cause of delay. I. C. STEELE, Treasurer.

Referred to Committee on Officers' Reports.

Secretary's Report.

The summary of the Secretary's monthly financial statements for the year ending Sept. 30, 1887, showed the total receipts to have been \$1797.84, all which was disbursed, leaving on hand supplies valued at \$28.50.

The membership reported Oct. 1, 1886, was 2786; the membership at date 3032; gain in membership, 246.

A sketch was given of the revival of Grange interest in California during the past year, and of the missionary and organizing work accomplished by Bro. Overhiser, as General Deputy, with the timely pecuniary aid of Bros. Logan, Steele and Chester, the most salient features of which have been noted from time to time in our columns.

An interesting correspondence was reported to have been had with James Dunn, delegate of a pastoral and agricultural society in Australia, looking to the organizing of a farmers' association, modeled after the American Patrons of Husbandry. The following

Report of the Executive Committee

Was read and referred to the Committee on Officers' Reports:

To the Worthy Master, Officers and Members of the California State Grange:—The lapse of another year has again brought us together from all parts of the State for a retrospective consideration of the past and for the purpose of devising and formulating new enterprises and labor for the future welfare and prosperity of our beloved Order.

The work of your Executive Committee has been necessarily very much retarded and crippled from the lack of funds wherewith to put in operation many suggestions and plans which we had from time to time under discussion and hoped to perfect, but have been compelled to abandon from our inability to meet the necessary expense to bring them to a successful realization.

Through the liberality of a few of our noble and generous brothers who each placed in the Grangers' Bank their individual checks as a fund wherewith to meet the expense of an Organizer, we have been enabled to accomplish something in that direction in the southern portion of the State. They are still calling on the mother Grange for much needed help. A full report of what has been done will doubtless be presented to you by said Organizer at this session.

With a keen appreciation of these difficulties and a sincere hope to be able to remedy them in the future, your committee would respectfully suggest and recommend the passage of resolutions whereby the dues from subordinate Granges to the State Grange be increased at least 100 per cent. It will be borne in mind that by such an increase no individual member will be directly called upon to incur any further liability to their respective Granges, as this amount is paid to the State Grange from the treasury of the subordinate Granges.

From the reports of the W. Secretary and W. Treasurer you will be enabled to appreciate the financial status of the State Grange, therefore there will be no figures reported by your committee, but reference is hereby made to such reports for detailed information.

Our connection with the California Patron Publishing Company will be fully set forth in the report submitted by the manager of said company, hence it will not be further alluded to in this report.

In connection with the Patron Publishing Company an informal attempt has been made to organize a Bureau of Information for the immigrant Granger and farmer and space provided at the office of the Secretary for an exhibit of the products and resources of the various sections of the State, and an appeal made through the columns of the *Patron* requesting farmers and others to send forward such specimens and information as they might possess or be enabled to procure that would assist in carrying out the above idea.

In response to such an appeal, many letters have been received by the Secretary indorsing the enterprise and promising after the lapse of county and other fairs to forward exhibits to be placed on permanent exhibition at our rooms. Your committee would respectfully ask an expression of opinion from this body as to the expediency of continuing work in that direction, as well as suggestions as to the most advantageous means of consummation. Hoping your deliberations may be productive of many lasting benefits, and that a spirit of fraternal interchange of opinion may characterize your discussions, we beg leave respectfully to submit for your consideration this report.

WM. JOHNSTON,
A. L. CHANDLER,
H. G. KEESLING,
JOHN F. DEMING,
Committee.

Woman's Plea for the Ballot.

In the course of the debate on the resolution favoring Woman Suffrage, Sister Mary F. Merrill of Stockton Grange made the following most eloquent and soul-stirring appeal:

Since I was old enough to know her history I have always loved my country. My country, did I say? I have no country.

She stretches out her beneficent hands to the uttermost parts of the earth; she invites even the lowest and most degraded, and they come—come, from the hovels and mudsills of Ireland—come, from the slums and the gin-mills of England—come, bending beneath a load of ignorance and superstition from Spain and Italy—come, loaded with dynamite from Germany, France and Russia, and she bids them welcome. She says: "Look abroad over my vast domain and take whatever there is left of the fairest and the best. Stay yet a few days and then enter into the councils of the nation. Stay yet a few days and have a voice in saying how this fair land shall be ruled."

But when an American woman, true-hearted, intelligent, and patriotic, knocks at the door of the council-chamber, she shows a forbidding face. She says: "Go home! go home! and use your influence there. I know that influence is ever exerted for good, but we want none of it here. Go home and use it there; and when your husband comes to you, mad with drink, why, influence him; and when your son, the beloved of your life, comes besotted into your home, when every reeling footstep leaves its impress upon your breaking heart, why, influence him; and if he will not influence, go to the man who turns the happiness of your home into food and drink and fine raiment; who breaks your heart and ruins your life that he may live in slothful luxury, go to him and try your influence."

I tell you, brothers and sisters, I would rather influence the wild beast from the mountains, mad with hunger and fierce with the thirst for blood!

Oh! that I had the right, when he sneeringly asks, "What are you going to do about it?" Oh! that I had the power to say: "I will put you in the eyes of the law on a level with other malefactors. I will make you responsible for the ruin and sorrow you bring upon the world."

My brothers, put this power into our hands; we will rightly use it, not abuse it. We ask it as a privilege—we might well demand it as a right.

It is ours now; the right is ours, inalienable. But the power to exercise our right is denied us. Not through any sense of justice, not through any appeal to reason and morality, but simply through the power of absurd prejudices and the superiority of physical force.

Legislators and Debris.

On the 10th of October, as we mentioned a week ago, the Anti-Debris Association resolved to invite our Congressmen to visit Marysville and satisfy themselves by personal inspection that the evils caused by dumping mining debris into rivers and streams have not been overstated.

In accordance with that resolution, the president of the association, Chas. E. Stone, has sent the following invitation to each of the U. S. Senators and Representatives from California:

MARYSVILLE, October 13, 1887.

Dear Sir: I am instructed by a resolution adopted by the Anti-Debris Association of the Sacramento valley to request you to visit Marysville at your earliest convenience to examine into the condition of the rivers in this vicinity.

The object of this visit is to afford you an opportunity to become thoroughly acquainted with the effect of hydraulic mining upon our navigable rivers, which, by the Act of admission of California into the Union, were guaranteed to be kept unimpaired. It will also give you very important information as to the condition in which the bay of San Francisco will ultimately be placed by the continual accumulation of debris from the rivers emptying into it.

I hope you will make it convenient to come at an early day, as I consider it a matter of great importance that our Senators and members of Congress should be fully informed by personal observation of the menaced destruction of the entire Sacramento valley, with its cities, and of the harbor of San Francisco.

An early reply is requested. If you will name a day on which you can visit us, we will meet you at the train. Your stay can be limited to one full day, as we can take you to any point upon the rivers in that time which will give you a correct idea of the situation.

Yours respectfully,

CHARLES E. STONE,

Pres. Anti-Debris Association Sacramento valley.

Dr. Stone has already had favorable responses from some of the gentlemen in question.

NATIONAL GRANGE EXHIBIT.—Worthy Master Overhiser and Bro. J. D. Huffman, of Lodi, are using their best efforts to have a creditable display of California products made at the National Grange. It has been strongly hoped that some provision would be made for transporting all suitable products that could be collected, but up to this date no definite arrangement has been effected. The railroad officials have declined to give free carriage; it is hoped, however, that means will be provided by subscriptions and donations to secure transportation without expense to exhibitors, and that such announcement can be made by Saturday, October 29th.

Grange Work and Progress.

[Prepared Weekly by M. WHITEHEAD, National Lecturer.]

In a number of the States of our Union fall elections are approaching, and the campaign grows warmer as the day for casting the ballot draws near. Party lines are drawn as closely as possible by the party managers, the "machine" is kept in good running order, and citizens who "belong" will go through the form of depositing the ballot with little thought as to the qualifications of the candidates for the positions. Parties are all right in their places, and the more equally balanced they are the better, for it keeps them on their good behavior; but we should see to it that the people run the party and not the party the people. The voters are greater than any great party. Emerson once said: "The great end of all political action is to secure morality as the basis of all political action," and Thos. Jefferson said: "The whole art of government consists in the art of being honest." We need honesty in politics nowadays, and honest men in all political parties. The Grange teaches the farmer to purify his own party, and not to believe the wrong is all on the other side. "It is his duty to do all he can in his own party to put down bribery, corruption and trickery; to see that none but competent, faithful and honest men, who will unflinchingly stand by our industrial interests, are nominated for all positions of trust." Here is a plain duty for all members of the Grange, for all farmers, for all good citizens.

So long as men serve their party in preference to their own sense of right and justice, so long we must suffer from unjust legislation. It lies with the people to demand that the best men be nominated for office, and then go to the polls with the determination to support the best men without regard to their political beliefs. Farmers spend all their time and labor in producing crops, and devote too little time to studying what the laws and politicians are doing for them.

Two Farming Issues a Week.

Heretofore the California Patron and PACIFIC RURAL PRESS, the two leading Grange and agricultural papers of the Pacific Coast, have both been published on Saturday and circulated at nearly the same time. Many copies of these papers are taken by the same subscribers. Under such circumstances two large papers come to hand to be read simultaneously, often furnishing more good reading than their readers care for at one time. To make the two papers more valuable to the farmers of this coast, the PATRON, as soon as possible, perhaps next issue, will be dated on Wednesday and printed in the early portion of the week.

The market reports are an important feature to the producing readers of any farming paper, and it is proposed to render the market reports of both these papers a significant feature. The Rural Press has had its market reports prepared specially by its own editors and reporters, and now that the PATRON will be published upon a different date, the same pains will be taken with the market reports hereafter to be found in its columns. These arrangements will afford farmers who take both papers the equivalent of a semi-weekly journal. We therefore hope that all subscribers will find it not only agreeable, but profitable, to continue their names on the subscription list of both papers, and that many who have heretofore taken but one paper will now avail themselves of this favorable opportunity of securing two first-class rural papers, issued during different periods of the week.—Patron, Oct. 22d.

Celebrate the Grange Birthday.

December 4th will be the anniversary of the birthday of the organization of the Patrons of Husbandry. The Patron suggests that representatives of Pomona Grange and State officers, Past Masters, and as many other Patrons as can, meet on the 4th of December at Oakland or some other place that may be selected, and commemorate, with appropriate exercises, the birthday of the Order. Also, at the same time, discuss plans and adopt some methods for the strict co-operation in carrying on the work of the Order during the coming year to the best advantage possible to revive the work in the different sections of the State and to increase the membership and activity and the fruitful doings of the Order throughout our whole ranks, and particularly to start the ball in motion for a successful annual session at Tulare.

We believe it is feasible to hold an inter-State picnic or Grangers' camp-meeting in some southern, northern or central part of the State in the Spring time when the country is in its brightest and handsomest livery and before the extra busy season of farm work begins; or, if more feasible, during the camping-out times when all the farmers need a season of rest and recreation, and more than any other class should be entitled to take it. We need these general gatherings to talk over plans for co-operation and advancing the interests of farmers. We wish to hear from correspondents. Let

subordinate Granges discuss this matter and give an expression as to the best time and location for such desirable gatherings.—Patron.

[From Patron, Oct. 22.]

State Lecturer's Bulletin.

Open Letter No. 1.

BROTHER DEWEY, MANAGER OF THE PATRON:—I extend to you the right hand of fellowship, and believe you a true friend in your future management of the PATRON. You have been tried and not found wanting when the time arrived to strike the fatal blow.

By a tenacity and uprightness of purpose you have so devoted your time, means and talent to the upbuilding of a paper (*Rural Press*) that surpasses everything on this coast of its kind, and, not much to say, stands second to none on the other side of the Rocky Mountains.

You have greater facilities and more experience to bring to bear in the conducting of the PATRON than it ever possessed, and I am satisfied nothing will be left undone on your part to make it the beacon light to the farmers and Grangers on this Coast. Now,

FARMERS AND GRANGERS,

What is your duty in the matter? Will you allow Bro. Dewey to carry on this contest single-handed and alone, without one word of encouragement or the sinews of war? Do you fully comprehend the word "aggregate?" If not, consult "Webster."

Send him something of the workings of your Grange or news of your section, and, when that is exhausted, give him some of the ideas that are struggling in your brain for an utterance.

By this aggregation from all parts of the Coast we will have a chance to contribute to the columns of the PATRON and (wastebasket.)

By this means we learn to write, to spell, to express our crude ideas in an intelligent manner, which is an accomplishment, and an education worthy the effort.

Each family, neighborhood or Grange should appoint one or more persons to correspond with the PATRON and write up the interesting matter connected with their locality, which, when published, would make very interesting reading matter, and each could know what was going on in other sections of the State.

We have a very efficient set of officers in the State Grange. Now, will each subordinate Grange see that their officers are capable, willing, and have the push to them? Let each member feel that it is as of much importance for him to be there as it is for the officers.

Next Saturday, at South Sutter Grange, I begin the first campaign of my second term as Lecturer of the State Grange.

Will you lend your presence and personal efforts to make these meetings a success? I think from my record of the past that you can depend upon it that I will put forth my best efforts for the future. I ask one and all, will you lend your presence and ability in helping along the work that we have undertaken?

Come to the Grange, if you are cumbered with wealth, we will take out our percentage, and give you more pleasure than you have now.

If you are not loaded down with this world's goods we will point out to you the short road to a competency and happiness.

If you are treading the devious paths of this world alone, and have no star to guide by night, or cool shade of retreat by noon, come to the Grange, and we will introduce you to living subjects and make suggestions, to illumine your life and immortalize your name, and it can be truly said you have made two spears of grass grow where one grew before.

If you are despondent and gloomy, and fancy you have no friends, come to the Grange, especially when the sisters set out one of their fine banquets attended with smiles and fragrant flowers, and the long furrows in your face will turn into smiles of joy, and you will go home and take the rope that you contemplated in ornamenting a gallows, and hang the dogs that bark at the man in the moon. D. F.

Our Worthy State Lecturer is generally very level headed, but he has levied on us more than the tariff will bear by placing on us too high a standard. However, we will, all the same, stand square up to the rack, "fodder or no fodder," and honestly do our best. We propose to give his good, plain name in full hereafter in these columns—Daniel Flint.

PERSONAL. Worthy Master Overhiser and Brothers I. C. Steele, A. L. Chandler, H. G. Keesling, J. D. Huffman and Christian Bagge were among the out-of-town visitors at our office this week.

Exhibits for the National Grange.

Worthy Master Overhiser wishes us to state that specimens of all agricultural products suitable for exhibition at the National Grange are solicited for that purpose, the National Grange having provided space for exhibits from all parts of the Union.

Pomona and subordinate Granges, boards of trade and all firms and individuals are solicited to send on as fine and complete samples as possible, such as vegetables, nuts, dried and preserved fruits, etc., and other products of the soil. Pamphlets and other printed matter suitable for free circulation on such occasions will be received and well cared for.

Send by express, addressed W. L. Overhiser, care National Grange, Lansing, Michigan, in time to be received by the 15th of November. Give full description in letter by mail. Also be particular to label each article with its proper name, locality where grown and address of grower. All fruit should be wrapped in paper or shavings and securely packed, and on the outside of each box also should be marked the locality whence it comes. Prepay all charges, unless otherwise advised later.

From Sacramento Grange.

Relating to California's Exhibition at the National Grange.

We wish the Worthy Master success in this undertaking, and only regret that action was not taken in the matter sooner. But I hope the members of Sacramento Grange will not be backward in the matter, and send such samples as they have to the committee at an early date, as all must be in readiness by Nov. 5th. The committee consists of Bros. G. C. McMullen, E. Greer and L. H. Fassett.

Members of Sacramento Grange will take notice that the fourth degree will be conferred on a class at our next meeting, Nov. 12th, and we shall hold a Harvest Feast.

Grange will be called at 10 o'clock A. M. All initiatory offers will please be on hand promptly. In the afternoon a short literary program will be presented under the charge of the following committee: W. O. Bro. Holmes, W. St. Bro. Mack and W. Sec. Sister Stevens. We anticipate a good time and expect a large attendance. Fraternally yours,
W. WALTER GREER, M. W.

SOUTH SUTTER GRANGE.—A grand meeting of Patrons was held at this Grange last Saturday. Worthy Lecturer Flint was present with many other visiting Patrons. Worthy Master Overhiser had gone to Sacramento in anticipation of meeting with the Pomona Grange, but the meeting did not occur at that date. By the kindness of Brother Hull, and the Manager of the Grangers' Business Store at Sacramento, he was enabled to reach Sutter Grange in the early part of the afternoon (in time, we presume, for the Harvest Feast). This was the Worthy Master's first official visit since his inauguration. He gives a favorable report of Sutter Grangers. The Worthy Master with the Worthy Lecturer enjoyed the hospitalities of Brother Chandler's elegant home, of which he speaks volumes of grateful admiration.

EDEN GRANGE, not having a full attendance last Saturday, let the subject of holding a joint celebration with Temescal Grange lie over for another week, when it is hoped there will be a large meeting and final action taken. The member of Temescal Grange committee who visited Eden Grange reports a pleasant meeting. An interesting recital was given by Sister Anway, and a guitar solo by Miss Gladding was very fine. Sister Roxy Dennis also delighted the Grange with one of her inspiring vocal solos. Overseer Blackwood presided in the absence of Worthy Master Chester.

DIRECTORS' MEETING.—A called session of the Directors of the California Patron Publishing Co. was held Monday and Tuesday of this week, and the agreement with Dewey & Co. for the publication of the *California Patron* was completed, and the books of the California Patron Publishing Co., with all the assets except for advertising to October 15th, were placed in the hands of Dewey & Co. for collection, all the proceeds to be applied to the liquidation of the debts of the Patron Publishing Co.

TEMESCAL GRANGE expects to confer the First and Second Degrees Nov. 5th. A good attendance is desired. Sister M. S. Smith of Oakland, whose farm is near Yuba City, is now on a visit to Tulare, where we hope she will visit and talk to the Granges as well as to the Patrons individually at their homes.

EFFECTS OF IMAGINATION.—A young man in Philadelphia was hurt at the locomotive-works and two physicians said his leg was broken. After he had been in bed a week another doctor was called who said the limb was not fractured, and the young man at once got up and walked without difficulty.

The list of awards at the Independence Fair, as printed in the *Inyo Index*, was the neatest, tastiest and (typographically speaking) most exemplary work of its class that we have seen in years.

WILLOWS suffered loss by fire to the amount of about \$50,000 early Monday morning. One-fourth the value was covered by insurance.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

COLLAPSE OF A WAREHOUSE.—Haywards Cor. *Chronicle*, Oct. 21: The grain warehouse of Isidor Franklin, on the south side of the railroad, is a total wreck. Mr. Franklin and his employees had just left the building yesterday when they heard a roar like thunder, and looking around beheld the warehouse, grain and all, in a mass of destruction. The building contained 90,000 sacks of grain, 50,000 of which were more or less damaged, while a part of it is a total loss. The loss is estimated at not less than \$8000. Twenty men are employed in clearing away the debris and piling the uninjured grain under adjoining sheds to protect it in case of rain. Another warehouse will be erected as soon as possible on the site of the one recently demolished.

Butte.

COTTON.—*Enterprise*, Oct. 21: This morning Charles Sanders of Diamondville, eight miles from Chico, brought us down a fine specimen of cotton grown on his father's ranch at that place. It is from a stalk 3½ feet high, which contained 19 bolls, and shows what our foothill lands will do. The variety is called the "Texas Prolific," Mr. J. J. Sanders having had the seed sent him from Texas.

Contra Costa.

MANGOLDS.—*Martinez Item*, Oct. 25: D. R. Thomas' West Hill farm is an example of what can be done in and around Martinez in raising almost anything that grows. He has a patch of beets that beats anything in the beet line we have ever seen, and they are not dead beets either, but living mangel wurtzels, growing two feet out of and covering the ground.

El Dorado.

GARDEN VALLEY NOTES.—*Cor. Republican*, Oct. 15: Some farmers have sowed part of their grain, but it is too dry to do much toward putting in a crop yet. Potatoes in this vicinity are excellent and yield well.... The Wakefield boys have just sold a lot of uncommonly fine late peaches, for which they received a good price.... Apples are very scarce and in most cases badly troubled with worms. If any one has salable apples this year, they will bring a good price.

Lake.

PLANTING PEANUTS.—*Clear Lake Press*, Oct. 15: Linck is cultivating on his place in town peanut vines, which are producing good, large peanuts. He has left a bunch of them at our office. The experiment having proved successful, Mr. Linck intends planting a large patch with vines next season.

Lassen.

HAY AND GRAIN IN BIG VALLEY.—*Bieber Tribune*: This valley can already boast of a population of nearly 3000 souls, mostly thrifty, well-to-do farmers and stock-raisers, with enough land unoccupied to accommodate as many more. The amount of natural hay harvested in the valley this year is estimated at not less than 20,000 tons, and yet not more than half the hay ground was mowed; and with the present irrigating schemes in progress 50,000 tons may be harvested annually within five years. The like can be said of grain. A few years ago we harvested about 40,000 bushels, and thought Big valley was doing wonders. This year—a poor one for grain—nearly 100,000 bushels were harvested, and if all the tillable soil were farmed our grain crop would count up into the million bushels.

Los Angeles.

SWEET POTATOES.—*Santa Ana Standard*, Oct. 22: Last winter when John Hassheider dug his sweet potatoes, he rolled the vines off the hills and left them to die. But they didn't—they just took root and went to growing again, as they will here if the rain falls on them, and looked so well that he concluded to see what they would do. A short time since he went out with his shovel to prospect and found the finest lot of large, handsome potatoes he ever raised. Many of them weighed from 5 to 10 pounds each.

THE RAIN AND THE RAISINS.—*R. M. Hargrave* is packing his raisins this week—that is, he is packing them to the wineries as fast as he can load them up. Too much moisture last week for them.... The raisin crop upon the gravel lands was seriously injured. This is unfortunate, as first-class raisins are very scarce in Europe this year and command high prices. It seems that bad weather did a great deal of harm.

WESTMINSTER PRODUCTS AND PRICES.—*Cor. L. A. Times*, Oct. 18: At the District Fair last week, Westminster took 26 first prizes. It was conceded at once that the Westminster apples were entitled to all prizes and were beyond competition. Our people have laughed a little over the first prize awarded us for the best three varieties of oranges, ahead of Riverside and Duarte. A family can raise all the semi-tropical fruits they want here. We took first prize for Japanese persimmons, which thrive in our damper soils. Of course it was only to be expected that we should clear the lists in barley, corn, potatoes, squashes, onions, cabbages, beets, carrots, radishes and the like. A box of peat soil was sent up by John Anderson, and little bags of it were carried off as specimens by the curious visitors. It is not to be expected that much rest will follow such laurels. Real estate to the value of over \$60,000 has recently

changed hands, including 20 acres peat land at \$200, 130 acres peat and mixed lands at \$150, 20 acres corn land at \$150.

Napa.

WALNUTS.—*St. Helena Star*: The crop of walnuts, at the Walnut Grove farm, between here and Calistoga, is unusually large and of good quality. The Shamp Bros. expect to gather from 3000 to 4000 pounds of these fine nuts, which find a ready local market at 15 cts. per pound. It was the fine exhibit of walnuts from this farm that aided materially in securing for Napa county the Mechanics' Fair award for best display of nuts.

Sacramento.

FIRST FROST.—*Record-Union*, Oct. 21: Thursday morning the mercury was down to 37°; a faint trace of white frost was visible in some places—the first of the season. In 1886, according to the record kept by S. H. Gerrish, the first frost was Oct. 9th. In 1885, Oct. 11th; in 1884, Sept. 30th (the earliest ever known here); 1883, Oct. 16th; 1882, Oct. 5th; 1881, Oct. 4th; 1880, Oct. 31st.

San Benito.

BENEFITS FROM ARTESIAN WATER.—*Hollister Advance*: Riding through the San Felipe district at the present time, a person notices hundreds of sleek horses and cattle grazing in the alfalfa fields. The succulent grass grows luxuriantly, in many places from 12 to 15 inches high. While farmers in other parts of the county are growing anxious about feed for their stock before the grass comes, the San Felipe farmers have feed and pasture to sell. Their alfalfa fields are watered by numerous artesian wells, which, added to the natural fertility of the soil, renders the nutritive grass perennial. The total cost of Mr. Hamilton's well was only \$370, and he bored nearly 50 feet deeper than was necessary. An artesian well upon 20 acres of land sown to alfalfa, will yield a handsome return on the investment. [Particulars respecting the well above mentioned were given in our "Agricultural Notes" last week.—EDS. PRESS.]

San Diego.

A HOME IN THE MOUNTAINS.—*Julian Sentinel*: In a nice little valley nearly surrounded by two protecting arms of the Volcan mountain, David Price showed us a field containing about three-fourths of an acre from which he had gathered 50 bushels of corn. He has a patch of blackberries about the size of a town lot, from which he sold \$40 worth of fruit. If he should happen to want to sell his land to a tenderfoot, he would probably be offered \$10 or \$15 per acre, notwithstanding he is deriving a cash income which is 10 per cent on from \$500 to \$1000 per acre. Several fine springs come out of the mountain-side on this ranch, which furnish an abundance of water at all times. The garden is well supplied with vegetables and the yard filled with ornamental and shade trees.

San Joaquin.

NOT PHYLOXERA.—*Stockton Cor. Chronicle*, Oct. 25: The statement that phylloxera has attacked vines in an orchard near this city is pronounced incorrect by W. H. Robinson, local correspondent of the U. S. Agricultural Department. He says the alleged cases of phylloxera are merely black wart, and that there has been no instance of phylloxera in this county for many years.

Santa Barbara.

BEANS AND WALNUTS.—*Carpinteria Cor. Independent*, Oct. 13: The foggy and rainy weather greatly interfered with the harvesting of the bean and walnut crops. The bean thrasher was started last Monday and has run between showers. H. L. Hall, the owner of the machine, is running it with a steam engine this season, which, it is believed, will facilitate the work. Many farmers are thrashing with horses and wagons as usual. The showers of rain caused the hearts of those whose beans were on the floors to beat unpleasantly, and many lanterns could be seen bobbing around Monday night, when a small shower commenced to fall. So far but little damage has been done the beans, and in a short time the crop will all be harvested if the weather is favorable. The walnuts have been considerably blackened by rains and heavy fogs. The crop is being gathered in great haste and is proving unusually heavy. The crop, with the exception of that of Hon. Russell Heath, has been contracted for by S. F. parties. Mr. Heath has special and regular customers, and consequently does not contract with the commission dealers.

Santa Clara.

CANNERY BUSINESS.—*San Jose Mercury*, Oct. 20: The fruit season is coming to an end and the canneries are closing. At the various packing establishments, this year has been one of the heaviest in the memories of the managers, the failure of Eastern crops being seconded by propitious returns in the West, and both combining to make such a large demand on our home products. At the San Jose Fruit-Packing Co.'s cannery, it was reported that they were running at full force and will continue to do so until the first of the month. They are working principally on tomatoes, the other crops having ended. The total pack up to date, Oct. 19th, this year, is 2,827,556 cans of fruit, as against 1,662,820 last year. By the end of the season, the pack will exceed 3,000,000 cans—double that of the preceding season. This enormous amount is composed of cherries, apricots, plums, grapes, peaches and tomatoes. Of cherries alone, 1500 tons of green fruit were used, while others approach that amount. The

largest number of cans packed in one day was 55,621. During the season, they have had employment on an average to 500 people a day, while at the height of the output the number has gone close on to 1000.

Solano.

MULES AND NORMANS AT ELMIRA.—*Vacaville Reporter*, Oct. 20: L. C. Northcut has been purchasing mules and Norman horses for the N. P. R. Co., and on Wednesday afternoon shipped a carload. E. H. Vance sold a span at \$450; Johnson Bros. a span at \$500; Owen O'Neill a span at \$450; J. Wolfskill a span at \$500; D. O'Neill two span of four-year-old Norman colts, \$725; J. H. Selemcan one four-year-old Norman colt, \$200. It pays to raise good stock, for which Elmira is becoming noted.

LAST OF THE FRUIT.—*Dixon Tribune*, Oct. 22: L. W. Buck & Sons shipped their last carload of fruit last Monday. Henry Bassford and W. W. Smith will perhaps close shipments for the season this week.

A NOTABLE GRAPE SHOW.—*Vallejo Chronicle*: The exhibit [made at the late district fair] by J. F. Deming from his Cypress Hill vineyard, consisted of 26 varieties of grapes, and proved the adaptability of the soil of Southern Solano to growing vines, and producing grapes equal to the best. Among the varieties are the White Syrien, Black St. Peter, Flaming Tokay, Muscat of Alexandria, Zinfandel, Black Muscat, Fifer Zagos, Emperor, Cornichon, Violet, Black Pinot, Muscatelle Gorrion, Black Morocco, Black Hamburg, White Tokay, Black Prince, Verdaho, Isabella, Rose of Peru, Mission and Black Malvoise.

Sonoma.

REDWOODS BURNING.—*Sonoma Democrat*, Oct. 22: D. A. Foster of Forestville reports a big fire in the redwoods. The fire started from Lautran's ranch, near Guerneville, last Tuesday, where some laborers were burning brush, and swept with great fury and rapidity through the dense woods toward Forestville, cutting a swath two miles in width. All day Wednesday 75 or 80 men fought the fire without success, and Thursday it was burning in the Green valley switch, about three miles east of Forestville. It is reported that three houses were burned, a large tract of country devastated, and a great amount of wood, tanbark and fencing destroyed, also live-stock. The fire is now reported to be checked, if not under control.

POTATOES around Bloomfield are better than they have been for 10 years, and there is every prospect of a large yield. Laborers are scarce. Last year white men and Indians did the digging, performing satisfactory work and freezing the Mongols out, and the farmers want the same order of affairs now.

Tehama.

FROM THE RANGES.—*Red Bluff Sentinel*, Oct. 15: I. M. Henderson, superintendent of Gen. Chipman's grazing and stock interests at Big Meadows, came down to Millville, near which the General has a large winter stock range, with 190 head of stock cattle and 45 horses, mares and colts, and located them on South Cow creek, eight miles above Millville. The stock is in fine condition. Riley & Hardin had 1700 beef cattle on the General's meadows when he left there, and he has no doubt that by this time there are 1500 more, as they were near the meadows a few days ago. Riley & Hardin will let the cattle remain there until some time in November, and then drive them to their range in this county.

HONEY DEW.—John Gleason, a well-known farmer and horticulturist near Henleyville, on Thomas creek, has forwarded to the *Sentinel* office a box of branches and leaves out from an oak tree near his residence, and the leaves are covered with "honey dew," drops as large as peas, and some the size of small walnuts being found, as white as loaf-sugar, that look and taste like candied honey. In a note he says: "I have never read one word in the papers about the appearance of 'honey dew' in this place. I can show dozens of trees loaded with it, just like the branches and leaves of the scrubby oak which I herewith send you. If a man could place say 100 beehives on my place, he could take out each week as large a quantity of the finest, purest honey, in snow-white comb, as could be produced in any other part of California or the Eastern States." Was not the manna upon which the Israelites fed during their journey through the wilderness the same as the "honey dew" of Tehama county?

Tulare.

INDEMNITY LANDS.—*Visalia Times*, Oct. 20: Sixty-nine filings on land were made in the land office on Monday, 19 of which were timber-culture claims, the remainder homestead and pre-emption. The majority were on railroad indemnity lands lying west of Huron and from the San Joaquin river to the remotest southwest corner of Kern county. The indemnity lands filed on are supposed to aggregate in the neighborhood of 9000 acres.

FROM VISALIA TO CHICAGO.—I. H. Thomas last week shipped 29,400 pounds of dried fruit to Sherman, Marr & Higgins of Chicago. The value of the fruit was \$3800. This is the first shipment of the kind ever made direct to Eastern dealers from this city.

PROFITING BY THE FAIRS.—Elias Gallup of Jona, who had Holstein cattle and Poland China hogs on exhibition at the fair last week, says it pays a stock-raiser to exhibit at the fairs, and remarked that he had sold \$200 worth of stock by his visit to the fair this year.



Shakespeare Memorial Fountain.

On October 17, at Stratford-on-Avon, a Shakespeare Memorial Fountain was presented to the town of Stratford by George W. Childs of Philadelphia. There were imposing ceremonies and the following poem by Dr. Oliver Wendell Holmes was read:

Welcome, thrice welcome is thy silvery gleam,
Thou long imprisoned stream!
Welcome the tinkle of thy crystal beads
As plashing raindrops to the flowery meads,
As summer's breath to Avon's whispering reeds!
From rock-walled channels, drowned in rayless night,
Leap forth to life and light;
Wake from the darkness of thy troubled dream,
And greet with answering smile the morning's beam!

No purer lymph the white-limbed Naiad knows
Than from thy chalice flows;
Not the bright spring of Africa's sunny shores,
Starry with spangles washed from golden ores,
Nor glassy stream Bandusia's fountain pours,
Nor wave translucent where Sabrina fair
Braids her loose-flowing hair,
Nor the swift current, stainless as it rose
Where chill Arveiron steals from Alpine snows.
Here shall the traveler stay his weary feet
To seek thy calm retreat:
Here at high-noon the brown-armed reaper rest;
Here, where the shadows, lengthening from the West,
Call the mute songbird to his leafy nest,
Matron and maid shall chat the cares away
That brooded o'er the day,
While flocking round them troops of children meet,
And all the arches ring with laughter sweet.

Here shall the steed, his patient life who spends
In toil that never ends,
Hot from his thirsty tramp o'er hill and plain,
Plunge his red nostrils, while the torturing rein
Drops in loose loops beside his floating mane;
Nor the poor brute that shares his master's lot—
Find his small needs forgot—
Trust of humble, long-enduring friends,
Whose presence cheers, whose guardian care defends!

Here lark and thrush and nightingale shall sip,
And skimming swallows dip,
And strange, shy wanderers fold their lustrous plumes
Fragrant from bowers that lent their sweet perfumes
Where Pæstum's rose or Persia's lilac blooms;
Here from his cloud the eagle stoops to drink
At the full basin's brink,
And whet his beak against its rounded lip,
His glossy feathers glistening as they drip.

Here shall the dreaming poet linger long,
Far from his listening throng—
Nor lute nor lyre his trembling hand shall bring;
Here no frail Muse shall imp her crippled wing,
No faltering minstrel strain his throat to sing!
These hallowed echoes who shall dare to claim
Whose tuneless voice would shame
Whose jangling chords with jarring notes would wrong
The nymphs that heard the Swan of Avon's song?

What visions greet the pilgrim's raptured eyes!
What ghosts made real rise!
The dead return—they breathe—they live again,
Joined by the host of Fancy's airy train,
Fresh from the springs of Shakespeare's quickening stream!
The stream that slakes the soul's diviner thirst
Here found the sunbeams first;
Rich with his fame, not less shall memory prize
The gracious gift that humbler wants supplies.

O'er the wide waters reached the hand that gave
To all this bounteous wave,
With health and strength and joyous beauty fraught;
Blest be the generous pledge of friendship, brought
From the far home of brother's love, unthought!
Long may fair Avon's fountain flow, enrolled
With storied shrines of old,
Castalia's spring, Egeria's dewy cave,
And Horeb's rock the God of Israel clave!

Land of our Fathers, ocean makes us two,
But heart to heart is true!
Proud is your towering daughter in the West,
Yet in her burning life-blood reigns contest
Her mother's pulses beating in her breast,
This holy fount, whose rills from heaven descend,
Its gracious drops shall lend—
Both foreheads bathed in that baptismal dew,
And love make one the old home and the new!

[Original Contribution.]

Joaquin Miller's Open Letters.

To a "Fellow-Gardener in the New Eden":

Yesterday a great man, a man so great and so good and so modest, indeed, that he would be deeply offended should I give his name, said to me: "I am going to use your pretty idea and expression about every cultured and refined soul trying to get back into Paradise by making a little Eden of his own on earth; for I think with you that it is singularly fit evidence of the beautiful and the piteous story of Paradise and the Expulsion."

I have also had three letters on this subject. One of these letters has no other

signature than the line at the head of this letter. And it is well; for the author, be he who he may, would have had a line from me asking permission to use that letter instead of this of mine; for it is better than anything I can hope to write to-day.

But my "fellow-gardener" is, or was, more fortunate than I from the first, and that may account for the perfect fineness of his work. For I was not born with an inordinate love of the beautiful, as my fellow-gardener seems to have been. So far from that, I can recall many harsh and violent acts of mine, both toward man and beast, and even toward the inanimate things of this beautiful world.

Neither are other men born to a sure and tranquil love of beauty in the inanimate world, as a rule. Nations certainly never were suddenly born to a love of the Edens of this earth. The Greeks, the greatest gardeners—you remember that Alexander the Great, so far from sitting down and weeping by some impossible sea, planted nearly all of Persia in trees from Greece—the Greeks, I was going to say, had hard work in keeping themselves up to their lofty standard of perfection in things beautiful. They, like the children of Israel, were always going out after strange gods, driving out their dramatists and poets and poisoning their philosophers and lovers of the truly beautiful; just as the world has been doing in some fashion ever since. For the mass, the mob of mankind, is always ignorant, often vicious, and so the teachers have been and perhaps ever will be derided and crucified.

You see clearly, then, that it is for the mass we must toil, my "fellow-gardener." You and I have no right to sit down and indite letters to each other, "swap lies," as Lincoln would have called it, and congratulate ourselves that we have entered into the temple of the god of the beautiful and stand there in high places worshipping together. We must keep our feet level to the solid land; pick in hand and hoe in hand, we must minister at the altar in the open air each day before those who are asking the way to the door of our temple.

An old sinner once said to Lorenzo Dow: "I should think you would stop trying to preach. You have been trying to preach for five years now and I never yet heard of but one man that you converted."

"Glory be to God!" answered Lorenzo Dow; "let every man convert his one man and all the world will soon be converted." And the great exhorter took courage and kept on, converted this old sinner, and I guess did much good before he died.

As for myself, I cannot say certainly that I ever had but one genuine convert and disciple that I knew personally. I found him in a great rage with his horses. He was driving a stage up and over a mountain in Oregon. I helped him up the hill. The sun was going down, and such a sunset!

While the poor battered and bruised horses rested a spell, I, without thinking of reaching the man's heart, called his attention to the white clouds in the valley below, the black woods about us, and the wonderful glory and golden halo of the dying day far away toward the sea; the peace, the majesty, the sublimity of the world before, below and about us! The man said nothing at the time, and indeed I said almost nothing, much less than I am saying now, for I had only to look below, about, beyond, and have him do the same and see and understand. Words are a dreadful impertinence at times like this, and are to be avoided as far as possible.

But I met this stage-driver years after, in other lands, and he told me that he never passed that place from that time without stopping his horses and taking off his hat.

I did not ask the gray-headed old stage-driver, now a very wealthy and influential man, but I can safely assert that he never after that time either pounded or swore at his horses.

The truth is, this love of the beautiful, whether it is the love of a single flower or the love of mountains, massed and piled-up mountains in all their tremendous majesty and crowned in the golden inheritance of the dying sun, is simply the love of God and man, of beast and bird and flower. But the flower simply is the bud, the beginning; the mountains, the stairway, by which the soul ascends and walks into the presence of the Eternal God.

Anyhow, if we are going to do any very great good to others, we must not only build our little Edens, make at least one little spot of this earth more beautiful than we found it, but we must leave the gates of Paradise open and the fences down.

We never read or hear another single word about Paradise, good or bad, after the gates were closed.

And this brings us face to face with a very important and practical matter. Why have any fence or wall at all? All over this State

we are to-day building little parks in our young cities. Let there be no wall, no fence, no gate. The flowers, plants, trees to be grown there belong to the people. Trust the people with them; especially do they belong to the poor the poor who toil and have no gardens or flowers of their own. Let there be no fence, no gate against such people.

They tell a pretty story in Jerusalem to this day about an officer who was driving some poor out of a garden at sunset.

"Why do you drive these poor people out?" asked a lone, and sad, and silent man by the gate.

"They are the poor and they must be gone, for the king comes after sunset, and we don't want to have the poor here then."

"Will you give them to me? I will take them into a garden of my own."

"Certainly; take them and welcome."
And so the lone and sad man took the poor on a hill and showed them the unfenced gold, and glory of the sunset, the spars and bars, and bolts of fire in the west, the vast sweep of skies, and the coming out of the kingly stars on the awful porch of heaven.

And as this man who had stood by the gate spoke to them his voice was sweeter than the flutes of those who danced in the garden before the king; and his raiment shone like gold in the light of the dying sun that reflected on the hill. And all these poor—God's poor—were filled with unutterable love and content.

The lone and silent man who had stood watching by the gate as the officer drove the poor people forth from the flowers that had grown out of the earth for them—because they had so little else—that man was Jesus Christ.

Ah! there is so little of this earth, so little of the heavens, that even a king can fence in!

My "fellow-gardener," let us not try to fence in any of it at all, so far as we can avoid it. Let no park in this one vast Paradise out here by the great sea have any sign of fence about it. Let even private flower-paths and lawns lie open to the people. Do you think they will pull the flowers? Try them.

For half a century New York and Philadelphia kept tall iron pikes and huge, ugly padlocks about the city parks. Ten years ago Dorman B. Eaton, the author of the Civil Rights bill, went to the capital of New York with a bill to tear down those hideous iron pike fences around Union and Madison squares. A dozen of us scribes remained in the city to say the truth for the right.

The fences came down. And the flowers? It a single flower has been pulled, it has not been reported by any one. No; the people, God's people, the people whom Jesus Christ found being driven out of the garden, are very careful of their flowers.

So take down every fence in town, so far as you can. If you could fence in a single star, a single bit of blue heaven, a breath of wind, or an odor of the sea, why, there might be some sense in your fence. But as things are, banish it from about your door. It is an impertinence; a barbarism; a relic of the old baronial and feudal days in England when robbers rode to battle singing,

"Let him who dares to get,
And let him keep who can."

The Catholics have a beautiful custom, in Spain especially, in Mexico as well, of leaving all their churches open to all people at all hours.

If we are going to spread this religion, this love of the beautiful, if we hope to proselyte the world and get it back to the old Greek glory in the beauty of man and beast and bird and flower, let us, like the Catholics in Spain and Mexico, leave our churches and our temples open at all times to all people.

Of course, this commercial age, this age and day of money-getting in which we have been projected upon earth, is a hard one. But it is not nearly so hard as an age of wars, and many another worse thing that might be mentioned. Nor must you forget the fact that many of these money-getting people are fine gardeners. As to whether they truly love the flowers, is another matter. But if they are trying to love the flowers, that is much indeed. No man can "walk in his garden," no man can rear a single flower, without feeling more or less its influence for good; for a love of form, color, fragrance, all induce that which is fine and refining. These things, which are so often Christ's texts, are always and forever God's syllables of speech to man.

There is something pitiful in looking back over the path of the world for green places in the history of man; so few are the oases, so rare are the places of rest, after "the Lord planted a garden Eastward in Eden."

But we find that the Jews, like the Greeks, were wondrous gardeners. We have

grapes and grain and fruits and harvest feasts, from the time that men were "sent to spy out the land," up to the time of the scene in the garden beyond the brook of Cedron. Nearly two thousand years of persecution during which time no Jew dared till the soil, drove this brave and industrious people from the plow forever, as it would now appear. The soil of Greece has been worn away and washed into the sea. I sat near Athens one season, an invalid, waiting, watching, praying for the flowers. They came at last—little bits of spindling spikes not much bigger than pins and not taller than a finger's length.

But these two mighty people—the only two that are really remembered in history, if we omit the Romans, for they were gardeners too—look at Cincinnatus and his cabbages—laid the corner-stone of state in the garden and the grape-field.

On the maps of the world you can cover these two places, Athens and Jerusalem, with the tip of your finger, and yet in your heart, in all history, they cover more than all the rest of Europe and Asia together.

They were lovers of the beautiful; this love of the beautiful and the true gave them poets, and their poets have not permitted them to be forgotten.

It was the law in England till lately to challenge, for cause, any man who was or had been a butcher when a jury was being called to try a man for his life.

I think if I was on trial for my life, and cared to preserve it, I should ask each juror if he kept a garden and cherished flowers; and I should accept no one who did not spend at least a portion of each day with these voiceless ladies of God's household.

JOAQUIN MILLER.

Oakland, Cal., Oct. 15.

Old Age.

[Written for the RURAL PRESS by MRS. L. P. J. HERRING.]

A letter from an absent friend inquiring if I was "getting gray and feeling old," set me to inquire of myself if I was; truthfully answered, I say no. I am only in my infancy in universal knowledge, but just taking my first steps in right-doing; am in the alphabet in spiritual learning; only beginning to see the possibilities of helping others over rough places I know of. I hope I am not getting old when I am just beginning to enjoy living. It takes 50 years of this life to learn how to live; to get our boys and girls big enough to be companions and a help to us. One wants to see how the world will get along when we are looking on, instead of being ourselves in the turmoil of life. Then these thoughts came to me: Does the spirit grow old? If it gains in knowledge which is power (not weakness, as age means), surely, then, it grows stronger, more powerful and able to overcome difficulties. That is to be desired, not to be regretted. What is there about old age that mankind dreads? Is it the mere physical decay, the inability to do a good day's work, the loss of youth's freshness and beauty, or the usual querulousness and feebleness of the aged—its boasting of "the good old days of its youth" and consequent evil days of the present? Why this antagonism between age and youth, amounting to a dread and alarm on the one side, and a contempt or pity on the other?

I have often felt the truth of the old saying, "Young folks think old folks are fools, but old folks know young folks are fools." Why this state of things should exist I cannot understand, unless we old folks are to blame, and I believe we are, friends; first for getting old, second, for seeming or acting old.

If the spirit don't grow old, then we should not allow the material part of us to show age, save in looks. Our feelings and thoughts we can control and subject to our will. Keep them young and in harmony with the rising generation. Cultivate young friends, sympathize, and help them to do their best. Counsel them lovingly by our own failings. Live in the present and future, not in the past. If the hair is silvering, don't grieve about it, but modestly accept the halo of age as a gift and a sign of worthy work in past years. If the cheek shows signs of Time's finger-tips and the eye grows dim, keep a cheerful smile and bright look on cheek and eye, and both wrinkles and dullness will be overlooked.

Nothing will make old age more beautiful than health, cheerfulness, honest work, and a holy purpose in life, and for all mankind. Keep a pure faith in God and a deep love for good and truth. Never think or act as if we knew it all, for our education is but commenced in this life. Progress is the watchword of the spheres. Our added years but teach us how little we know and how much there is to learn. Life is one grand "kindergarten" where old and young are forever children learning life's lessons. Let each strive who best shall learn their task and do their duties, unconscious and not caring whether Father Time marks our heads white, gray or black.

A WOMAN sold her washtub to a party of riflemen for a target. They paid her \$1.50 for it, and after they had gone home she went out into the field and brought it back as good as it ever was.

Liquor and Liberty.

EDITORS PRESS:—I think that excepting the coin used in bribes, the most common argument now in favor of the liquor traffic is the "personal liberty" plea. With people who regard liberty as a national birthright, this plea is well chosen for effect, especially in cases where liberty sympathies and liquor sympathies connect by way of the stomach on the pocket. There is something a little peculiar in the common manner of presenting this plea, which is, as if "personal liberty" and personal rights were the same thing; as if "personal liberty" were an independent unconditional sovereign right. I notice that liberty is as really connected with crime as with good deeds. Murder and treason are an exercise of "personal liberty" but not of personal rights. I should think every human being entitled to liberty in doing good but none in doing harm, and I cannot understand that wrong-doing has any right of liberty, or liberty any right in wrong-doing. If the liquor traffic is beneficial it must be right and entitled to liberty; if harmful, it must be wrong, and no wrong can have any rights. This manifest assumption of "personal liberty" rights looks like a design to appeal to liberty sympathies in a way to drop out of notice the distinction between personal liberty and personal rights; to hold attention aloof from investigation of relation of the liquor traffic to public interests, the relation of liquor freedom to drunken bondage, of licensed whisky to prohibited crime. It should be borne in mind that all government is an abridgment of liberty, and as all good tendencies need no restraint, we have no use for government but to suppress wrong tendencies and thereby protect the right. Does the liquor traffic deserve protection for the good it does or deserve suppression for the harm it does? Of all persons whom our Government protects, none whoop louder for liberty than the anarchist. The greatest anarchical power on earth, and one that is doing most to corrupt and subvert our Government to-day, is this liquor traffic that calls so loudly for "personal liberty." Do any doubt this, let them ask themselves if they ever knew an honest election where liquor interests were at stake and liquor sympathizers plenty.

What other power breaks and defies law as does the liquor traffic? How much of its present privilege has it secured by other means than fraud and bribery? How many total abstinents are to be found in the anarchist rabble? What proportion of crime and prison life come of liquor liberty? San Quentin reports 80 per cent; police courts show more than that.

Oct. 15, 1887.

THOUGHTOGRAPH.

Saved by Her Bustle.

We don't believe history has chronicled a more singular escape from death than occurred in Redwood canyon last week. The male sex, who are an unfeeling lot taken altogether, have severely criticised bustles, which is a most important part of the female wardrobe, but after reading this thrilling episode should "forever hold their peace." A handsome young lady of sweet 17 arrived from Arizona a couple of weeks ago, and spent a very pleasant visit with friends in the above canyon. One evening when the head of the family was away, the milking naturally fell on the female portion of the household. The Arizona fair one at once offered to do her share, but the aunt protested. The protest was of no avail, however, and shortly afterward she started for the corral, milk pail in hand, a typical Maud Muller. The young lady was just in the act of milking when a ferocious bull spied her and at once started on the warpath. It was a critical position, and, as the bull came charging at her with lowered horns, with blood in his eye, the young lady quietly dropped on the ground, face downward, and lay as still as death. This maneuver was something new for the bull, and he was for a moment n nplussed, but he soon recovered from his surprise and made for the prostrate maiden; and had it not been for that bustle, the young lady never would have lived to tell this exciting experience. The bull gored that tenderly framed air-castle, called a bustle, until it gave way, and he retired with the trophy. The aunt saw the charge and was about to run in to assist, when the brave girl called out to keep back, or else both would be killed. As it turned out, the bull, after discovering the bustle, concluded that he had made a slight mistake and retired from the battle. Had the young lady started to run, the bull would very likely have soon overtaken and killed her. Hereafter all young ladies should have an extra bustle in reserve when they go into the country and play the milk-maid act. —*Haywards Journal*.

A CHRYSANTHEMUM SHOW, in aid of the Woman's Exchange, is to be held in this city by the lady managers of that worthy enterprise the second week in November. The exhibition will take place at the Union Club building, Post and Stockton streets, the corner room on the ground floor having been kindly offered to the ladies for the purpose.

THE man who can pass the warning notice, "paint," without testing the matter with his finger to see if it is dry, has sufficient will-power to give up drinking.

YOUNG FOLKS' COLUMN.

The Brave Girl by the Sea.

[Written for the RURAL PRESS by DOLLIE BROOKS.]

Helen Gray lived with her father in a little cottage facing the ocean. She was a rosy-cheeked maiden about 16 years of age, brave and fearless. She had one brother, Charley, who was some years older, but he had run away and gone to sea, and her mother afterward died of grief. Helen would never refuse to accompany her father to a wreck.

One day she sat looking out of the window waiting for her father to return from the village, where he had gone to make some purchases. She saw by the sky that a storm was gathering. On came the great black clouds. Flashes of lightning could be seen, followed by peals of thunder. Helen saw something dark out upon the waters. By the help of her father's spyglass she found it to be a ship on the rocks fast going to pieces, and the poor sailors were clinging to broken spars and planks. Could she save any one? She might try, any way. Helen took her shawl, tied it around her head, and rushed out in the storm toward the cape where the wreck was. Before leaving, she hastily wrote a few lines for her father, saying:

"There is a ship on the rocks off the cape and I have gone there to try and help them. Don't worry for I will soon be back."

HELEN.

She reached the cape and clambered down over the rock to where the sailors and wreckage were being washed ashore.

Already several lifeless bodies were being dashed on the rocks, and she was grief-stricken to think she had come too late to save any one. But soon another body rolled in on the waves and she thought she could discern some movement or struggle, so she sprang down off the rocks as the wave was about to carry it back again; she seized the clothing and pulled it above the receding wave.

Just as Helen laid the body down, she thought she heard footsteps, and on looking around saw her father with a friend. Mr. Gray, having read the note, became very much worried, and immediately started for the cape. Helen was somewhat surprised at seeing them, but did not for a moment forget her charge.

"Have you any spirits in your pocket, father?" she asked. He put his hand in his pocket and drew out a flask which Helen took and placed to the sailor's mouth, but he was too weak to drink.

Mr. Gray picked him up, and between the two men they carried him home and placed him on a little cot. They were very busy with the sailor for a while, Mr. Gray giving him spirits, Helen chafing his hands, and the other man rubbing his feet.

After awhile he opened his eyes and asked: "Where am I?" When he had talked a little, she found him to be her long-lost brother.

I will not try to describe their meeting, but it was a joyous one. A stranger looking in the window that evening would have seen a very happy fireside; but there was one empty chair. How happy it would have made their mother, had she lived to see her lost son again.

Vanden Station.

A Good Dog.

A family in Woodland has a shepherd-dog that they would not sell for a heap of money. A few mornings since, the *Democrat* says, the mother was busy in the house about some important work, while the four-year-old daughter was playing in the back yard, her only companion being the family dog. Soon the dog came to the door and began to bark furiously, rearing up against the door, as if to force it open. The lady tried several times to drive him away, but it appeared to make him the more persistent. At last she went outside, to see if she could not pacify him. As soon as she opened the door, the dog started toward the back yard, barking and looking around, as if to give her to understand that she must follow. She had not gone far before the screams of her daughter made her aware that there was some meaning to the dog's peculiar actions. She hastened in the direction of the screams, and soon found the child had climbed upon the picket fence, and fallen in such a manner as to catch one foot between the pickets, and there she was hanging, head downward, when the mother arrived. She soon extricated the child from her perilous predicament, and, aside from a scraped ankle, she received no material injury. It would be hard to pile up money enough to buy that dog.

"WHAT ARE YOU GOING TO DO?"—Polly Larkin puts this anecdote in the *Petaluma Courier*: "What are you going to do when you grow up?" said one of a group of little girls the other day. "Me? Oh, I guess I'll get a certificate and teach school." "I'm going to learn to be a doctor," said another one. "My father says I'd make a good one. I set and bandaged a little chicken's broken leg yesterday, and I put a piece of sticking-plaster on a scratch on our old cat's nose this morning and you ought to have seen her buck." It went the round; one was going to be a milliner, another a copyist, and so on until it came to the last rosy-faced little sprite, and her answer was the best of all. "What are you going to do?" "I'm going to learn to help my mother," was the reply.

GOOD HEALTH.

A SIMPLE CURE FOR RHEUMATISM.—A correspondent of the *English Mechanic* says: Let all of "ours" know the following: My wife has suffered occasionally with acute rheumatism in her feet, with painful swelling, completely taking her off her feet for many days at a time. The following remedy was recommended recently and tried, and took away the agonizing pain in less than 15 minutes, and she can now walk very fairly, and in a couple of days she will be able to button her boots and walk without a stick or crutch. One quart of milk, quite hot, into which stir one ounce of alum; this makes curds and whey. Bathe the part affected with the whey until too cold. In the meantime, keep the curds hot, and, after bathing, put them on as a poultice, wrap in flannel and—go to sleep (you can). Three applications should be a perfect cure, even in aggravated cases.

SPINAL DISEASES.—Children are peculiarly liable to those ailments in which the spinal nerves or base of the brain are more or less involved. In view of that which has gone before it is unnecessary to dwell further upon the propriety of placing the bodies of little ones suffering from cerebro-spinal disturbances in that position best calculated to avert undue determination of blood to the base of the brain and spinal cord—that is, to keep them in as elevated a position relatively as is practicable, upon the same principle as we would raise an inflamed foot or hand above the rest of the body to relieve congestion. Of course it will be seen that, so long as the prone position is occupied, all that is possible in this direction has been compassed.—*Babyhood Magazine*.

CIGARETTES AND EYESIGHT.—The greatest enemy to the eyes of young men is the cigarette. Recently a disease has appeared among smokers which is dangerous, and after careful investigation the best of authorities, who for a long time were at a loss to understand the peculiar malady, have traced it to the small paper-covered tobacco sticks. It is now known as the "cigarette eye," and can be cured only by a long treatment. Its symptoms are dimness and a filmlike gathering over the eye, which appears and disappears at intervals. If young men continue to smoke cigarettes excessively they may expect to be afflicted by this troublesome disease, and it is not relieved by spectacles.

DISINFECTING THE HANDS.—The question, "How shall the medical practitioner disinfect his hands?" which has been often discussed, seems to have been completely and satisfactorily answered by Dr. Foster of Amsterdam, who has made some careful research bearing upon the question, and who asserts that the only absolutely reliable preparation is that recommended by Dr. Koch of Berlin, which consists in a solution of corrosive sublimate, in the proportion of from 7 to 15 grains in two pints of distilled water. The simplicity of the process and unquestionable prophylactic qualities of this disinfectant will go far to recommend it with surgeon and general practitioner.—*The Medical Register*.

PNEUMONIA.—It is generally supposed that pneumonia is due to the accidental penetration of specific microbes into the system; but the observations of M. Jaccoud, a French student of the subject, show that the disease really results from the development, under favorable conditions, of microbic germs permanently present in the system. A chief condition of such development is a sudden chill which explains the frequent coincidence of lung affections with abrupt changes of temperature.

PURE AIR AND EYESIGHT.—English physicians say that a form of opththalmia, caused by the vitiated atmosphere arising from overcrowding, has been practically banished whenever sanitary improvements have been introduced. Pure air produced immediately better eyesight.

COLD DRYING.—A blacksmith at Haywards, according to the *Haywards Journal*, has demonstrated that a blast of cold air is just as effective in drying fruit as a hot blast. His experiments were made in a room adjoining his forge. Directly back of the room occupied by the forge is another apartment, which is used for drying fruit. The cold blast comes from the blower that supplies the wind used in the blacksmith's furnace. The fruit is placed on trays inside of an inclosed frame, and the cold air blast is then turned on. The action of the air is soon noticed, and the fruit is found to be completely dried. Samples of prunes, apricots and apples are shown which were dried two years ago by this process, and which are still in a perfect state of preservation. People in this part of the State are very generally familiar with the great evaporating power of our cold autumn north winds.

A HYGROMETRIC PAINTING.—A weather prognosticator and amateur artist of Prague recently painted a landscape colored with the salts of cobalt. These colors are very sensitive to moisture, and are made still more so by mixture with gelatine. With increasing moisture in the atmosphere, the blue heavens of the picture assume a dirty red hue, and the green grass and foliage, the yellow background, etc., are also strikingly changed in color.

DOMESTIC ECONOMY.

FRUIT HONEY.—I have been reading of the Swiss pear honey, and the ambition seized me to attempt something of the kind at home. The baskets of glowing Sheldon pears in the pantry were a picture, but a vanishing one, as they were melting with ripeness. Three quarts of pear juice were soon simmering in the stone pot in the oven. All night they slowly reduced, and in the forenoon an hour's boiling brought them to a syrup of honey which surpassed all expectations. The three quarts of pear juice yielded nearly a quart of delicious honey, pale, clear, sweet, with fruity flavor, which I won't call an improvement on that from the hive, but it is an agreeable variety from it. Early pears are very rich in sugar, and it may be profitable to fix their transient sweetness in this way. It has been kept three months from the making, unsealed, and the flavor is even better than at first. It was clarified by straining the juice through flannel and removing a few spoonfuls of froth in boiling. Not a grain of sugar was put in. The honey is the pure juice and sweetness of the fruit. This pear honey comes in very nicely at the close of summer, and furnishes one of those standbys of the store-closet which are such great helps to the housekeeper, who likes to keep up a good table. An American breakfast in autumn, with delicate Adirondack griddle cakes, or the first buckwheat cakes and pear honey, finishes very nicely.—*Vick's Magazine*.

[Other fruit-juices might give satisfactory results, if treated in like manner.—EDS. PRESS.]

WATERMELON SYRUP.—A writer in the *National Farmer* says that those who have never eaten it have no idea how delicious and pleasant flavored watermelon syrup is; it is next to maple syrup, and far superior to the best sorghum molasses, having none of its strong taste. Press the juice out of the melons in any way convenient; it will be about like maplesap or sweet cider; then it is boiled in about the same way as maple sap is made into syrup. Every farmer knows how to grow them. One thing—freely use coal-tar water on the growing crops to keep off bugs and worms.

APPLE MERINGUE.—Prepare six large, tart apples for sauce. While hot, put in a piece of butter the size of an egg. When cold, add a cup of fine cracker crumbs, the yolks of three eggs well beaten, a cup of sweet milk or cream, a little salt, nutmeg and sugar to taste. Bake in a large plate with an undercrust of rich paste and a rim of puff paste. When done, take the whites of the eggs, half a teaspoon of white sugar and a few drops of essence of lemon; beat to a stiff froth, pour over and put back into the oven to brown lightly.

FRICASSEE OF EGGS.—Take some hard-boiled eggs, cut them into quarters, yolks and whites. Heat some gravy seasoned with shred lemon peel, parsley, thyme and grated nutmeg. Put in the eggs together with a piece of butter rolled in flour; shake it gently over the fire till properly thickened; garnish with yolks of hard-boiled eggs, chopped small.

GRAHAM BISCUIT.—Three cups of graham flour, one cup of wheat flour, two large teaspoons of baking powder well mixed with flour; rub in two large tablespoons of butter, a little salt, half a cup of sugar, one beaten egg, and enough sweet milk (cold) to make a soft dough, roll out, cut with biscuit cutter, and bake immediately.

LEMON PIE.—One teacup of boiling water, two tablespoonfuls of cornstarch, cooking until a thick paste. Add one cup of sugar, piece of butter the size of an egg, and set to cool. Stir together the yolks of two eggs and the grated rind and juice of one lemon. Mix all together; bake quickly. Frost when done.

ICE CREAM CAKE.—One cup of sugar, two eggs, one-half cup of sweet milk, one and a half cups of flour, piece of butter the size of an egg, three teaspoonfuls of baking powder. Cream for cake: One-half cup of sweet milk, three teaspoonfuls of powdered sugar, one teaspoonful of cornstarch, boil until thick; flavor with vanilla.

COTTAGE CAKE.—Three-fourths of a cup of butter, one cup of white sugar, one and one half cups of flour, four eggs (yolks and whites beaten separately), one tablespoonful of sweet milk, one and one-half teaspoonfuls of baking powder, a little salt; flavor with lemon. Rub the baking powder into the flour.

SUET PUDDING.—Chop fine three ounces of beef suet, same quantity of bread crumbs, small pint of flour, pinch of salt. Mix well, then add one teacup of preserves and enough water to make it soft; then put in a floured bag and boil three hours. Any fruit can be used instead of preserves if preferred.

POTATO SALAD.—One quart of small potatoes, two tablespoonfuls chopped onions, two of chopped parsley, four of beets and enough of any of the salad dressings or clear vinegar to make it slightly moist; to the latter, if used, add a little melted butter. Keep in a cool place until ready to serve.

RAW TOMATOES.—Skin the tomatoes by putting them in scalding water for a minute, allow to cool, cut into slices and squeeze a good lemon over them.

FRIED CAKES.—Two eggs, two cups of sugar, six tablespoonfuls of melted lard, three teaspoonfuls of baking powder, one and one-half cups of milk.



A. T. DEWEY.

W. B. EWER.

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SAN FRANCISCO:

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The Week.

The Thanksgiving Proclamations are out and nearly a month is given to get ready for the annual family festival. There is much to give thanks for in California this year; there are many reasons why the gatherings should be large and joyous. We have had a good year—a great year in some respects—with no general calamity, no wide distress. Those who have lands find them worth more than a year ago, and if for some reason crops have been less in amount, values have often compensated. It is to be hoped also that in moral and intellectual affairs, individually and collectively, there will be found progress fit for thanksgiving. Wherever definite reason for exultation does not appear, let hope and trust shed their light; coming events may cast effulgence, not a shadow.

Still the rains delay, and their coming is anxiously awaited to quench the ruinous fires which are still raging in the Coast Range mountains from point to point. Great destruction of property has been occasioned already, and fears will not be allayed until the ground is well soaked with rain.

The Portland Butter Fiasco.

In our last comments we left the Portland crusade against California butter hanging upon the results of the analysis of the second sample which the Oregon Dairy Commissioner produced as the butter which he obtained in a California box. This sample was apparently quite different in appearance from that sent down for analysis at first. The analysis in Prof. Rising's laboratory showed that it was bogus and a very clumsily made counterfeit at that. The same state of affairs was shown by the microscopic examination. The manner of obtaining the two samples, which we have already mentioned, may be repeated in this connection. In our issue of Oct. 15th, we said:

The authenticity of the sample first sent to Professor Rising seems clear enough. At the time the Dairy Commissioner took butter from the California boxes, the commission merchant sent rolls at once from the same boxes and had them sealed up in tin cans and handed them over to other parties to keep, in case any question should arise concerning the purity of the material. These sealed cans were held by disinterested parties until they were opened for analysis by the chemists. The testimony that these were the facts seemed conclusive. On the other hand, the Dairy Commissioner testified that he took the butter and kept it in his cellar until he handed it over to the Portland chemists which he employed. Thus it becomes a question to determine if the analysis should show one pure and the other adulterated, which butter the merchant was really selling.

This is really the question as it now stands. The sample which the Dairy Commissioner brought forward is really bogus; the sample taken and held as described above was genuine. It now becomes a question for the court to decide which sample represented the butter for which the Portland merchant was arrested for selling. The case came on for trial in Portland on Monday, and the Associated Press telegram concerning it is as follows:

One of the pending California butter cases came up to-day and was continued to Friday at the request of the prosecution. The defense think their case has been strengthened in the interval since the last trial. They claim that the Dairy Commissioner has been acting in bad faith and changing samples. At the recent trial the evidence all went to show that the butter was of a whitish color. At the close of the evidence, and before the disagreement of the jury, the Dairy Commissioner brought butter which he said was from the same roll pronounced impure by local chemists, and this was given to Professor Rising. The latter now reports it impure, highly colored and a poor article, even of imitation. Meanwhile one of the local chemists has examined a roll like the one in question and from the same box, finding it pure. It is expected that the case will be disposed of Friday.

Thus it appears that the defense will claim that the sample supplied by the Dairy Commissioner is not the butter under question at all, but that a change of samples has occurred. The Dairy Commissioner will have to make a very clear showing that he has the right sample and that he did take it, as alleged, and kept it so that substitution could not be made. It is very unlikely that he can produce any such chain of evidence, and in all probability the cases will be dismissed. This result will not be satisfactory at all, because it will not give the clear vindication to California butter which it should have. The fact that the Dairy Commissioner would not produce his sample until clearly forced to do so, and that he then brought out something which contradicted the testimony already given of the appearance of the butter, which was sworn to be light, while he produced a nasty, highly colored mixture, goes to give his side of the case an ugly look, and if his own townsmen do not hesitate to charge him with fraud, we do not see how he can expect Californians to be any more gentle with his reputation.

DEMAND FOR ANGORA.—The Texas Angora breeders seem to be finding a good market for their increase in Mexico. The Texas Farm and Ranch publishes a note from W. M. Landrum of San Antonio (who we suppose is our old-time Watsonville breeder) in which he says he "has sold and delivered to W. B. Colte, Mexico, \$21,500 worth of Angora goats since March last—7000 fine shearing ewes and 66 pure bucks—the best selected outfit in America. I will slaughter over \$5000 worth before Christmas, making a total of over \$30,000 worth of goats handled during the year. Who says there is nothing in goats? One man says he will petition the next Legislature to take out the star and p u a goat

in the State flag. The goat has saved the lives of thousands this year in west Texas, who ate the meat and sold the hides for bread during the drouth." We recognize in this note something of Mr. Landrum's old-time enthusiasm. He always went the whole goat or none, and we are glad he is waking up the Texans and Mexicans. Some of our breeders can perhaps take a point from his method of booming the business.

The State Board of Trade.

This organization, planned to extend information about California and induce desirable immigration hither, seems to be progressing vigorously with its work. The headquarters on Second street, near Market, are being supplied with a very creditable display of imperishable products, and many visitors attend to see the sights and gain information about the State. The support of the Board is growing and representatives from new counties are constantly gaining admission to the Executive Committee. Descriptive pamphlets are being distributed at the ferries and hotels to visiting strangers, and much seems to be doing to call the attention of people to our resources and the chance for investment in their development. Work is being done at longer range by encouraging exhibits of California products and in other ways. An effort is now being made to secure stop-over privileges on emigrant's tickets, as are given east of Ogden. This would no doubt distribute the immigration better and suit all parties better, both those who come and those who have good land to locate them on. The Immigration Association at No. 10 California street, is pursuing its accustomed work. Its display of products has been greatly increased since the fairs. Its valuable collection of maps and descriptive matter is being constantly conned over by intending settlers.

Real estate matters are active. Enterprises and projects to people individual tracts of lands here and there have become so numerous that space cannot be found in which to enumerate them. Where one such thing was underway a few years ago, there are a hundred now. The result is, on the whole, satisfactory, and every district which wakes up and raises its voice loud enough to be heard is securing attention.

Travel to this State is enormous at present. The Sacramento Bee says:

The railways are totally unable to carry the multitudes who are thronging to the State. Passengers bound West have to wait their chances for a seat, and are not unlucky if their delay does not exceed more than three or four days. The Santa Fe is compelled to run three sections of its overland daily, and then the facilities for getting into the State are causing much complaint. The Southern Pacific over its two transcontinental lines is pouring in about 1000 people a day, so that it is safe enough to say that the total influx from all sources is about 2500 daily. We may expect this to continue for about 60 days, and that means 150,000 new people in the State. Of these, it is not likely that less than 100,000 will remain and become permanent residents.

It may be thought that counting two-thirds of the arrivals as permanent settlers may be large, but our observation leads to the conclusion that it is moderate. Although those who come intending to remain may be much less, those who finally do find their way here, and bring friends with them to remain, is much greater. California wins on sight as a general thing.

MANUAL TRAINING in common schools is rapidly becoming a matter of general interest, and is being adopted in many of our cities and large towns. The New York Board of Education, after a careful investigation in Europe, have resolved to introduce it into the public schools of that city. The new system will include carpenter work, or the use of wood-working tools.

REDUCING THE OIL PRODUCT.—It is stated positively that the oil-producers in Pennsylvania have agreed upon a general suspension of drilling in the oil regions, competition having reduced prices until "there is nothing in the business," with an excess of 20,000 barrels daily beyond requirements.

A FISH-HATCHERY is promised on Donner lake if the citizens of Truckee will put up a \$200 building, and subscriptions to that end are being taken.

The lumber landed at Port Harford for inland shipment since Oct. 1st amounts to 2,000,000 feet.

High-Toned Gambling.

There is hardly anything connected with commercial and business operations in general which is so demoralizing to legitimate business and the best interest of the people as the unmitigated and rascally gambling operations of unscrupulous speculators, which has become so common within the past decade. The exposition and denunciation of such schemes should be considered as matters entirely within the province of all periodicals devoted to either the industrial, commercial, moral or social interests of the people. It should be made a special point with such journals to denounce all such operations as illegitimate, as no better than open gambling—if anything, worse. When any man or set of men, or any corporation, or any number of corporations, band themselves together with the view of controlling any of the great necessities or even conveniences of life, or any of the great highways of commerce or intelligence, such action should be denounced as a high-handed wrong, and if it is not illegitimate under our present codes, it should be made so by special statutory enactment. The people should demand this of the next Congress, and should be satisfied with nothing short of it. The matter should be agitated at once and continually until relief is obtained from all combinations of bankers, railroad and telegraph managers and "dealers in 'Change," on all the monetary, commercial and other necessities and conveniences of the people.

In this connection, we would call the attention of our readers to the following extracts from a recent communication from F. V. Powderly, the well-known conservative head of the Knights of Labor. Mr. Powderly writes as follows:

This country has, within a brief period of time, witnessed the failure of a gigantic scheme to rob the people under the shadow of law, or, rather, because the law is silent as to the method by which gambling in the necessities of life should be punished. True, the rogues who attempted to corner wheat and coffee were not entirely successful—they sustained some of the losses which they had hoped to inflict on the country. The panic in the coffee market did not cause such a rush to lay in large supplies as was anticipated.

Although millions of dollars changed hands during the corner, not a pound or an ounce of coffee changed owners. Coffee not yet ripe in the field was sold, resold and gambled in at the Exchanges in New York and Chicago. Coffee that sold for 25 cents on one day went up to 30 cents in 24 hours; not because the article was of a better quality or any scarcer than it was on the day before; not because the owners of the coffee demanded a higher price for it, but because the stock gamblers had willed it, and their will, for the time, was law.

It is estimated that the losses of those directly interested in the wheat deal will reach \$5,500,000. The losses to the coffee thieves will exceed \$4,000,000. Two gangs of thieves were engaged in manipulating the coffee market. One of them realized \$5,000,000 on the deal and then quit in time to save it. Their "pals," the other coffee dealers, more greedy, kept on until their schemes exploded, and, taking fright, they stopped short at a heavy loss.

The men who cleared the \$5,500,000 deliberately robbed every man, woman and child who uses wheat. In comparison to these men, Dick Turpin and Sixteen-String-Jack were honest men. Even Jesse James had a more merciful way of robbing people. The men who raised the price of coffee and tried to take advantage of the necessities of the people go unwhipped of justice. Is it not time to appoint a commission to inquire into this refined method of robbing the people, so that a law can be passed to punish those who gamble in food while others starve for want of it? Is it not high time for the consumers and producers of this land to inquire why swindlers, dealers in futures, and men who understand the villainous art of cornering breadstuffs should levy tribute on the bone and sinew of the land to satisfy their greed and avarice?

An attempt was made in the last Congress of the United States to regulate the commerce of this country. The influence of the railroads was so potent in Washington that the interstate commerce bill was shorn of its strength, and it passed into law in such a form as to enable the railroads to make it appear that it was a blow at the rights of the people. The end in view is to have the next Congress repeal the law, on the plea that Congress or the people cannot regulate or even interfere with the railroad system of this country.

The people must remember that "eternal vigilance" is the price of equitable rates of transportation, whether of person or freight; and instead of allowing the interstate commerce law to be repealed, it must be amended in the interest of those for whom the railroads were built.

The prisoners at Walla Walla are on a strike against working in shackles, and are living on bread and water.

Fruit-Growers' Convention.

The November conventions of fruit-growers are now fixed horticultural events of the year. They come after the fruit has been gathered and sold, after the bug-fighting for the year is finished and the results discernible, after the fairs are over—in fact, just in a corner of the year which can be most profitably filled with discussion and conference concerning the lessons to be drawn from the season's experience. We are quite sure that any one who has shared in the deliberations of one of these conventions will desire to attend another, if possible, both because of the pleasures of social converse with others pursuing the same line of thought and work, and because of the valuable suggestions which can be gained from the essays and discussions.

Two years ago the convention was in Los Angeles and the distance prevented many of our central and northern county fruit-growers from attendance. It is a better arrangement which now provides for semi-annual conventions—one in the spring at the south and one in the fall at the north. In accordance with this arrangement the convention last November was held in Sacramento, and it was a large and excellent meeting. It was then decided, at the eloquent invitation of Gen. Vallejo, to assemble this year in Santa Rosa—the beautiful, thriving county-seat of Sonoma county. The formal call of the State Board of Horticulture for the meeting has been made, and we urge all of our fruit-growers, who can, to arrange to be present. The convention will open at 11 o'clock A. M. on Tuesday, November 8th, and will continue in session four days. The citizens of Santa Rosa and the members of the State Board cordially invite fruit-growers and those interested in kindred pursuits to be present at said convention and participate in its deliberations. Every effort will be made to insure a large attendance, and it is to be hoped the meeting will be one of interest and profit to all. The State Board of Forestry has accepted an invitation and will be in attendance.

An exhibition of fruits, etc., will be made by the people of Santa Rosa and vicinity. All those having new fruits and inventions of value to horticulturists are requested to exhibit them.

The Southern Pacific R. R. Company will allow return tickets from all points on their lines to San Francisco—provided a receipt for the ticket purchased be taken at starting point. This will be countersigned by the secretary at the convention, and entitle the holder to a return ticket at one-third the regular rate. Visitors will find ample hotel accommodations, etc.

The semi-annual meeting of the California State Board of Horticulture will be held at the rooms of the board, No. 220 Sutter street, S. F., on Monday, November 7th, at 10 o'clock A. M. The board will adjourn in the afternoon and proceed to Santa Rosa, to attend the Convention of Fruit-Growers.

ARIZONA INDIANS.—In Gov. Zulick's annual report it is stated that the Navajoes are the most prosperous, intelligent and enterprising tribe in the Territory, and doubtless the healthiest in the United States. They number about 15,000 souls and are increasing. It is estimated that they own 20,000 horses and 1,000,000 sheep. The Apaches, who occupy San Carlos reservation, containing about 2528,000 acres of the best agricultural land in the Territory, are as a race, lazy, thievish, murderous and seemingly incapable of civilization. So long as the Apache Indians are suffered to remain within the borders of the Territory, just so long will her peace be insecure and her progress retarded.

Mt. Shasta.

We present on this page a view of Mt. Shasta and its adjacent foothills. The necessity for anything like a detailed account of this mountain and its surroundings in this article, is superseded by the full, accurate and graphic description thereof from the pen of Dr. Henry Degroot, which appears in another part of this paper. Dr. Degroot writes from personal observation, having lately spent much time in the region of country by him so faithfully depicted. The Doctor is, in fact, familiar with our entire California Montana, about which few others have written so much or so well.

While we will not here attempt any further delineation of the features of Mt. Shasta, let us try and impress the reader with a just sense of its magnitude by comparing it with other notable elevations, the most of which are familiar to all. Standing on the water-front of San Francisco and looking at Telegraph hill, it seems a conspicuous object, though less than 300 feet high. Ascending this hill and looking around, we see on every hand others so much higher

RAPID INCREASE OF WEALTH.—Chauncey M. Depew of New York made a speech before 200 doctors of medicine at a recent banquet given by the College of Physicians and Surgeons to celebrate the completion of the new medical building erected in that city through the munificence of Wm. H. Vanderbilt. He spoke of some of the proper uses of wealth, as follows: "For the first 75 years of our country's existence our one need was money to develop mines, railroads, telegraphs, steam, electricity and inventions, and thus develop our unequalled natural resources. Fifty years ago there were not three \$10,000,000 men in the country, and not 10 \$1,000,000 men in New York. The man who had an income in excess of liberal living for that reason alone had distinction, superiority and social power, and the one ambition was for money. Now rich men are so common that in itself wealth confers no power. The nation has more wealth than it needs for its development, and the millionaire is estimated by the use he makes of his money. Nobody asks him to divide his wealth, but everybody expects him to feel and act as if his possessions

Kaffir Corn and Other Sorghum

EDITORS PRESS:—I send by this mail a sample of Kaffir corn from a field that I have grown this season. The patch was sown in the Kaffir corn and dura sorghum; the late frost killed the dura, and I thought, at the time, the Kaffir corn also, so I replanted the Blounts Prolific corn, when, to my surprise, the Kaffir came up, made a good growth, and has borne well, thus showing its hardiness.

Kaffir corn is a variety of sorghum cultivated for both forage and grain that has been extensively grown in Georgia, and is equally adapted to the climate of California. The plant grows from four to six feet high, is stocky and erect, with wide foliage. It bears from one to four heads of grain on each stalk. These heads are long and well filled out with plump white grain, slightly flecked with red spots. Kaffir corn, in common with all sorghums, possesses the quality of resisting drought. This quality makes it of especial value in our dry climate. It will yield paying crops of corn and forage where corn utterly fails. When ground, it makes a flour very similar to that of wheat. I look upon it as the best of all feeds for poultry, and I do not believe a better grain for fattening broilers can be grown, as it strikes a happy medium between wheat and corn. The culture is the same as for field corn.—E. H. SCHNAEFFLE, *Murphys, Cal.*

We are very glad to have this note on the growth of Kaffir corn and the splendid specimen which accompanies it. We are especially

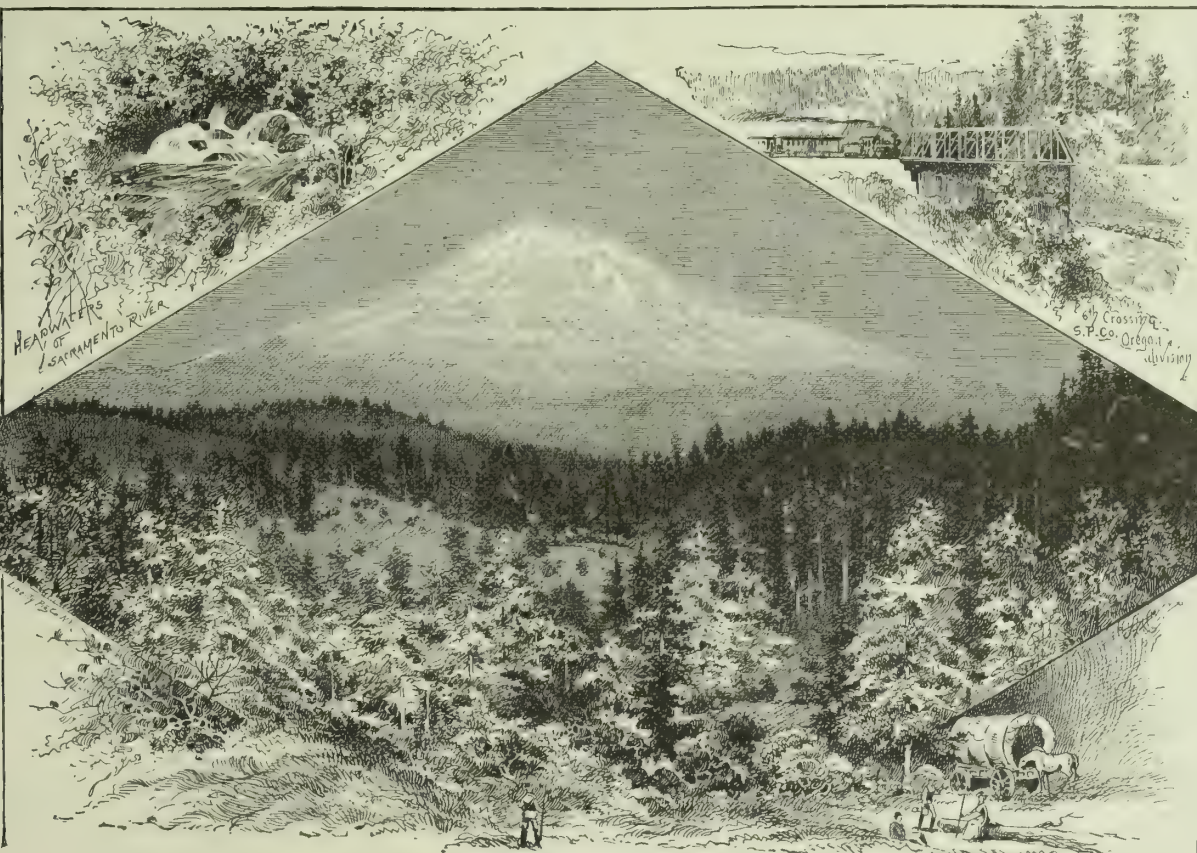
interested because we watched closely an experiment made on the University grounds at Berkeley in which the Kaffir corn was grown in comparison with several sorghums, and careful accounts kept of the cuttings made of each. The seed of the Kaffir corn was distributed in small test lots last year both by our State University and by the U. S. Department of Agriculture, and we presume, because of the value which is found in the plant, the seed will be offered by the State University again this year. Of course only small packets for trial can be had;

for growing on a commercial scale the seed must be purchased of growers or of seedsmen.

As Mr. Schnaeffle's note brings up the subject in a striking manner, we shall add to it the review by Mr. Wickson, of the University experiment, which is found in the last report of Prof. Hilgard. It is as follows:

The plant named Kaffir corn was grown from seed donated by Dr. J. H. Watkins of Palmetto, Georgia. It is a member of the sorghum family, bearing a seed resembling the white dhoura, or Egyptian corn. The plant is, however, of different habit, bearing its seed stem erect, and being generally of a more stocky growth. It proved with us of slower development than the other sorghums mentioned in the table above; but its growth late in the season, as shown by the table of second cuttings, was very creditable, surpassing in this respect the "Rural Branching Sorghum" or "Millo-maize," as it is generally called at the South. A superiority which is claimed for the Kaffir corn at the South is that it sends but one stem from the ground (thus leaving a stubble, which is easily handled), and branches freely at the top. In our experiment it stooped out somewhat, and also showed a disposition to branch at the top. The growth, after cutting, was very good. The table above shows its second growth heavier than some of the tall sorghums. The grain is very large and fine, and was borne in larger amount than is usual for the sorghum family in this location. The variety certainly seems worthy of trial beside the common Egyptian corn in those parts of the State where the latter yields well, and is becoming popular as a grain and forage plant. We receive many notes of the successful employment of Egyptian corn as a substitute for barley for horses, and wheat for chicken feed.

The growing interest in sorghum as a plant for summer and fall food for milch cows seemed to make desirable a sowing of a collection of the leading varieties in the market, both to test their comparative value and to give the many visitors to the University grounds an opportunity of examining their growth. The piece of ground selected had been used for cereals for a number of years. It is rather deficient in drainage, and could not be worked until quite late in the season, and even then was not brought into very good tilth. The seed of seven varieties of sorghum was obtained at the East, and was sown in drills three feet apart May 5, 1886. A good stand was obtained,



MOUNT SHASTA AND SOME SCENES IN ITS VICINITY.

that the eminence we occupy sinks almost to the level of a mole-hill by comparison. To the south and southwest appear San Bruno and Mission Peak, each something over 1000 feet high. To the northwest, ten miles away, stands Tamalpais, its top 2600 feet above the ocean that washes its western base, while still further off to the northeast Mt. Diablo looms taller than any of these, its summit having an altitude of 3856 feet. Gazing on this towering mountain the beholder is impressed with its stupendous proportions, and were he to go over and climb to its top and thence survey its environs he would enjoy a solid satisfaction, conscious that he had performed a great feat and seen a great deal, as would, indeed, be the case.

But, if, now, this Mt. Diablo, so called because of its rough and forbidding aspect, could by any means be taken up bodily and be dropped in the Piedmont region of Shasta, it would disappear altogether, being so overtopped and hidden from sight by the foothills of the Great North mountain. Such is Shasta, which, aided by the cunning of the artist, we have here reproduced, albeit in a puny way, and for a description of which we refer the reader to the much longer article before alluded to.

JAMES TRAYNOR of Marysville, who has been largely interested in farming thereabout for two decades, and has been a leading grain-buyer the past five years, was struck with paralysis on the 9th, and died five days later at the age of 60. Noted for devotion to the agricultural and commercial interests of the community, his truthfulness, square dealing and generosity had made him many friends, and his death is greatly regretted.

carry with them a trust. Its proper administration is his only opportunity to secure the good opinion of the community. If he simply schemes and hoards he loses all that makes life worth living—the respect of his neighbors here; the approval of his Maker hereafter."

HANDS OFF.—The New York *Herald* is one of the few Eastern papers which realize that the Hawaiian Islands are to the Pacific Coast what Cuba is to the Atlantic. The United States has declared that it will oppose the possession of Cuba by any other European power than the one which now holds it, not because the products of Cuba are valuable, but because a first-class naval power in possession of that island would be a constant menace to our ports. By the same rule the Hawaiian Islands should be maintained either in their independence or under the protection of the United States. With these islands in possession of England this coast would be menaced in the same way that the Atlantic coast would be with Cuba in possession of a great naval power. The United States is strong enough to take and declare its position in relation to the Hawaiian Islands. As the *Herald* says, it will save Americans of two or three generations hence from very serious complications if we have a plain understanding now with England, and all other countries that may look upon these islands as desirable possessions, to the effect that this Government will not permit them to pass into other hands without such protest as it is in our power to make.

HORSE-THIEVES are troublesome about Albuquerque, and would-be lynchings are after them in the mountains.

but the plants grew rather slowly at first. As the weather became warmer the growth was accelerated, and the collection made a very good showing for our climate, which is too cool for the best results with plants of this family. No irrigation was given. Portions of each plot were out in different stages of growth, and the results of the weightings are given in the following table:

VARIETY.	Weights of Sorghum—Varieties Cut at Different Stages of Growth.			
	First Cutting, Before Heading, Out, Aug. 10.	Second Cutting, "In the Dough," Sept. 10.	Third Cutting, "In the Dough," Sept. 20.	Average Height of Plant at Maturity.
Household...	16,370	18,580	17,400	74
Seaward's Hybrid...	4,930	17,600	17,600	74
Rural Branching...	11,600	21,750	21,750	74
Chinese Impee...	13,000	22,400	22,400	74
Early Orange...	31,000	22,700	22,700	74
Early Amber...	22,300	22,700	22,700	74
Kaffir Corn...	25,500	22,700	22,700	74

Second growths started quickly after each of the cuttings noted above, and a very fine growth was made without application of water. In some cases the second growths headed out, but the proportion of leaf to stem was much greater than in the first growth. The following weightings were made of second crops:

VARIETY.	Yields per Acre of Second Growth of Sorghums.			
	Second Cut, Aug. 10, 1887.	Second Cut, Sept. 10, 1887.	August and September.	October.
Household...	17,800	3,204	46,755	60,200
Seaward's Hybrid...	15,664	5,304	46,755	60,200
Rural Branching...	9,612	1,434	46,755	60,200
Chinese Impee...	22,072	4,638	46,755	60,200
Early Orange...	14,302	1,065	46,755	60,200
Early Amber...	14,302	2,885	46,755	60,200
Kaffir Corn...	12,104	3,204	46,755	60,200

The above are all weights of green fodder, immediately after cutting. The columns which combine the two cuttings from the same plants at different dates, contain interesting data, and indicate that one must study the growth of the varieties carefully to secure two cuttings of maximum amount, and that the ratio between the cuttings at fixed dates is not constant. For example, the highest result with Chinese Impee was gained by cutting in August and November, while with the Early Amber there was more weight secured by cutting in September and December. The full significance of the results noted in the last two columns of the last table can only be understood by gaining more light from future experiments.

Feeding experiments carried on to test the preference of cows for either of the varieties named above showed that the Chinese Impee was eaten fully, while of all the other varieties there were butts of the cane left, from a foot to 18 inches in length.

Another plant, grown in the same plot, but not weighed because of its slower growth, was the Pearl millet (*Penicillaria epicata*), which has been mentioned in previous reports of this institution. It made a very good growth of blade and stem, and a large crop of heads. The cattle were very fond of it, and ate it up clean, the green seed heads as well as the leaves and stems.

OREGON STATE FAIR.—The official canvass of receipts and expenditures connected with the State Fair held at Salem, Oregon, last month, shows that there was received, including \$5000 from the State, \$22,349.50; paid on account of premiums and expenses, \$17,529.46, leaving in the treasury, \$4820.04. About \$3500 more of old indebtedness will be paid off.

THE streets of Olympia, W. T., are full of Indians returning from the hopfields, and the merchants are reaping a rich harvest.

The Mountains and Canyons of Northern California.

A Future Recreation Ground and Sanitarium of the State.

[Original—By DR. HENRY DE GROOT.]

That California is a country possessed of great agricultural and mineral resources, a fine climate and many other natural advantages, are facts that have long since and everywhere become well known. Most intelligent persons, both at home and abroad, are pretty well informed as regards the extent and productiveness of her gold-fields and her wheat-fields, her orchards and her vineyards, and have even heard something of her deep-fissured and steep-walled valleys, her majestic mountains, her far outstretched plains, her orange groves and her great forest growths. In almost every spoken language these things have been written about and published far and wide, the several convocations, civic, soldierly or industrial, held during the past few years in the metropolis of the State having served to gain for them a more general recognition and a wider notoriety. And so California, as regards these, her more salient features and obvious sources of wealth, stands to-day one of the best-known, not to say well-advertised, countries on the face of the globe. And well does she deserve all that has been said about the extent of her mineral resources, the grandeur of her scenery, the excellence of her climate and the fruitfulness of her soil. In describing these and much more that might be claimed for this State, glowing as have been most of the accounts given of them, not often have these accounts been much overdrawn, so little likely is any one to employ the language of exaggeration when speaking on this subject.

But in all that has been so said and written, we conceive that one of the most noteworthy advantages pertaining to this country, and one that will in the years to come constitute to a large class of visitors its greatest attraction, has received too little attention, having very often been but slightly alluded to or wholly overlooked—this advantage and special feature of attraction consisting in the fact that California, by reason of her peculiar climatic conditions, is destined to become the great recreation-ground and sanitarium of the whole world. While this feature may not so much add to the permanent population of the State, it cannot fail to greatly promote her material prosperity, by inviting hither that very considerable and almost always wealthy class who go abroad in search of health, pleasure, recreation or rest. These be the people who, by their presence, enrich a country hardly less than they who come to stay and to toil.

Such being the case, it may well be inquired where in this broad Hesperian land, with its manifold climates, its varied products and its diversified scenery, shall be found the most suitable place of abode for these strangers who, in numbers multitudinous, are at no distant day coming here to sojourn—some to make temporary homes and even perhaps tarry for many days. What locality, if any, promises to combine the most advantages for a retreat of this kind, the wants, tastes and desires of the greater number of these visitors being consulted, for, in determining such point, these are matters not to be overlooked or lightly considered. There will come to this retreat tourists and scientists, health-seekers and sight-seers—those in quest of adventure and those in quest of mere recreation and pleasure. Some will require means and opportunities for excitement and exercise, while others will delight in quietude and repose. There will be the admirers of the soft and subdued and of the rough and imposing in nature. There will be those prone to climb mountains or perform other feat of endurance and daring for the purpose of invigorating their bodily powers or exhilarating their spirits, with those, again, who will seek to reach these ends by methods less heroic and exhaustive. Not a few will find their delectation in hunting and fishing; still more in bicycling, horseback or buggy riding, games, athletic sports, etc.

Such popular haunts in order to accommodate every class of guests, must, therefore, compass a great deal; more, in fact, than we can hope to find in any one locality even in California. The best that can be done, then, is to look after and if possible discover the place that seems to meet in largest measure these several necessities and requirements. That place will, in our opinion, be found

In the Vicinity of Mount Shasta.

Standing near the northern border of the State, and about which there extends a vast area of wild and broken country wherein the rugged and the sublime, the picturesque and the beautiful, are strangely intermingled.

In endorsing so fully the eligibility of this spot, it is not our purpose to underrate the attractions to which many other localities in California may justly lay claim as places of public resort. We are only speaking of a remote, primeval and unfrequented district, which, taken as a whole, seems to possess great capabilities in the above direction. It is not pretended that this region excels in every particular all others in the State. There are

here forests of big trees, but none so gigantic as those that stand in the Calaveras or the Mariposa grove. There are here chasms, dark and deep, yet none so profound as the Yosemite abyss. There are here waterfalls, but none so lofty as those that precipitate themselves into that awful gorge, nor are the medicinal properties of the mineral springs, of which there are a number scattered through these hills, so well established, perhaps, as are those of Paso Robles, Gilroy, or the Geysers.

But the Big Trees of Calaveras and Mariposa are things to be visited, looked at and left, few caring to stay there very long. The vale of the Yosemite is a unit with views comparatively restricted, it being impossible to see much of interest outside its walls. There, too, a short stop generally suffices, while the warm and the medicinal springs are more for the invalid than for the scientist, the tourist or the traveling public. Of the more populous portions of California, with their dust and din, the seeker after quiet and repose will often tire. Often will he long for a place where he can escape from the noisy world, with its whirl of fashion and its roar of business. To such this north country, with its many climates,

Its Towering Mountains and Its Billowy Hills.

Its freshness and beauty, will present a happy retreat. Though exceedingly picturesque, not very high nor yet very steep are these hills on the west. The dead plain of the Sacramento rising at first into gentle undulations, swells further on into long, sweeping waves, which, gathering force as they proceed, break in great billows about the base of Mount Shasta. The innermost of these hills, though several thousand feet high, sink into mere knolls beside the great central cone, the top of which reaches an altitude of 14,444 feet above the level of the ocean.

Springing to such regal height out of this girdling sea of hills, snow-capped Shasta stands the most conspicuous, symmetrical and imposing of all our California mountains. Seen a long way off from either the north or the south, it takes the shape of an almost perfect pyramid, its double summit, formed by the breaking away of the rim of the crater once at its top, not being seen. The views obtainable from many parts of this mountain are not surpassed in extent or grandeur by any to be had in the Alps or the Andes. Shasta is seen to best advantage from the railroad after we have passed it going north, it being in sight from the cars all the way up to the Oregon line. So seen, we have an almost perfect view of the highest portions of the mountain.

Coming up the Sacramento valley from the south, the traveler little heeds the first glimpse he gets of Mount Shasta, so like a hazy cloud hanging on the verge of the horizon does it appear; not until he has approached it nearer and it begins to take on the shape of a vast pavilion standing against the sky, does he note it more closely and feel moved to inquire what it is.

Not difficult should it be for the mind devout to see many of the divine attributes typified in this imperial mountain, so suggestive of vastness, majesty and power. Far uplifted, spotless and alone—immutable, the same to-day, yesterday and forever—the great white throne seen by him of the Apocalypse—the rest land dreamed of by the recluse and saintly—the heaven longed for by the austere pilgrim and the stern covenant—so awe-inspiring, cold and pure.

Equally varied, if not so far-reaching, inspirational and grand, are the views presented in the tumult of hills that constitute

The Piedmont Region of the Mother Mountain.

And which, it may safely be affirmed, are without a parallel in the great Cordilleras of either North or South America, there being here so much that is subdued and beautiful as well as majestic and grand. Many of the landscapes are little short of an enchantment. Eroded by a thousand streams and tumbled into every conceivable shape, there is among these billowy hills nothing wanting that the most exacting lover of nature could desire. Intermingled with them are cliffs and bluffs, and softly rounded knolls, and dells so gently curved and deftly shaped that even the unimaginative might believe "the fairies had come of a moonlight night and scalloped them out with their dainty fingers." There are here stretches of stately forests, and clumps of trees and scattered groves with delicate shrubbery, and clouds of wild vines along the water-courses. There are walks and alamedas with generous sweep but not too prim or over-symmetrical. There are sunny lawns and irregular glades opening far into the woodlands, all of which man well may envy though he cannot imitate. Turn where we will, something new and charming, magnificent and startling, opens to the view, Shasta everywhere visible, appearing a very presence, so seemingly near and impending. There is about this mountain a fascination not readily dispelled. Gaze upon it much as we will; climb it to its top—not an easy task—and yet we regard it with the same reverential feeling as at first.

Leaping in cascades down its cold sides are streams innumerable, which, eddying about mossy rocks, go rippling over their pebbly beds or linger in deep, placid pools on their way to the sea. And there are here sounds to soothe and delight the ear, as well as objects to interest the mind and please the eye. The murmuring waters

sing perpetually a song of peace, while every pendant leaf of the pine, moved by the passing breeze, becomes a harpstring musical with the glory of the mountains.

The Climate and the Woods, With Their Health Giving Odors.

The climate of this region is simply perfection. So healthful are the conditions that here, if anywhere in the world, Hygeia might be expected to make her home. The very atmosphere is a tonic. There lingers not in it the least germ or taint of disease. There is hardly an acre of malarial land within a hundred miles of this spot. In so far as temperature is concerned, this can be so readily varied by change of altitude that one may pass in the course of a few hours from a region of perennial flowers to one of perpetual frost and snow. The air, except in higher mountains, is balmy and springlike, being everywhere laden with the incense of the piney woods and redolent of health-giving odors. Many of the trees, besides so exhaling a balsamic fragrance, bear soft and poetic names. There is here the madrona and the sweet-gale myrtle, the silver fir and the incense-bearing cedar. And shrubs there are, too, with equally pleasant and euphonious names, such as the manzanita, the chemical and the wild syringa; some of these shrubs giving out also delicious perfumes, their forms and their foliage being withal exceedingly beautiful. Moreover, some trees and flowers there are in this little explored and pristine field of botanical research that remain unknown and nameless, the man of science having not yet been there to classify and name them. It will be a joy to some to find growing by the streams in this wild and virgin region the sycamore or plane tree, the buttonwood of their boyhood days; also the quaking asp, with its slender trunk and its ever-tremulous leaves.

The water that runs among these hills is purity itself. Coming from the melted snow about the sources of the streams or falling from the clouds, it is free from any mineral, vegetable or other deleterious substance whatever. There are here, as elsewhere in California, but two seasons, the wet and the dry. The former, which is the winter season, commences usually about the middle of November and extends to the end of May, during which time there are from 15 to 25 continuous rainy days, the rest of the precipitation occurring in the shape of gentle showers, which in February, April and May are apt to fall only at considerable intervals. The annual rainfall ranges from 50 to 60 inches, hardly more than one inch of which falls during the dry season. There are 50 partially clear and over 200 wholly cloudless days during the year. Not over five or six inches of snow ever falls in the lower valleys of this region, nor does it often lie for more than a few days at a time. Ice more than an inch in thickness seldom forms here. On the foothills the snowfall is greater, increasing everywhere with altitude reached, the fall on the higher mountains varying from 20 to 40 feet every winter. Thunder and lightning are rare and withal so harmless that they are regarded as curious and interesting phenomena. No lives have ever been lost here, nor has any person or property ever been injured, by earthquakes. Cyclones, tornadoes and destructive gales of wind are things unknown.

Its Manifold Capabilities and Its Probable Future.

After having visited every one of the more noted pleasure retreats, seaside homes, mineral springs and sanitariums of California, we are constrained to say that in our judgment this realm, so engirdling, Mount Shasta meets the requirements of a great popular resort as fully as any other place in the State. Arrived in these sylvan retreats so suggestive of action, so inviting to repose, visitors of every class and kind, however varied their wants, capricious their desires or opposite their tastes, will each be likely to find here what he most longs for. The strong, opportunities for exercise and adventure, the effete for excitement and the scientist for study, while the over-worked, the weary and the crushed will find cry out, "Alabama! here let us rest."

Not difficult is it to forecast the horoscope of this great solitude at the North. We foresee for this now sparsely populated and little disturbed realm, the abode of loneliness and silence, the work-ground of the adventurous painter, the dreamland of the poet, an early change of scenes and conditions. We foresee the time, not far off, when, its fame having been spread abroad, the peoples of all lands will be turning their footsteps hither; when great hostels and elegant villas and cottages on all the more eligible sites will be erected; when wagon-roads and bridge-trails and serpentine walks will be laid out and built; when rustic bridges will span the streams, and arbors, and baths and bowling greens and tennis lawns, and all the other devices that tend best to facilitate exercise, insure comfort and health and to promote recreation and amusement, will here be provided. We foresee, in the not much more distant future, a time when the lumberman, the vine-grower, the orchardist and others of economic habit, will begin to invade this beautiful wilderness; when the cabins of settlers will multiply on every hand; when the shriek of the locomotive will be heard in these hills and canyons and the voice of a many-toned industry will pervade all the land.

This hill country, including the whole of Northern California and Southern Oregon, has

been made easy of access through the construction of

The California & Oregon and the Oregon & California Railroads.

Now just completed. It can be reached either from Portland or San Francisco in about 12 hours' ride by rail, the journey from either leading through countries as rich in agricultural wealth and as varied in scenery as any on the continent. Going up from San Francisco the traveler passes through the rich agricultural counties of Contra Costa, Solano, Yolo, Colusa and Tehama, and the almost equally rich mining county of Shasta. For nearly 200 miles in the valley of the Sacramento he rides through an almost continuous wheatfield, the only interruption consisting of orchards and vineyards laden in their season with the choicest of fruits. Coming from Portland the traveler is for more than 100 miles in the fertile valley of the Willamette, no less famed for its wheat farms and its orchards than the Sacramento, the next 100 miles coming south covering a region of diversified hills and valleys, some portions of it rich in mineral and agricultural resources, and the whole well adapted for growing almost every kind of fruit, grapes included.

The Fairs.

Santa Barbara—19th District.

To supplement the account of the Santa Barbara county fair, given by our local correspondent in the PRESS of 8th instant, we add the list of awards in agricultural and allied departments:

HORSES.

THOROUGHBREDS—Stallions, 1st, "Accident," G. W. Leland; 2d, "Lightfoot," Ephraim Allen; mares, "Maggie Barnes" and "Lucy S.," Mr. Hunter.

ROADSTERS—1st, mare, "Florence P.," H. W. Lawrence; stallion, "George W.," A. C. J. Wilson; 2d do, "St. Patrick," and mares, "Lucy" and "Polly," A. W. Buell; stallion, "Volante," E. C. Durfee; stallions, "Selim" and "Dashaway," E. A. Hollister.

CARRIAGE HORSES—Horse, "Topsy," A. W. Buell; double team, "Diamond" and "Bob Burns," H. G. Pierce; mare, "Maggie," W. E. Johnson; sucking colt, "Fox," A. Martin; do, (mare) S. F. Moore; do, (horse) T. M. Lewis; stallion, "Don Patricio," I. K. Fisher.

ALL PURPOSES—Best mare, 3-yrs-old and upward, "Millie," A. Doty; 2d do, "Mollie," Wm. Robinson; best sucking filly, "Topsey," E. P. Sawyer; best stallion, "Compromise," and 2d do, "Richmond," S. Hobbs; sucking horse-colt, "Dunois," F. T. Underhill; mare, 3-yrs-old and upward, "Kate," A. H. Phelps; stallion and 5 colts, "Ben Archer," mare, 2-yrs-old, "Queen," and 2d, filly, 2-yrs-old, "Princess," F. M. Lewis.

SADDLE HORSES—Horse, "Chief," C. D. Patterson; horse, "Bob," Wm. Smith.

DRAFT HORSES—All premiums to T. Phillips save the following, viz.: Yearling, "Montebelo," A. Doty; mare, "Belle," J. F. Moore; filly, "Sukey," M. Van Robbins; stallion, "Chief," C. Murphy.

MULES AND JACKS.

Best span mules, "Pete" and "Joe," M. Van Robbins. Best jack, "Jack," F. T. Underhill.

CATTLE.

DURHAM—Wm. Swift.

JERSEYS—E. J. Packard.

GRADES—2-yr-old hfr "Christmas," J. M. Hunter; cow, "Juvy," W. Robinson; cow "Queen," E. Stratton; hfr "Blacky," W. N. Lee; cow "Belle," and calf, W. J. Stafford.

SWINE.

Boar "Jack" and sow, S. G. Oliver; "Butler" and sow "Lady Mayheyn," A. H. Phillips; litter pigs, sow and pigs, boar, J. A. Faulding.

POULTRY.

Pigeons, H. F. R. Vail; Guinea pigs, Bertie Hunt; canaries, Mrs. M. A. Spring; chickens, E. J. Packard; ducks, Jas. Delaney; chickens, Wm. Swift.

FARM PRODUCTS.

Best sample rye, E. H. Hollister; yellow corn, white corn, A. Martin; corn on stalk, T. S. Collis; English mustard, Geo. Bassenger; squash, H. Langman; largest and best-flavored watermelon, G. M. Williams; onions, John Spence; carrots, H. Langman; tomatoes, G. M. Williams; Mangel Wurzel beets, H. Langman; lima beans, T. S. Collis; tobacco, Mrs. Keppen; bale barley hay, E. H. Hollister; sunflower, C. N. Leet.

FRUIT.

Best display by one person and grapes, G. M. Williams; best apples, pears, peaches, Wm. Jackson; oranges, strawberries, J. E. Shephard; blackberries, C. N. Leet; lemons, G. C. Packard; ex. assorted jellies and jams, and ex. domestic canned fruit, Mrs. G. C. Packard; ex. jellies, apples, pears and guavas, Mrs. L. G. Oliver; pickled olives, Mrs. M. A. Spring; dried fruit and nuts, E. J. Knapp; display grapes from Sespe (Ventura Co.), Cyrus Kenney.

PLANTS AND FLOWERS.

All premiums to John Spence.

MISCELLANEOUS.

Exh. packed butter, L. G. Oliver; single roll butter, E. P. Sawyer; honey in comb and extracted honey, J. Archer; saddle and harness, S. Loomis; agricultural implements and farming machinery and farm wagon, W. A. & T. S. Hawley.

Bishop Creek—Eastern Slope.

Among our Agricultural Notes, Oct. 8th, there was a brief report of the second annual fair held at Bishop Creek, Inyo Co., the last week in September. We now give the awards for products of agricultural and allied industries, as published by the Register:

HORSES.

THOROUGHRED—Stallions—3-yrs-old, Olds &

Co.'s "Truckee," 2-yrs-old, A. H. Allen's "Andy," 1-yr-old, A. Friedline's "Gibraltar Jr."

GRADED—Stallions—3-yrs-old, A. Welch's "Flamingo" 2d; 1-yr-old, T. F. A. Connelly's "Inyo," mares—3 yrs and upward, W. Rowan's "Belle," 2 yrs old, E. Powers' "Julia," 1-yr-old, W. Rowan's "Minnie W."

ALL PURPOSE—Gelding, B. T. Williams' "Jim," stallion, A. J. Shipley's "Pat," brood mare and Norman colts, W. Rowan's "Belle."

MATCHED TEAM—E. M. Clarke's "Pass" and "Lize."

DRAFT HORSES—Stallion, 3-yrs-old, W. Rowan's "Albion," matched team, Rowan's "Belle," and "Pet," pair draft mares, G. Sanger's "Edith" and "Lucy."

CATTLE.

DURHAM—Bull, 1 yr and upward, J. H. Muller's "Switzer Boy No. 3," heifer, A. Clark's "Washoe Princess," graded heifer, J. H. Muller's "Kate."

JERSEY BULL, B. H. Yandell's "Doctor."

SWINE.

Poland-China and Berkshire sow and 3 pigs, Producers' Union.

POULTRY.

White Leghorns, W. O. Moroney; Light Brahms, Mrs. W. H. George; Brown Leghorns, W. McDonald; Houdans, Mrs. A. J. Murphy.

GRAIN AND VEGETABLES.

Wheat, oats, alfalfa seed, A. Thompson; sweet corn, D. Olds; field corn, Wm. Powers; sweet potatoes, W. T. C. Elliott; potatoes, J. Haas; parsnips, C. Kennedy; carrots, A. Thompson; beets, T. F. A. Connelly; watermelons, tomatoes, A. Van Fleet; cabbage, R. Hilton; peppers, B. S. Glover; cucumbers, L. P. Yandell; canteloupes, A. Clark; beans, white, V. Sherman; onions, A. A. Cashbaugh; squash, S. J. Newlon; pumpkins, W. Bulpitt; beans, bayou, T. Goodale; cotton plants, tobacco, S. T. White; cauliflower, Wm. Smale; castor beans, Mrs. Enloe; egg plant, Tom Kee; peas, Mrs. Shannon; peanuts, hops and kolarabi.

FRUIT.

Apples, C. R. Thompson; pears, Jas. Shaw; peaches, S. G. Sneden; grapes, W. T. C. Elliott; dried apples, Wm. McLaren; raisins, W. P. Bailey; hard-shell almonds, Mrs. King.

MISCELLANEOUS.

Butter, cheese, R. Love; lard, Mrs. W. McLaren; display honey, Mrs. Shaw; ham and bacon, W. McLaren; watermelon syrup, S. T. White; comb honey, W. G. Watson; canned fruit, Mrs. W. T. C. Elliott; flowers, Virginia Arison.

EQUESTRIENNE CONTEST.

First prize, Miss Nettie Olds; 2d, Miss Alice Meads.

Independence—18th District.

The First Annual Fair of the Eighteenth District Agricultural Association, after repeated postponements, was formally opened at Independence on Monday, October 10th, and continued throughout the week. While the new pavilion was in building, a good many criticised the judgment of those who were having it made so spacious, but what with the varied and plentiful output from orchard, field and mine, and the throngs of visitors day and night, the experiences of fair week convinced the people generally that the structure must be enlarged before another autumn. Although attendance and exhibits from Alpine and Mono counties this year were scanty, yet the number of strangers in town was rather unexpected, the people of Owens valley were out in force, the weather was fine, no accidents occurred to mar the general enjoyment, and the sum total was a satisfying, nay! exhilarating success.

The mineral exhibits were rich and diverse; but to enlarge upon them does not come within our province.

The horse parade on Thursday, including draft and all-purpose animals, roadsters, carriage and saddle-horses, was a display of surprising excellence. The ladies who took part in the equestrian contest evinced a degree of skill that made the deciding upon their relative merits no easy task for the judges.

Among the products exhibited by W. L. Hunter was a sack of buckwheat as good as that grown in any Eastern State; also very fine rye, and peanuts on the vine; and his big sweet potatoes, as well as those of G. W. Parrish, were noticed with admiration.

T. J. Goodale of Fish Spring showed wheat in the sheaf, remarkable for the size of the heads and plumpness of the berries. It was raised with little irrigation and makes the best of flour. He also displayed some varieties of seedling apples which he has found profitable in Owens valley. They are large, high-flavored, handsomely colored, good keepers and prolific bearers.

From Lone Pine came a fine display of fruits. Mrs. Kate Stewart sent several varieties of apples, etc., and a handsome lot of canned fruits; Mr. S. Zam showed grapes in variety, the bunches very large; John Lubken sent some fine apples; Mr. and Mrs. A. C. Harvey made an agricultural exhibit, which was very novel and effective. It comprised peaches, strawberries, green beans, sweet potatoes, peanuts, figs, grapes and a variety of the harder fruits and vegetables, disposed upon a monstrous sagebrush 12 feet 8 inches high, which grew upon the same ground. "It showed at a glance, and most forcibly, what can be raised upon the sagebrush lands of Owens River valley, with industry and intelligent cultivation."

Mrs. Sallie Bell of Big Pine made a fine output of apples, pears, figs and walnuts. Miss Rachel Bell had a lovely display of flowers.

Our old contributor, Wm. Muth-Rasmussen, made a showing of honey and apiarian implements, very interesting and instructive to every one who handles bees. It embraced every-

thing used in the business, from comb-foundation to marketing package. We append the usual

Awards—Horses.

STANDARD TROTTERS—Best stallion, 3 yrs and upward, "Roderick," G. Sanger; colt under 1 yr, "Flash" and special, "Lady Nelson," W. S. Enos.

ROADSTERS—3 yrs and upward, "Bismark, Jr.," M. Muldoon; 2-yr-old, "Valentine," J. S. Gorman; roadster and family, "Bismark," M. Muldoon; team, W. S. Enos.

GRADED—Mare, 3-yr-old and upward, "Jessie," G. Sanger; carriage team, Mrs. W. S. Enos.

ALL WORK—Stallions, 3-yr-old, "Prince," W. R. Tibbetts; 2-yr-old, "Young Hero," J. H. Dodge; 1-yr-old, "Billy," E. Robinson; Mare, 3-yr-old, "Snider," W. S. Enos; 2-yr-old, "Belle," J. Vagt; mare and colt, "Nellie," E. Robinson.

SADDLE—1st, "Wade," W. S. Enos; 2d, "Chappell," E. Robinson.

DRAFT—All premiums to G. Sanger, except best 2-yr-old stallion, "Ted," W. S. Morton; and family, "Lady Clyde," W. S. Enos, and special for colt, same.

MATCHED TEAMS—Mares or geldings, or either, 1st, "Hero" and "George," J. H. Dodge; 2d, "Prince" and "Frank," Goodale.

SWEEPSTAKES—Stallion, any breed or age, "Roderick," G. Sanger; mare, any breed or age, "Lady Clyde," W. S. Enos.

JACKS—All awards to J. E. Shepherd.

CATTLE.

GRADED—Bull, "Tom," J. H. Dodge; bull calf, J. Brown; cow, 3 yrs old, "Cherry," 2-yr-old, "Silkie," and heifer calf, "Jamie," all by A. N. Bell.

SHEEP, GOATS AND SWINE.

Graded Merinos—E. Robinson. Angoras, H. Bellows. Boar and sow, J. Vagt; Berkshire, (spec.) E. Robinson.

POULTRY.

Wyandottes—Mrs. H. L. Clark; Plymouth Rocks, J. Baxter.

GRAIN, VEGETABLES, ETC.

Flour, A. N. Bell, 100 lbs. each wheat, barley and corn, T. J. Goodale; oats, W. R. Tibbetts; 50 lbs. alfalfa seed, C. A. Walter; sack buckwheat, W. L. Hunter; sk rye, John Baxter.

Sweet potatoes, tomatoes, G. W. Parrish; Early Rose potatoes and any var. potatoes, W. J. Lake; parsnips, cabbage, canteloupes, S. A. Densmore; carrots, onions, A. C. Harvey; beets, squash, J. Vagt; turnips, J. Baxter; pumpkin, watermelons, W. L. Hunter; red peppers, A. Rossi; white beans, pink beans, T. J. Goodale; best display agric. products, S. A. Densmore.

Butter, J. Baxter; lard, Mrs. Allie R. Brown; honey, apiary display, Wm. Muth-Rasmussen; fruits in jars, Mrs. Kate Stewart; hams and bacon, J. Vagt.

FRUITS, ETC.

Best apples, J. W. Symmes; 2d do, J. Baxter; pears, Mrs. Sallie Bell; peaches, E. Robinson; plums, Wm. Walker; quinces, grapes, J. W. Symmes; 2d grapes, A. C. Harvey; dried apples, J. Baxter; dr. peaches, Wm. Walker; display dried fruits, S. A. Densmore; Rhine wine, S. Zaun.

HONORABLE MENTION.

Was also made of the following exhibits, many of which were not entered for premiums: W. L. Hunter, rye and corn in ear, potatoes; J. S. Gorman, oats; J. Baxter, alfalfa and corn, egg plant; J. Kispert, corn in ear; C. A. Walters, corn and wheat; S. A. Densmore, corn, new var. wine and vinegar; J. Vagt, green corn, 2d crop; W. R. Tibbetts, oats; A. C. Harvey, green beans and excellent agr. display; F. Albers, Early Rose potatoes; H. L. Clark, Kohl Rabi; W. J. Lake, cauliflower; Wm. Walker, apples, plums in alcohol; E. Robinson, wheat, corn, apples, pears, fruit in alcohol, sundried raisins; Mrs. McCall, apples; J. W. Symmes, pears; J. Seely, apples; T. J. Goodale, apples; J. Vagt, apples and pears; A. N. Bell, pears.

LADIES' TOURNAMENT.

1st, Mrs. J. J. Stewart; 2d, Miss May Shepherd; 3d, Miss Emma Duval; 4th, J. Roeper.

Death of J. N. Lund.

J. N. Lund, the well-known poultry fancier, having trodden upon a nail and wounded his foot, died of lockjaw at his home in Oakland on Tuesday, Oct. 18th, aged 43.

Mr. Lund was a native of Schleswig, but came to America when quite a young man. After passing a dozen years in New York and Chicago, he came to Oakland some 12 years ago and lived there up to the time of his death. A carpenter by trade, he was perhaps more widely known as an active member of the California Poultry Association and as proprietor of the Piedmont poultry-yards. He leaves a widow and two daughters.

AMERICAN POMOLOGICAL SOCIETY.—At the recent biennial meeting of this honorable association in Boston, P. J. Breckmans, the well-known Georgia horticulturist, was chosen to the presidency made vacant by the death of the lamented Marshall P. Wilder. The choice of Mr. Breckmans will give general satisfaction. Dr. J. B. D. Stillman of San Bernardino was chosen vice-president for California. The meeting was a great success. We expect to refer to it at greater length hereafter.

SAYS the Kittitas (W. T.) Localizer: The green grass is several inches high. That, with the old throughout the bunch-grass regions, will make good feed for the stock before the winter sets in. All kinds of stock are looking well.

THE PORTLAND MECHANICS' FAIR closed last Saturday night, after a successful run of 2½ weeks. The display is said to have been quite up to those of former years, while the attendance was larger than ever before.

MARVELOUS CHANGES.

What the Future Will be to Those who Refuse to Believe.

Is this country unconsciously undergoing a wonderful change, is the change to take place before we are aware of the fact, and when it has taken place will we wonder why we did not see it before it was too late?

Those that see the changes early avail themselves early, and thereby receive benefit.

The shrewd iron man sees the iron interest transferred from Pittsburg and Pennsylvania to Birmingham, Alabama, and in his far-sightedness sees the furnaces in Pennsylvania torn down and deserted for this new and prolific field. It is claimed by the iron men of Alabama that the low price at which iron can be produced there will revolutionize the iron interest of the world.

We have seen the grain-growing centers of this country shifted to the West. We have seen the pork-packing industry flit from Cincinnati to Chicago, and from thence to Kansas City and Omaha. Southern cotton mills undersell New England and American markets, and challenge the world.

We have seen, and are seeing, all this take place before our eyes, and know that other changes are taking place equally as prominent, and we wonder as we behold them. Ten years ago the insurance companies only required an analysis of the fluids when they were taking insurance for very large amounts. To-day no first-class company will insure any amount unless they have a rigid analysis of the fluids passed, and if any traces of certain disorders are apparent, the application is rejected. In their reports they show that the death of 60 of every 100 people in this country is due either directly or indirectly to such disorders. The Brompton Hospital for Consumptives, London, England, reports that 60 of every 100 victims of consumption also have serious disorders of the kidneys.

Among scientists for the treatment of this dread malady the question is being discussed:

"Is not this disorder the real cause of consumption?"

Ten years ago the microscope was something seldom found in a physician's office; now every physician of standing has one and seldom visits his patients without calling for a sample of fluids for examination.

Why is all this? Is it possible that we of the present generation are to die of diseases caused by kidney disorders? or shall we master the cause by Warner's safe cure, the only recognized specific, and thus remove the effect? It is established beyond a doubt that a very large percentage of deaths in this country are traceable to diseased kidneys. For years the proprietors of Warner's safe cure have been insisting that there is no sound health when the kidneys are diseased, and they enthusiastically press their specific for this terrible disorder upon public attention. We are continually hearing its praises sounded.

This means wonders!

Cannot the proprietors of this great remedy, who have been warning us of the danger, tell us how to avoid a disease that at first is so unimportant, and is so fatal in its termination? Are we to hope against hope, and wait without our reward?

The most significant of all changes, however, that we of to-day can note is this radical change of view to which the public has been educated: It was formerly thought that the kidneys were of very small importance; to-day, we believe, it is generally admitted that there can be no such thing as sound health in any organ if they are in the least degree deranged.



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ORANGE CULTURE

A practical treatise by T. A. GARRY, giving the results of long experience in Southern California. 196 pages, cloth bound. Sent post-paid at reduced price of 75 cts. per copy by DEWEY & CO., Publishers, S. F.

The Little Giant Gang Plows.

DOES IT PAY For a man and team to plow all day, turning a furrow 14 inches wide, when the same man, by using one more horse and a **LITTLE GIANT GANG**, can turn a furrow 30 inches? To take four weeks doing a piece of plowing that can be done just as easily and as well in two weeks? To be behind with your plowing and work, because you are wasting one-half your time, although working hard all day?

REMEMBER That the **LITTLE GIANT GANG** is the greatest TIME-saving as well as a LABOR-saving PLOW. It has three levers, giving it plenty of adjustment. That it can be adjusted to any depth and width of cut while in motion. That it is the strongest and best braced GANG PLOW made, and will not get out of line. That the beams are heavy and made of high-grade steel and cannot spring.

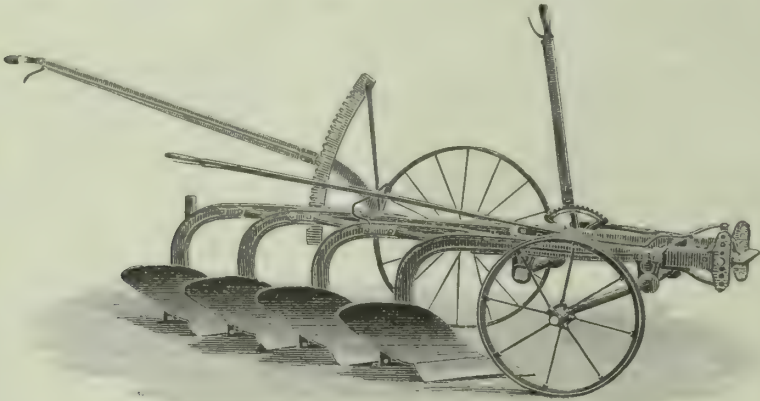
POINTS. 1. These plows are strong, being thoroughly braced and well made in every respect.

2. The main lever regulates the depth only.

3. By means of the (short) Leveling Lever, the plow can be instantly adjusted, without stopping the team, thus keeping the plow always level on hilly as well as smooth ground, and insuring good work.

4. The (center) Landing Lever is a feature that will be fully appreciated by the practical dealer or farmer, for with this, if one horse is inclined to crowd, you can at once favor him without stopping, and thus maintain a straight uniform furrow. This lever also saves a great many changes of hitch when you want to take more or less land.

5. The doubletrees or equalizers are supported by means of an attachment on the cross clevis, so that in backing up they are not under the horse, but entirely out of the way.



The Little Giant Gang will do more work with less horse flesh, and do it better, than any other make of Plow in California. Try one, and if not as represented, return at our expense.

Bull & Grant Farm Implement Co.

SOLE IMPORTERS,

14 and 16 MAIN STREET, - - - SAN FRANCISCO, CAL.

211, 213 and 215 J St., SACRAMENTO. 233 N Los Angeles St., LOS ANGELES.

GOULD'S SPRAY PUMP.

This Pump we have got up expressly for spraying vines, fruit trees and other shrubbery infested with the destructive insects which inflict so much injury in orchards, vineyards, etc. It has been adopted and recommended by the State Horticultural Society. The working parts are constructed entirely of brass, and will not be affected by the corrosive solutions used in them. **THE BAMBOO EXTENSION** is an admirable invention. The operator of the Pump, by the use of this extension, can get to all parts of the tree while on the ground; also saving himself from getting his hands and face burnt from the solution. Send for Catalogue and Special Prices.



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Gould's Spray Pump, with Bamboo Extension and Spray Nozzle Complete.

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AXLE GREASE

To \$2.25 per Case.

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BOOK OF BEAUTIFUL SAMPLE CARDS.

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This Fire-proof Brick Building is centrally located, in the healthiest part of the city, only a half block from the Grand and Palace Hotels, and close to all Steamboat and Railroad Offices.

Laundry Free for the use of Families
HOT AND COLD BATHS FREE.

Terms, Board and Room, \$1.00 per Day
And upward.

ROOMS WITH OR WITHOUT BOARD.

FREE COACH TO THE HOUSE
J. POOLEY.

ON 30 DAYS' TRIAL.

EGGLESTON'S ELASTIC TRUSS
Has a Pad different from all others, is cup shape, with Self-adjusting ball in center, adapts itself to all positions of the body while the ball in the cup presses back the intestines just as a person does with the finger. With great pressure the Hernia is held securely dry and night, and a radical cure certain. It is easy, durable and cheap. Sent by mail, Circulars free.

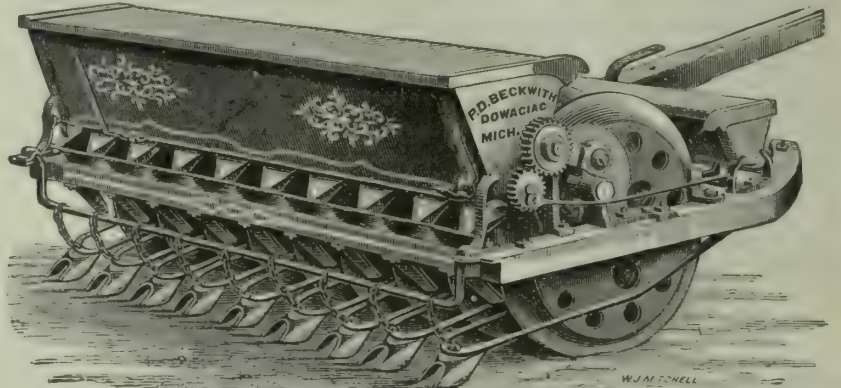
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BATCHELOR & WYLIE

ARE NOW OFFERING

ROLLER GRAIN DRILL & CLOD CRUSHER COMBINED,

19½ feet in width, coupled in three sections, one of which is shown in cut below.



1. CANNOT CLOG IN ANY KIND OF TRASH.
2. REQUIRES ONLY SIX HORSES AND ONE MAN TO OPERATE.
3. WILL SOW FROM THIRTY TO FORTY ACRES PER DAY.
4. INCREASES THE YIELD FROM THIRTY TO FIFTY PER CENT.
5. READ THE ANNEXED LETTER AND WRITE US FOR PRICES.
6. SEND IN YOUR ORDERS IMMEDIATELY, AS THIS SEASON'S STOCK WILL SOON BE EXHAUSTED.

BATCHELOR & WYLIE,

37 Market Street, San Francisco.

FOWLER, Fresno County, Cal., November 4, 1886.

MESSES. BATCHELOR & WYLIE—Gentlemen: I thoroughly tested your Roller Drill last year, and it is with pleasure I report the result. I sowed a portion of the land with grain from the plow, covering it in the ordinary way; another portion was sowed upon the plowed ground and covered as thoroughly as possible by cross harrowing; another portion was sown with your Roller Drill, using only about TWO-THIRDS as much seed per acre as was sown on the other pieces, and I can safely say, that sown with the Roller Drill produced at least twice as much as that sown the other way.

JAMES M. ROBERSON.

Booth's Sure Death Squirrel Poison

For Squirrels, Gophers, Birds, Mice, Etc.

Endorsed by the Grange and Farmers wherever used.

The Cheapest and Best.

Put up in 1-pound, 5-pound, and 5-gallon Tins.

Every Can Warranted.

This Poison has been on the market less than two years, yet in this short time it has gained a reputation of "Sure Death," equaled by none. By its merits alone, with very little advertising, it is now used extensively all over the Pacific Coast, as well as in Australia and New Zealand.

SEND FOR TESTIMONIALS.

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Special Terms on Quantities in Bulk.

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For Sale by all Wholesale and Retail Dealers.

TO FRUIT GROWERS, FRUIT SHIPPERS, CANNERIES, ETC.

The **ALLEGRETTI GREEN FRUIT TREATMENT and STORAGE SYSTEM COMPANY** announce that they are now ready to store and treat all kinds of Green Fruit, Vegetables, and other Perishable Articles, on Storage System, by the week, month, or for shipment East.

This system is well known among fruit-growers, its power of preserving fruits, etc., in a fresh state, having been fully demonstrated with most satisfactory results.

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DECKER BROS., the Artist's Piano.

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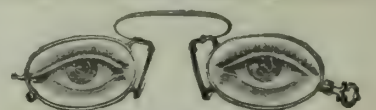
WE BUY FOR CASH and "Take our Pick."

We can suit all purses and tastes.

We guarantee every instrument, backing it with a guarantee, if necessary, of \$50,000.

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Send for Illustrated Catalogue and Price Lists, free.

Fun and Flirtation Cards and
Book of finest Sample Cards ever offered, with Agents Outfit for 2 cts. A. B. HINES, CADIZ, OHIO.

The Pears Which Were Lost.

EDITORS PRESS:—In your last issue I read a letter by Mr. W. C. Blackwood. Perhaps I did not express myself right (as I am not master of the English language) when I said that the fruit was not "marketable." When he sent it to me I stated in conversation that in handling the fruit two or three boxes were broken and some of the fruit fell out on the floor, when I discovered that a great many were very small, rusty and not very fine-looking pears; some were rotten in the center of the boxes.

I also stated that the fruit was not packed according to the instructions of my circular. The boxes were large and closed tight. I did not open the boxes nor examine them when they came. I stored them away just as they came, though I saw from some small cracks on the top of the covers that there were yellow pears among the green ones, and I called the attention of Mr. S. Heywood and some other party who was present, to the fact of my observation. I also told Mr. Blackwood when he came to order them to the market. I showed him just the same way where I saw from the little cracks of many boxes, and pointed out where the yellow pears could be seen.

Bartlett pears are the most difficult fruit to keep, and when once they have turned little yellow you cannot preserve them any length of time. I am really very sorry that Mr. Blackwood has sustained such loss.

By the bearer I will send you a box of fruit, among which you will find Bartlett pears of the first crop and other kind of fruit which I have kept some two months, and others over that length of time, and they have been long out of market. I desire you to examine and judge how they have been preserved and if they are marketable.

I. ALLEGRETTI.

West Berkeley, Cal.

[We examined the fruit closely. We found the Bartlett pears of good fresh color, flesh firm and of excellent flavor, with just a sign of breaking down at the core. The plums were very good indeed, and were quickly eaten up by the bystanders. The yellow cling peaches were good-looking on the outside and firm to the touch, but on cutting open the flesh was found to be of light chocolate color. A yellow freestone peach was good inside and out and of good flavor. Mr. Allegretti claims that his experience has taught him that each fruit has its proper period of life under storage. He says a cling peach will keep in first-class condition four or five weeks; after that it apparently begins to extract color from the pit and the flesh becomes dark and loses flavor, although its texture does not break down. A freestone peach will keep in good condition longer than a cling. He says the period during which each fruit will retain first-class condition varies, and must be learned by experience. The preservation of the samples brought us seemed remarkable, considering the length of storage, being, as stated by Mr. Allegretti, two to two and a half months.—EDS. PRESS.]

From Northern Solano.

EDITORS PRESS:—The north wind has been blowing about two weeks, and everything is as dry and dusty as can be. The atmosphere is so full of smoke that a person cannot see any distance to speak of. A shower of rain would be welcome to everybody, except a few who have grapes out to dry.

Fruit shipping is about done for this season. A few who sent grapes East the last month have lost money. One gentleman who lives near here was East on a visit lately, and says he saw California grapes in almost every market, and they were retailed at from 15 to 25 cents per pound. These prices give somebody a much larger profit than the grower gets.

Dried fruit is not so high as it was awhile ago. One man here has about 14 tons of apricots, for which he has offered 16 cents per pound. Now he can get but 12½ cents. Another was offered 14 cents for unpeeled peaches and 24½ cents for peeled. Now they will not bring near that figure. It seems as if people ought to know that the prices paid for dried fruit were too high; poor folks could not afford to buy, and there was a great deal more than would supply the rich ones. To make a grand success of selling California fruit, either green or dried, in the Eastern markets, it must be sold at a price which laboring people can reach, and this can be done with a profit to all who handle the fruit if they do not want to get rich too fast.

Agents from the city canneries have been buying Muscat grapes here, paying \$20 per ton, the grapes to be shipped in large boxes.

A great many new buildings are going up in Vaca valley. The Broughton ranch was sold at auction last Saturday in small lots. A large crowd was in attendance, about 300 coming up on the excursion train from Oakland. The prices brought were satisfactory, running from \$70 to \$300 per acre. Some stock was sold. Horses went high, but cattle went low.

Most of our roads are summer-fallowed, and the roadmaster is busy plowing the rest as fast as he can. There is a large amount of summer-fallow between Vacaville and Winters, and 20 or 30 big teams are at work putting in grain.

Vacaville, Oct. 24th.

Contra Costa Fair Awards.

Awards for exhibits of live-stock, farm and orchard products, etc., were made at the recent Concord Fair as follows:

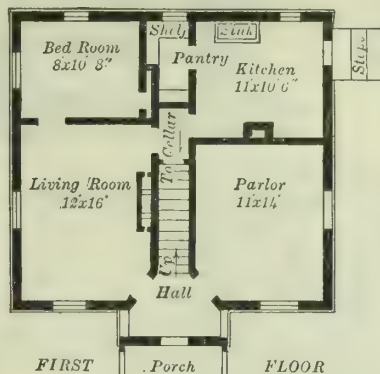
HORSES.

THOROUGHbred—2-yr-old and over, stallion "Lame Deer," B. S. Clark.

DRAFT—2-yr-old mare "Queen Bee" and colt, "Concord Sun," J. Cantua; 4-yr-old and over stallion "Vienot," R. R. Veale; 2d, "Tornado," Philip Wells; 1-yr-old mare, "Queen," C. V. Smith; 2-yr-old do, "Susie," and 3-yr-old "Kittie," A. Christy.

ROADSTERS—Best 2-yr-old stallion, "Coachman," Wm. Meese; 2d, Admiral Jr., W. L. McDonald; 3-yr-old mare, "Lulu," J. E. Durham; 2d do, "Leota," W. Lynch; single carriage horse, no name, J. D. Dixon; 2d, "Dolly," C. Sharp; 1-yr-old mare "Puss," Seth Cook; 2d do, "Belle," J. Coats; matched span carriage horses, "Blaine and Logan," F. L. Emerson; 2d do, "Eliza and Knox," D. F. Majors; 3-yr-old stallion "Milpitas," S. Sota; 2-yr-old-mare, J. Coats; 2d do, "Silk Stocking," J. Cantua; 1-yr-old stallion "Richards," J. Conway; 2d do, "Dude," Geo. Denking; 4-yr-old mare "Clip," Geo. Stark; 4-yr-old stallion, "Ohio Boy," L. P. Baker; 2d do, "Conductor," N. Clanton; colt "Bonnie Belle," B. S. Clark; span mules "Darkey and Lucy," G. T. Wiles.

SPECIAL PREMIUMS RECOMMENDED—2-yr-old



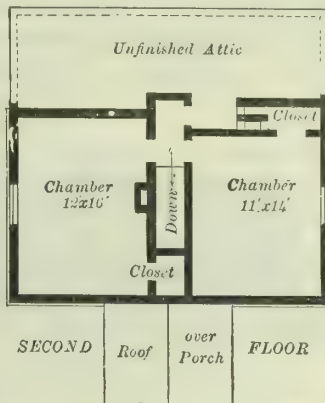
FRONT ELEVATION

Thanksgiving Day.

The following proclamation has been issued by the President:

The goodness and mercy of God, which have followed the American people during the past year, claim their grateful recognition and humble acknowledgment. By His omnipotent power He has protected us from war and pestilence, and from every national calamity. By His gracious favor the earth has yielded a generous return to the labor of the husbandman, and every path of honest toil has led to comfort and contentment. By His loving kindness the hearts of our people have been replenished with fraternal sentiments and patriotic endeavor, and by His unerring guidance we have been directed in the way of national prosperity.

To the end that we testify our gratitude for these blessings, I, Grover Cleveland, President of the United States, do hereby designate Thursday, the 24th day of November next, as a day of thanksgiving and prayer, to be observed by all the people of the land. On that day let all secular work and employment be suspended, and let our people assemble in their accustomed places of worship, and with prayer and songs of praise, give thanks to our Heavenly Father for all that He has done for us, while we humbly implore the forgiveness of our sins and the continuance of His mercy. Let families and kindred be reunited on that day, and let their hearts with kindly cheer and affectionate reminiscences turn in thankfulness to the source of all their pleasure, and



SIDE ELEVATION

DESIGN FOR A SMALL COTTAGE.

gelding, "Ridgway," Seth Cook; 3-yr-old "Gipsy Queen," S. Soto.

CATTLE.

HOLSTEINS—All premiums to W. Hawes.

POLLED ANGUS—All premiums to Seth Cook.

GRADED—3-yr-old bull, E. W. Williams.

SWINE.

POLAND CHINA—All premiums to I. J. Smith.

BERKSHIRE AND ESSEX—A. L. Foote, all premiums.

FRUITS, VEGETABLES, ETC.

Best collection fruits, do. apples, do. 6 var. apples, coll. pears, 6 var. pears, quinces, coll. almonds, Theo. Wagner; 2d coll. apples, Mrs. Lohse; 2d quinces, P. Wells; coll. table grapes, R. Hastie; 2d, P. Wells; 2d almonds, S. A. Sillers; coll. wine grapes, R. C. Terry; 2d, J. Gambis; watermelons, P. Wells; jellies, dried fruit, 2d canned fruit, Theo. Wagner; canned fruit, canned peaches, Mrs. A. Boss; canned grapes, J. Cantua.

Mangel Wurtzel, Theo. Wagner; sk. potatoes, exh. corn, Lima beans, J. D. Dixon; thrashed barley, I. Pacheco; 2d, B. Pacheco; thrashed wheat, E. W. Williams; 2d, C. Thompson; pumpkins, H. H. Whitman.

Red wine, E. B. Smith; white wine, Dr. M. Bollman; old wine, R. Hall.

Coll. house plants, Theo. Wagner; 2d do. bouquets, geraniums, R. Hall; 2d bouquets, dahlias, Elsie Gambis.

A Neat Little Cottage.

Perhaps some of our readers who wish to build small cottages can take a hint from the designs which we give on this page. The plan is certainly neat and affords much room for the money which the construction would require. The sketches make the design fully intelligible, and will give all the data needed by the carpenter to make out his bill of materials and construct the cottage. In most parts of this State, the climate is such that the cost can be further reduced by putting in one chimney instead of two. The design is taken from the census of 1880, and is one of a number of styles of cottages provided for their operatives by the Willimantic Linen Co. of Connecticut.

Giver of all that makes the day glad and joyous, and in midst of our pleasure and our happiness, let us remember the poor and needy and unfortunate, and by our gifts of charity and ready benevolence, let us increase the number of those who with grateful hearts shall join in our thanksgiving.

In witness whereof I have set my hand and caused the seal of the United States to be hereunto affixed. Done at the city of Washington this 25th day of October in the year of our Lord 1887, and of independence the 112th.

GROVER CLEVELAND.

By the President.

THOMAS F. BAYARD, Secretary of State.

By the Governor.

SACRAMENTO, Oct. 20.—Governor Waterman to-day issued the following proclamation:

For the many blessings the Almighty, in His infinite mercy and wisdom, has showered upon the people of California during the past year, and in view of the great prosperity that has attended all the great interests of the State, I hereby appoint Thursday, November 24, 1887, as a day of thanksgiving and prayer, upon which day I invite the people to forego all business and assemble in their respective places of worship for the purposes above indicated.

A Statue of Lincoln.

A bronze statue of Abraham Lincoln was unveiled at Chicago Oct. 22d, in the park which bears his name, in the presence of 5000 spectators, and with circumstances of peculiar interest. The covering was withdrawn by little Abe, son of Robert Lincoln, and grandson of the great emancipator.

After T. F. Withrow, one of the trustees of the Bates fund which paid for the statue, had formally presented it to the Lincoln Park Board, and W. C. Goudy had responded, an oration was delivered by Hon. Leonard Swett, who was an intimate associate, both politically and personally, of the martyr President. In speaking of the character of Lincoln, he said:

"He was emphatically a child of the Republic and the product of our institutions. He was of the people and was the people's.... His character was that of greatness and extreme simplicity.... He never in his life got the better of his fellow-man in a trade, and never loaned money on interest. I never knew

him but once to borrow money or give him.... The sublime and crowning characteristic of Mr. Lincoln was his self-reliance. During the 11 years I was with him at the bar of this State, I never knew him, in the preparation of a trial or the perplexity of it in court, to turn to his associate and ask his advice."

With reference to his re-election to the Presidency, Mr. Swett remarked:

"I believe he desired the second nomination, because that involved an approval by the common people (whom he always loved and confided in) of the course which he had taken. Yet he would do nothing and would allow no friend to do anything to get it. He looked with indifference over the machinations against him in his Cabinet, and with indifference over the Senate and Members of Congress to the action of the common people, as expressed in their preliminary conventions and resolutions of State Legislatures, as though an electric chord of sympathy extended from him to them."

The orator also mentioned, as a remarkable and useful trait in Lincoln's character, that mental equipoise which is not to be disturbed by anything nor turned aside from its chosen pathway.

"Although prosecuting the war simply from a sense of duty, and not from a belief in its success, yet he kept right on and was never depressed by disasters nor elated by success. He seemed to comprehend the magnitude of the contest in which he was engaged more thoroughly than any one. In short he was the strong man of the contest, and the great man at Washington learned to gain renewed courage from his calmness, to lean upon his great arm or support."

"DON'T YOU WORRY."

How Shrewd Business Men Have Solved a Great Problem.

"Is there a fatality among our prominent men?" is a question that we often ask. It is a question that perplexes our leading medical men, and they are at a loss to know how to answer it.

We sometimes think that if the physicians would give part of the energy to the consideration of this question that they give to combating other schools of practice, it might be satisfactorily answered.

The fights of "isms" remind us often of the quarrels of old Indian tribes, that were only happy when they were annihilating each other.

If Allopathy makes a discovery that promises good to the race, Homeopathy derides it and breaks down its influence. If Homeopathy makes a discovery that promises to be a boon to the race, Allopathy attacks it.

It is absurd that these schools should fancy that all of good is in their methods and none in any other.

Fortunately for the people, the merit which these "isms" will not recognize is recognized by the public, and this public recognition, taking the form of a demand upon the medical profession, eventually compels it to recognize it.

Is it possible that the question has been answered by shrewd business men? A prominent man once said to an inquirer, who asked him how he got rich, "I got rich because I did things while other people were thinking about doing them." It seems to us that the public has recognized what this fatality is, and how it can be met, while the medical profession have been wrangling about it.

By a careful examination of insurance reports we find that there has been a sharp reform with reference to examinations (and that no man can now get any amount of insurance who has the least development of kidney disorder), because they find that sixty out of every hundred in this country do, either directly or indirectly, suffer from kidney disease. Hence, no reliable company will insure a man except after a rigid urinary examination.

This reminds us of a little instance which occurred a short time ago. A fellow editor was an applicant for a respectable amount of insurance. He was rejected on examination, because, unknown to himself, his kidneys were diseased. The shrewd agent, however, did not give up the case. He had an eye to business and to his commission, and said: "Don't you worry; you get a half dozen bottles of Warner's safe cure, take it according to directions, and in about a month come around, and we will have another examination. I know you will find yourself all right and will get your policy."

The editor expressed surprise at the agent's faith, but the latter replied: "This point is a valuable one. Very many insurance agents all over the country, when they find a customer rejected for this cause, give similar advice, and eventually he gets the insurance."

What are we to infer from such circumstances? Have shrewd insurance men, as well as other shrewd business men, found the secret answer to the inquiry? Is it possible that our columns have been proclaiming, in the form of advertisements, what has proved a blessing in disguise to millions, and yet by many ignored as an advertisement?

In our files we find thousands of strong testimonials for Warner's safe cure, no two alike, which could not exist except upon a basis of truth; indeed, they are published under a guarantee of \$5000 to any one who will disprove their correctness, and this offer has been standing, we are told, for more than four years.

Undoubtedly this article, which is simply dealing out justice, will be considered as an advertisement and be rejected by many as such.

We have not space nor time to discuss the proposition that a poor thing could not succeed to the extent that this great remedy has succeeded, could not become so popular without merit even if pushed by a Vanderbilt or an Astor.

Hence we take the liberty of telling our friends that it is a duty that they owe to themselves to investigate the matter and reflect carefully, for the statements published are subject to the refutation of the entire world. None have refuted them; on the contrary, hundreds of thousands have believed them and proved them true, and in believing have found the highest measure of satisfaction, that which money cannot buy, and money cannot take away,

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

HORSES AND CATTLE.

E. J. TURNER, Hollister, Breeder of Percheron-Norman registered Horses and Roadsters.

SETH COOK, Danville, "Cook Farm," Contra Costa Co., breeder of Aberdeen Angus, Galloways and Devons (Registered). Young stock for sale.

PETER SAXE & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 16 years, of every variety of Cattle, Horses, Sheep and Hogs.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

BRADLEY RANCH, San Jose, Cal., breeder of recorded thoroughbred Shorthorn Cattle. A choice lot of young stock for sale.

J. R. ROSE, Lakeville, Sonoma Co., Cal., breeder of Thoroughbred Devons, Roadsters and Draft Horses.

THE BEST HERD OF JERSEYS, all A. J. C. C. registered, is owned by Henry Pierce, San Francisco.

H. W. COWELL, Stockton, "Morrano Farm," breeder and importer (and agent for Leonard Bros., Mo.) of Aberdeen and Galloways. Young stock for sale.

J. A. BREWER, Centerville, Alameda Co. Short-horn Cattle and Grades. Young stock for sale.

T. E. MILLER, Beecher, Ill. Oldest and best herd Hereford Cattle in U. S. Cattle delivered in California.

COTATE RANCH BREEDING FARM, Pages Station, S. F. & N. P. R. R. P. O., Penn's Grove, Sonoma Co., Cal. Wilfred Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

W. J. MARSH & SON, Dayton, Nevada. Registered Shorthorns of choicely bred strains.

H. van der STRATEN, Hopland P. O., Durham Valley Farm, Mendocino Co., breeder of Shorthorn Cattle (registered). Young stock for sale.

J. H. WHITE, Lakeville, Sonoma Co., Cal., breeder of Registered Holstein Cattle.

R. J. MERKELEY, Sacramento, breeder of Norman, Percheron Horses and thoroughbred Shorthorn Cattle.

M. D. HOPKINS, Petaluma, Cal. Eastern Imported registered Shorthorn Bulls and Heifers for sale.

POULTRY.

E. C. CLAPP, South Pasadena, Cal. Light Brahmas (Williams-Foot stock), Plymouth Rocks (Kieffer-Conger stock). Fowls and Eggs in season. No circulars; write for wants.

R. G. HEAD, Napa, Cal., breeder of the choicest varieties of Poultry. Each variety a specialty. Send for new Catalogue.

MRS. M. E. NEWHALL, San Jose. White and Brown Leghorns, Langshans, Plymouth Rocks, Light Brahmas, Pekin Ducks and Bronze Turkeys.

JAS. T. BROWN, 18 Georgia St., Los Angeles, Cal. Breeder of Thoroughbred Poultry of the leading varieties. Send for circular and price list.

THOS. WAITE, Perkins, Sacramento Co., importer & breeder of thoroughbred fowls of all leading varieties.

W. C. DAMON, Napa, \$2 each for choice Wyandottes, Leghorns, Lt. Brahmas, Houdans. Eggs, \$2.

PIEDMONT POULTRY YARDS, J. N. Lund, Box 116, Oakland, Cal.

THE PACIFIC INCUBATOR CO., 1817 Castro St., Oakland, Cal., manufacturers of the Pacific Incubator and Brooder, agency of the celebrated Silver Finish Galvanized Wire Netting, the Wilson Bone and Shell Mill, etc. Every variety of Land and Water Fowls. The Pacific Coast Poultryers' Hand Book and Guide; price, 40 cents. Send 2-cent stamp for Illustrated 60-page Circular.

T. D. MORRIS, Sonoma, Cal. Toulouse and Embden Geese, Bronze and W. Holland Turkeys, and all leading varieties of Thoroughbred Poultry.

O. J. ALBEE, Lawrence, Cal., breeder and importer.

D. H. EVERETT, 1616 Larkin St., S. F., importer and breeder of Thoroughbred Langshans and Wyandottes.

CALIFORNIA POULTRY FARM, Stockton, Cal.; send for illustrated and descriptive catalogue, free.

SWINE.

L. L. DICKINSON, Lone Oak Farm, Sonoma, Tuolumne Co., Cal., breeder of thoroughbred Essex Hogs. Pigs now ready for sale. Prices reasonable.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal., breeder of thoroughbred Berkshire and Essex Hogs.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poland-China and Berkshire Pigs. Circulars free.

SHEEP AND GOATS.

R. H. CRANE, Petaluma, Cal., breeder and importer. South Down of Long John Wentworth herd for sale.

KIRKPATRICK & WHITTAKER, Knight's Ferry, Cal., breeders of Merino Sheep. Rams for sale.

L. O. SHIPPEE, Stockton, Cal., importer and breeder of Spanish Merino Sheep, Durham Cattle, Jacks and Jennys & Berkshire Swine. High graded rams for sale.

E. W. WOOLSEY & SON, Fulton, Cal., importers & breeders of Spanish Merino Sheep; ewes & rams for sale.

F. BULLARD, Woodland, Cal., importer and breeder of Spanish Merino Sheep. Premium band of the State Choice bucks and ewes for sale.

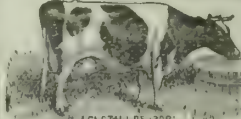
J. E. HOYT, Bird's Landing, Cal., importer and breeder of Shropshire Sheep; also breeds cross-bred Merino and Shropshire Sheep. Rams for sale.

IMPORTANT!

That the public should know that for the past Sixteen Years our Sole Business has been, and now is importing (Over 100 Carloads) and breeding improved Live Stock—Horses, Jacks, Short Horns, Ayrshires, and Jerseys (or Alderneys) and their grades; also, all the varieties of breeding sheep and Hogs. We can supply any and all good animals that may be wanted, and at very reasonable prices and on convenient terms. Write or call on us. PETER SAXE and HOMER P. SAXE. San Francisco, Cal., Oct. 22, 1886. PETER SAXE & SON, Lick House, S. F.

HOLSTEIN-FRIESIANS, CLYDESDALE, FRENCH COACH AND HAMBLETONIAN HORSES.

LAKE-SIDE STOCK FARM has



The only Cow that has given 26,021 lbs. 2 ozs. of milk in a year.
The only four-year-old that has given 23,602 lbs. 10 ozs. in a year.
The only two-year-old that has given 18,434 lbs. 13 ozs. in a year.
The only herd of mature cows that has averaged 17,166 lbs. 1 oz. in a year.
The only herd of two-year-olds that has averaged 12,465 lbs. 7 ozs. in a year.
The only two-year-old Holstein-Friesian that has made 21 lbs. 10 1/2 ozs. of butter in a week.

Fifty-two cows in this herd averaged 20 lbs. of butter in a week. 100 cows and heifers in this herd averaged 17 lbs. 1 1/2 ozs. of butter in a week. Over 100 cows in the Advanced Registry. Fine studs of choice highly-bred Clydesdales, French Coach and Hambletonian Horses. Send for Catalogue giving full records and pedigrees. In writing always mention PACIFIC RURAL PRESS.

SMITHS, POWELL & LAMB, Syracuse, N. Y.

HOLSTEIN & JERSEY CATTLE

Heifers in Calf in such grand bulls as Netherland Star, Clifden Prince (Holstein) and Ashantee's Sultan (Jersey) for sale at reasonable prices. Also POLAND-CHINA and BERKSHIRE PIGS.

POULTRY—All Varieties.

WRITE TO

WILLIAM NILES,
Los Angeles, Cal.



Redwood Duke. 13.368.

IMPORTED BERKSHIRES.

Prize winners at all the Fairs in California, and entire list of sweepstake premiums at State Fair, 1886. Importations made direct from England every year from the most noted breeders, selected from the best blood and most fashionable families of D's-faced Berkshires, regardless of cost, and all recorded in English and American Berkshire records. Young pigs from these importations, male and female, from different families, for sale at reasonable prices, and every pig guaranteed. Address, ANDREW SMITH, Redwood City, or 218 California St., San Francisco.

AUCTION SALE

Standard Trotting Brood-Mares,

COLTS AND FILLIES,

Bred by G. VALENSIN,
ARNO STOOK FARM,

MR. R. B. MILROY,

TO BE SOLD

Wednesday, November 2, 1887,

AT 11 A. M., AT

BAY DISTRICT TRACK,
SAN FRANCISCO.

The young animals are chiefly the get of Sidney, son of Santa Claus and weaness. They include near relations to the great young stallions Valensin and Shamrock. Also colts and fillies by Buccaneer and Crown Point. They are decidedly the most superior lot of standard colts ever offered in California.

Catalogues giving full pedigrees and interesting facts as to performances of colts and progenitors may be had at Nevada Stables, No. 1336 Market St., or of

KILLIP & CO., Auctioneers,
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CHILD'S CARBOLCRYSTAL SHEEP DIP.

"Patented in Europe and America."



A positive scab cure. A liquid, soluble in cold water. It is absolutely non-poisonous. The cheapest and most effective dip on the market, one gallon making one hundred gallons of wash.

Price, \$1.25 per gallon.

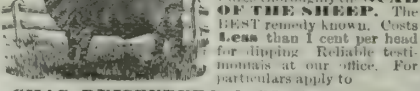
Special discounts and terms to agents and large consumers. For samples and other information apply to

LYNDE & HOUGH, Agents for Pacific Coast,
116 California St., San Francisco, Cal.

Italian Sheep Wash.

EXTRACT OF TOBACCO.

Free from Poison.



Cures thoroughly the SCAB OF THE SHEEP. The BEST remedy known. Costs less than 1 cent per head for dipping. Reliable testimonials at our office. For particulars apply to

CHAS. DUSENBERG & CO., Sole Agents,
No. 314 Sacramento St., San Francisco.

AGENTS LOOK HERE

and farmers with no experience make \$2.50 an hour during spare time. J. V. Kenyon, Glens Falls, N. Y., made \$1500 in 40 days. \$76.50 one week. So can you. Proof and catalogue free. J. E. SHEPARD & CO., Cincinnati, O.

Percheron Horses,

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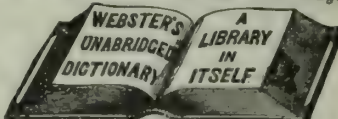
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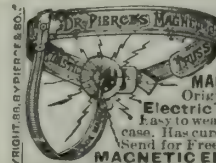
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The Chico Enterprise tells how a nuisance was abated in that place a few days since, thus: The nerviest little damsel in the burg was the one who rose in her wrath the other evening and administered a deserved chastisement to a swell loafer and masher, that shamed the men and will prove a warning to mashers here for a while.

A young lady well known in society circles, pretty, bright and a belle, was promenading with a young lady friend on Main street the other afternoon, when they were accosted by a well-dressed, handsome drummer, who has been hanging around the city for a month past. The soundrel smiled, tipped his hat and wished them good day. The indignant ladies turned and abruptly left him; but far from being abashed the bold young man resumed his undesired attentions again in the evening, and was again crushed by the now thoroughly aroused ladies. They consulted with each other and resolved that at the next attempt they would seek redress. Well, they did, and in a manner that the dude loafer will not soon forget.

He was sitting in front of the Union hotel with four or five boon companions, relating with great glee his numerous catches and also that he had a couple of Chico fair maids on his string. A few minutes after the ladies appeared. "Now boys," he said, "watch me catch them." They had passed and were about ten feet away, when he called out: "Ah, there, sweetness! Yes, pet." At the first word, the handsomer of the two ladies turned and started toward him. Thinking the conquest completed, he rose to meet her, when—one, two, three—he received three straight blows in the face from a dainty little fist, that sent him sprawling over the chair. "Take that, and that, you contemptible cur," exclaimed the lady, as she laid a riding whip over his head, face and shoulders until the craven coward begged for mercy. Amid the jibes and laughter of the bystanders, he took refuge inside the hotel, and early next morning left the town.

The unanimous sentiment of the community sustains the young lady in her brave action. She is made of the right stuff and deserves credit for the summary way in which she disposed of the blackguard. It was a severe rebuke to the manliness of the men who permitted the thing to occur, and it is time something was being done to fire out all such loafers.

"Oh, had some power the giftie gie us
To see ourselves as ithers see us!"

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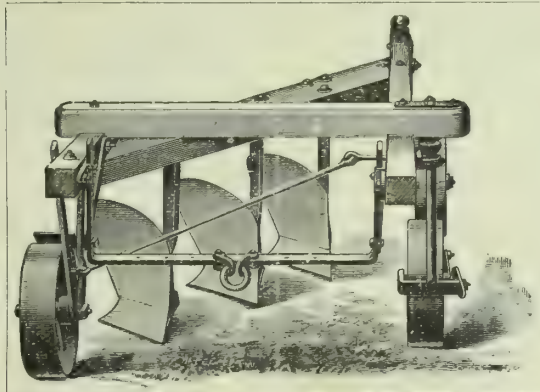
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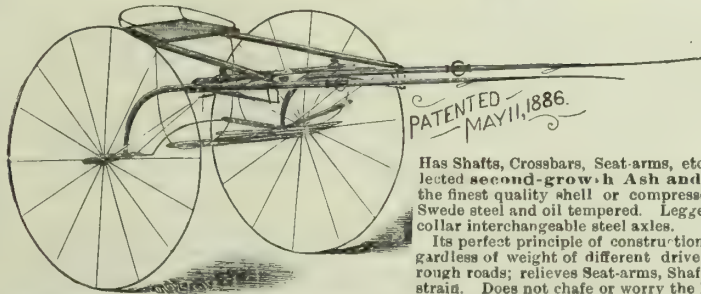
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S. H. MARKET REPORT

NOTE.—Our quotations are for Wednesday, not Saturday, the date the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Oct. 26, 1887.

The past week has witnessed abroad a stronger and advancing market for wheat, under a freer consumptive call and a stronger holding. To-day's cables are as follows:

LIVERPOOL, Oct. 26.—Wheat—Strong. California spot lots, 6s 2d to 6s 5d; just shipped, 3s 9d; nearly due, 3s; cargoes off coast, turn dealer; on passage, advanced about 3d to 6d per qr; French country markets, firm; wheat on passage to Continent, 160,000 qrs; wheat and flour on passage to U. K., 1,519,000 qrs; wheat in Paris, quiet; flour, rather easier.

Foreign Review.

LONDON, Oct. 25.—The *Mark Lane Express*, in its review of the British grain trade during the past week, says: The values of native wheats and country flour are unchanged. Supplies in provincial markets are variable, and prices are steady. The sales of English wheat for the past week were 61,123 quarters at 29s 9d per quarter, against 60,159 quarters at 26s 9d during the corresponding week last year. Trade in foreign wheat is quiet. Supplies of South Russian are arriving freely. Dealings at Liverpool are firmer. Flour is steady and prices are a fraction stronger. Corn is in small supply and values are hardening. Oats, beans and peas show a better tendency. To-day's market was inactive and values were firm. Flour was steady. Corn was strong; prices rose 1s. Oats were 3d to 6d higher. Beans and peas were 6d higher. Lentils were 1s to 2s dearer. Linseed oil was 6d lower.

Eastern Wheat Markets.

CHICAGO, Oct. 26.—Wheat—71½¢ for cash, 71½¢ for Oct., 72¢ for Nov., 73½¢ for Dec., 74¢ for Jan. and 79½¢ for May.

NEW YORK, Oct. 26.—Wheat—85¢ for cash, 83½¢ for Oct., 83½¢ for Nov., 84½¢ for Dec., 85½¢ for Jan. and 89½¢ for May.

California Products in Chicago.

CHICAGO, Oct. 22.—No change of importance is noticed in the California fruit market. Receipts are fair and the demand is pretty good for fruit in good condition. There were more or less grapes in rather bad order offered and these had to be discounted. Choice Tokays brought \$3 to \$3.50 per double crate and Muscats \$2.25 to \$2.50. Fall pears are firm and in good demand at from \$1.75 to \$2.25 per box. The demand for quinces is tame, and only the fine grades are held steady at \$1.40 to \$1.50 for small boxes and \$1.50 to \$1.75 for large.

Transactions in Cal. dried fruits are at present light and unimportant. New raisins are coming in and sell fairly; but in other lines trade is quiet, with moderate offerings and former prices asked. Peaches, sun-dried, in sacks, per lb. 13¢ to 14¢; do, evaporated, in sacks, per lb. 16¢ to 16½¢; do, do, peeled in sacks, per lb. 27½¢; apricots sun-dried, in sacks, per lb. 18½¢; do, evaporated, do, do, in sacks per lb. 15¢ to 17¢; plums, pitted, in sacks, per lb. 13½¢ to 14¢; nectarines, sacks per lb. 15½¢ to 18¢; raisins, loose Muscats, per box, \$2; do, London layers, per box, \$2.20.

Beans are steady and firm. Very few are coming from near by and new beans are being brought forward from California. These are quoted at \$2.07½ to \$2.10 per bushel, to arrive, and some of especially fine quality have been sold at \$2.25 per bushel, laid down here.

California Products in New York.

NEW YORK, Oct. 22.—Dried Fruit—Market continues quiet, with Cal. loose Muscat at from \$2.15 to \$2.20 per box.

Cal. yellow mustard seed, 4¼¢ to 4½¢ per lb.

Eastern Hoo Markets.

CHICAGO, Oct. 22.—Hops are held steady. There is a small trade, but nothing important doing. Stocks consist mainly of Pacific Coast. Pacifics, new crop, choice, 20¢; do, do, medium, 16¢ to 18¢; do, do, 1886, choice, 12¢ to 14¢; do, do, medium, 9¢ to 10¢; Pacifics, 1885, 5¢.

NEW YORK, Oct. 23.—Hops—The demand is light in new Pacifics; the stock is not sufficient in volume to establish prices. Coast crop of 1887, fair to prime, 15¢ to 18¢; 1886, common to good, 8¢ to 12¢; 1885, good to prime, 6¢ to 8¢.

Eastern Wool Markets.

NEW YORK, Oct. 23.—The supply of desirable domestic wools remains well in hand and holders look for an improving tendency. The demand, however, is erratic and stops short when an increase in prices is suggested. Among sales were 50,000 lbs fall Calif. at 19¢ to 21¢, 25,000 lbs Eastern Oregon at 20¢ to 22¢ and 100,000 lbs Territory at 21¢ to 23¢.

The Philadelphia market has ruled quiet, although there has been a large movement in fine fleeces at low prices. Territory wools are plentiful, but the demand for them is light and the market is still inclined in buyers' favor. Among sales were 1000 lbs Territory bucks at 12½¢ and 5000 lbs Territory fine at 18¢.

Boston reports a decline in pulled wools and a drop in scoured. Among sales were 46,000 lbs Calif. spring and Oregon and 13,000 lbs Calif. fall on private terms, and 435,000 lbs Territory at 20¢ to 24¢.

PHILADELPHIA, Oct. 25.—Wool is steady and unimportant.

BOSTON, Oct. 25.—Prices in favor of buyers. Fine Territory, 15¢ to 19¢; medium do, 20¢ to 24¢.

NEW YORK, Oct. 25.—Wool is quiet.

Local Markets.

BAGS—The market for standard Calcuttas is very strong, for both spot and forward delivery.

BARLEY—On Call, trading was, the past week, more active, with slight fluctuations at gradual hardening prices. It is generally claimed that the stock is being concentrated preparatory for an upward move. To-day's sales on Call are reported as follows:

Morning session: Buyer season—100 tons, 99½¢;

100, 99½¢; 100, 99½¢; 400, 98½¢; 100, 98½¢; 400, 98½¢; 100, 98½¢. Buyer 1887—100 tons, 89¢; 100, 88½¢; 100, 88½¢. No. 1 brewing, buyer 1887—100 tons, \$1.13; 200, \$1.13½ per cbl. Afternoon Session: Buyer season—100 tons, 98½¢; 500, 98½¢; 500, 98¢; 300, 97½¢; 800, 97½¢. Buyer 1887—100 tons, 88½¢; 100, 88½¢; 200, 88½¢; 100, 88¢; 100, 88½¢ per cbl.

BUTTER—The market is higher for fresh rolls, although at the close there is a weaker feeling, owing to slightly warmer weather. Pickled and firkin are in good supply, but gilt-edged is scarce.

CHEESE—The market holds to strong prices, under limited receipts and a continued good demand.

EGGS—The market is strong and higher, under light receipts and a good demand.

FLOUR—The market is barely steady, owing to continued free receipts of Oregon and also country brands.

WHEAT—The market on Call has been gaining strength throughout the week, with free transactions reported at slight fluctuations. In the sample market holders are firm, and shippers find themselves unable to buy round parcels of No. 1 white shipping corn at \$1.30, although reported by the daily press at \$1.25. On Call to-day the sales reported were as follows:

Morning Session: Spot—100 tons, \$1.32½. Spot, season's storage paid—100 tons, \$1.33½. December—500 tons, \$1.33. Buyer season—500 tons, \$1.45½; 200, \$1.45½; 1000, \$1.45½; 100, \$1.46. Buyer 1887—100 tons, \$1.35½; 200, \$1.35½ per cbl. Afternoon Session: Buyer season—100 tons, \$1.45½; 500, \$1.45½; 1200, \$1.45½; 200, \$1.45½ per cbl.

[COMMUNICATED.]

Market Information.

Cereals.

The visible supply of wheat on last Saturday was about 23,000,000 bu. less than on the same date one year ago.

Stock of barley in the principal markets of the United Kingdom is reported at 2,032,570 bu. against 1,354,910 one year ago.

It is now generally conceded that the United States and Russia will be the competitors for the European wheat trade this year.

Exports of wheat from India from April 1—the beginning of the crop year—to Oct. 15, were 21,460,000 bu., of which 10,960,000 bu. were to the United Kingdom and 10,500,000 bu. to the continent. The aggregate shipments for the same time last year were 30,312,000 bu.

The Northwestern Miller says that if the figures of competent statisticians and the opinions of astute observers are worth anything, as having a bearing upon the future of the breadstuffs markets, the month of December will witness a substantial advance in prices. So strong a combination of legitimate influence to bring about such a result has not existed for the past five years, yet in that period we have seen prices go as high as the most sanguine can reasonably expect them to go before the holidays. We do not look for a sudden nor for a heavy upward movement, and if it comes before the holidays, the season of dullness always resultant upon their interference with business may be expected to witness a material decline. The bull forces are so thoroughly demoralized as to preclude the idea of a sudden shouldering of wheat stocks, and a balloon-like upward flight in quotations, but those who expect to see present conditions and prices rule in December are likely to suffer grievous disappointment. The procession will move decently and in good order, but it must move, and those who fail to fall into line at the right time will speedily be numbered among the "killed, wounded and missing."

In a leading editorial the *London Times*, just to hand, remarks as follows: A week of genial weather has seen the conclusion of agricultural harvesting in all but the latest North, where on the hills considerable breadths of corn are in shock and there still remain patches to be cut. Autumn cultivation has had a most favorable opportunity; green cropping would grow still better; however, for a renewed douche of rain on at least the Southern and Eastern districts, where the land is yet too dry for the backward vegetation and also for the preparation of satisfactory seed beds for wheat. With a renewal of showery days, the season is just what is required for the forage supplies for the ensuing winter; root crops, cabbages and young seeds grow fast, and the clover plant has not been so generally destroyed by drouth as was at one time feared. The effect of the feed scarcity upon the stock markets still continues disastrous. Store cattle are disposed of at prices quite unprecedented in recent years; store sheep and lambs have been parted with at a decline of 8s or 12s per head below the figures common last year; and only the top quality of mutton realizes improving rates. The drouth has left its mark so deep that we shall not recover from it in a hurry.

W. E. Bear, writing from London under date of Sept. 27, says: At the middle of the current cereal year our Great Britain population will be about 37,500,000, and the consumption at 5½ bu. a head would amount to 206,250,000 bu. The available home supply will be about 64,000,000 bu., and we shall need to import about 142,250,000 bu. This seems to be the closest computation possible at the present time. Those who put our requirements of foreign wheat at less than this reckon the home crop to be larger than I do; but most people have already come down to the estimate I gave a month ago.

The United States' wheat crop of 1887 has been heretofore estimated at 430,000,000 bu., with 115,000,000 bu. available export surplus. The government Department of Agriculture, on October 10, reported a possible crop of 450,000,000 bu. The earlier estimates gave a surplus of 115,000,000 bu., including 25,000,000 from the Pacific Coast, leaving 90,000,000 bu. from Atlantic ports. The surplus is now increased to 110,000,000 bu. from Atlantic ports, of which 40,000,000 bu. have been exported within 14 weeks, leaving 70,000,000 bu. still available for export on October 1. Of this about 15,000,000 bu. will be required, without the United States, on this continent, leaving at this time 55,000,000 bu. available for Europe.

Oregon advises report farmers free sellers of wheat, with a large portion of the Valley wheat bought for San Francisco for milling purposes, and the Eastern Oregon wheat taken for export account. There were, at last advices, quite a number of vessels on

berth loading for Europe, with a still larger number chartered to arrive.

In this State large farmers who have not sold their wheat are reported to be holding for a better market, which is looked for after the turn of the year, if not before. The large tonnage in port disengaged, and a still larger tonnage to arrive, has weakened ships, and at the close it is difficult for iron vessels to get 27s 6d for U. K., against 31s 6d about one month ago. Continued dry weather in this State does no little in causing sellers to hold firm. Although the daily press quotes \$1.25 per cbl the highest figure for strictly No. 1 white shipping, yet it is known that \$1.28½ was bid for a round parcel by a shipper, and refused.

Barley continues to come in freely, notwithstanding which the market rules strong, at current quotations. It is claimed by some that a syndicate has been and is still buying in expectation that a higher range of values will rule soon. This opinion is based on the strong and strengthening market at the East, heavy consumption on this coast and farmers having very little in their granaries.

Eastern corn begins to come in more freely, but as yet it has no marked influence on our market. Californian corn is in light offering, which causes buyers to pay well up to obtain supplies. At the East the market is strong and active.

Buckwheat begins to move more freely, at from \$1.10 to \$1.40.

Rye is quiet, but steady.

Oregon and Washington Territory continue to send us liberal supplies of oats, which keep the market weak, although holders are slow in making concessions, except to save concessions. The quality of this year's crop appears to be better than last year's.

Fruits.

Apples are in heavy receipt, but the demand is large, better, if anything, than last year in this month. The quality, as a rule, is good. The market for the more choice hard keeping is firm, but defective are hard to sell.

Pears are in good supply, with a fair trade call reported.

Strawberries are in good supply, but blackberries are out of market.

Table grapes continue in liberal supply, causing the market to keep down. Choice varieties and good keeping are readily sold, but overripe are placed only at concessions.

Wine grapes keep well up. It is claimed that the hot drying winds a few days since, dried up a very large quantity on the vine. The different wineries are being run to full capacity, which absorbs about all coming to market.

Dried Fruits.

Receipts of dried fruits continue very heavy, causing large operators to bid down for all parcels not coming up to the standard. The demand is free, notwithstanding the heavy purchases made for forward delivery the forepart of the season. The stock of bright sun-dried peaches is light, but off color and uneven cured are in oversupply and only sold at concessions. Prunes continue in active demand, with all well-cured and evenly packed readily placed at full quotations. The market closed very firm. Currants are strong, with a higher range looked for, for the more choice, in sympathy with the improving market abroad, due to heavy purchases by France for the manufacture of cordials. Apricots are stiff.

Feedstuff.

Carrots hold steady at quotations, under a good demand.

Heavy receipts of bran and middlings, chiefly from Oregon, have broken the market, although the large consumption heretofore noted is continued.

Ground barley is steeper.

Hay is still higher, under a good demand and light receipts. The dry weather causes holders to ask more money, which is only met by buyers under protest. The supply in the country to draw from is light.

Hops.

The *London Corn Trade Circular* reports as follows: Now that the hop crop has been secured, calculations can be formed as to the probable supplies that will be required to meet the deficiency that will be experienced in the home wants. The annual consumption of hops in the United Kingdom is supposed to be about 600,000 cwt. The new crop has yielded, according to the estimates, from 390,000 cwt. to 400,000 cwt. so that there is a considerable shortage, even after allowing for the stocks held by the brewers. Toward meeting this deficiency, America will, it is stated, be able to export some 60,000 cwt., which will be considerably less than she exported during the season 1885-6. For the remainder we must look to the Continent, and it is thought that Germany, which will not have to export to America this season, will have a good surplus to ship to England, though nothing like the quantity she was able to spare last year for the American brewers. From Belgium also supplies can be drawn if necessary, but the hops produced in that country are said to be growing in disfavor with English brewers.

In our market trade is still reported light, owing to buyers' views being below sellers'. Some choice were placed at an advance on quotations; they were taken for home consumption.

Live-Stock.

Under continued free receipts, beef cattle and mutton sheep are still in buyers' favor. The quantity offering is unusually large, due to the scant pasture. In milch cows there is nothing to report. Hogs come in more liberally, causing packers to lower their bids. It is claimed that the heavy receipts are due to lessened feed and fears of rains soon. In work horses the market is overstocked, causing low prices to rule. Carriage and driving horses are wanted and find ready buyers at good prices. The former sell at from \$600 to \$1200 per span, and the latter at from \$200 to \$500, and in exceptional cases still higher.

The following are the wholesale rates of slaughtermen to butchers:

BEEF—Extra, 77½¢; first grade, grass fed, 6½¢ to 6¾¢ per lb.; second grade, 5½¢ to 6¢; third grade, 4½¢ to 5¢.

MUTTON—Ewes, 5½¢ to 6¢; wethers, 6 to 6½¢.

LAMB—Spring, 7 to 8¢.

VEAL—Large, 6 to 7¢; small, 6 to 8¢.

PORK—Live hogs, 4¼¢ to 4½¢ for heavy and medium; hard dressed, 6½¢ to 7¼¢ per lb; light, 4¼¢ to

4½¢; dressed, 6½¢ to 7¼¢; soft hogs, live, 3½¢ to 4¢. On foot, one-third less for grain or stall fed, and one-half less for stock running out.

Raisins.

The market for the better grades is very firm, with an active demand ruling. The consumption on this coast is largely increased, with the more choice in better favor, yet as a rule the consumptive demand is chiefly for the medium priced. The West is drawing quite freely, as is the East, where trade wants the better grades. In this market there is a wide range in quotations, due to the difference in the quality. The bulk of the country pack is poorly cured, uneven in color, and being, as a rule, in unattractive packages, is placed with some difficulty. Dealers receiving the indifferent packs report considerable difficulty in placing consignments except at low prices, and even then there is more or less trouble reported.

Vegetables.

Cabbages show a strong tone, with a higher range of values looked for. Tomatoes are without change, although receipts are light. Other summer vegetables are coming in more sparingly, which causes a stronger market.

The receipts of potatoes the past week were very heavy, in excess of market requirements, which caused values to go lower, but at the close a steadier, firmer tone is noted. The quality of this year's crop was never better.

Onions, if choice good keepers, suitable to fill distant orders, find a quick market, but soft are sold at concessions to the local trade.

Miscellaneous.

The tonnage movement compares with last year at this date as follows:

	1887.	1886.
On the way.....	329,596	252,777
In port, disengaged.....	99,072	72,000
In port, engaged.....	10,884	96,018
Totals.....	439,552	420,795

The above gives a carrying capacity as follows: 1887, 709,846 short tons; 1886, 670,144 short tons; showing an increase compared with last year of 61,702 tons.

Wool continues to move off freely at full prices, with extra choice desirable clips fetching a slight advance.

On Tuesday, four vessels were chartered to load wheat for U. K. at 27s 6d. About a month ago 31s 3d was asked.

Turkeys are firmer, at a slight advance. Hens and roosters are weaker, but ducks are higher.

In seeds there is nothing new to report; the demand being slow. Mustard is in good request for shipping to the East.

Honey continues to rule strong under light receipts and a good demand.

San Francisco, October 26, 1887.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Oct. 26, 1887.

BEANS AND PEAS		PAPER SHELL	
Bayo, etc.	1 90 @ 2 25	Brazil	11 10 @
Butter	2 00 @ 2 30	Peanuts	9 @
Red	1 25 @ 2 25	Peanuts	11 10 @
Red	1 40 @ 1 55	Peanuts	10 @ 11
Pink	1 50 @ 1 70	Hickory	7 @ 8
Large White	2 00 @ 2 30		
Small White	2 10 @ 2 40	Burbank	1 00 @ 1 10
Lima	2 10 @ 2 50	Early Rose	50 @ 75
Fld Peas, h. eye	1 00 @ 1 65	Early Cove	— @ —
do green	1 00 @ 1 12	Putnam	— @ —
do Niles	1 25 @ —	Tonnes	— @ —
		River reds	40 @ 60
		Humboldt	— @ —
		do Kidney	— @ —
		Chile	65 @ 90
		do Oregon	— @ —
		Peebles	50 @ 95
		Salt Lake	— @ —
		Sweet	1 10 @ 2

POTATOES

Cal. fresh roll, B.	32 1/2 @ 37 1/2	POULTRY AND GAME	
do Fancy brands	40 @ 42 1/2	Hens, doc.	5 50 @ 8 00
Pickle roll	20 1/2 @ 32 1/2	Roosters	5 50 @ 11 00
Prkin, new	24 @ 26	Broilers	4 00 @ 6 00
Eastern	24 @ —	Ducks, tame	6 00 @ 5 50
		do Mallard	— @ —
		do Sprig	— @ —
		Geese, pair	1 75 @ 2 25
		do Goslings	— @ —
		Wild Gray, doc	— @ —
		Turkeys	10 @ 19
		do Dressed	— @ —
		Turkey Feathers	— @ —
		tail and wing	— @ —
		Snipe, Eng. doc	— @ —
		do Common	— @ —
		Quail	— @ —
		Rabbits	1 00 @ —
		Hares	1 25 @ —
		Venison	— @ —

DAIRY PRODUCTS, ETC.

Cal. fresh roll, B.	32 1/2 @ 37 1/2	POULTRY AND GAME	
do Fancy brands	40 @ 42 1/2	Hens, doc.	5 50 @ 8 00
Pickle roll	20 1/2 @ 32 1/2	Roosters	5 50 @ 11 00
Prkin, new	24 @ 26	Broilers	4 00 @ 6 00
Eastern	24 @ —	Ducks, tame	6 00 @ 5 50
		do Mallard	— @ —
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		Geese, pair	1 75 @ 2 25
		do Goslings	— @ —
		Wild Gray, doc	— @ —
		Turkeys	10 @ 19
		do Dressed	— @ —
		Turkey Feathers	— @ —
		tail and wing	— @ —
		Snipe, Eng. doc	— @ —
		do Common	— @ —
		Quail	— @ —
		Rabbits	1 00 @ —
		Hares	1 25 @ —
		Venison	— @ —

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Pickle roll	20 1/2 @ 32 1/2	Roosters	5 50 @ 11 00
Prkin, new	24 @ 26	Broilers	4 00 @ 6 00
Eastern	24 @ —	Ducks, tame	6 00 @ 5 50
		do Mallard	— @ —

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Oct. 26, 1887.		THURSDAY, Oct. 27, 1887.	
Apples, box com.	40 @ 75	Figs, loose	4 @ 6
do choice	1 00 @ 1 25	Nectarines	10 @ 14
Apricots, lb.	1 50 @ 3 00	do evaporated	18 @ 13
Bananas, bunch	1 50 @ 3 00	Peaches	10 @ 14
Blackberries, ch.	— @ —	do pared	— @ —
Cantaloupes, cr.	— @ —	do evaporated	25 @ 28
Cherries, white	— @ —	Pears, sliced	8 @ 9
do black	— @ —	do qtd.	8 @ 9
do Royal Ann.	— @ —	do evaporated	11 @ 12
Cherry plums	— @ —	Plums, evaporated	13 @ 14
Crabapples	— @ —	do unpitted	3 @ 5
Cranberries	10 @ 11	Prunes	10 @ 13
Currents, ch.	— @ —	do French	11 @ 14
Gooseberries, lb.	— @ —	Zante Currants	8 @ —
Figs, black	— @ —		
do white	— @ —		
Grapes, white	30 @ 55		
do black	40 @ 65		
do Rose Fern	— @ —		
do Muscat	50 @ 75		
do Tokays	1 00 @ 1 75		
Isabel	1 00 @ 1 25		
Wine, Zinfandel	19 00 @ 22 00		
do Mission	15 00 @ 18 00		
Limes, Mex.	4 00 @ 6 50		
do Cal. box	— @ —		
Lemons, Cal. box	— @ —		
do Sicily, box	4 00 @ 6 00		
do Australian	— @ —		
Nectarines, box	— @ —		
Oranges, Com box	— @ —		
do Choice	— @ —		
do Navel	— @ —		
do Panama	— @ —		
Peaches, box	— @ —		
do basket	— @ —		
Crawfords, box	— @ —		
do basket	— @ —		
do choice	— @ —		
Pears, box	50 @ 1 10		
do choice	— @ —		
do Bartlett	— @ —		
Persimmons	— @ —		
Jap. box	— @ —		
Pineapples, doz.	4 00 @ 5 00		
Plums, lb.	— @ —		
Pomegranates, b	— @ —		
Prunes, lb.	— @ —		
Quinces, box	40 @ 70		
Raspberries, ch.	6 00 @ 11 00		
Strawberries, ch.	6 00 @ 11 00		
Watermelons, 100	6 00 @ 12 00		
DRIED FRUIT			
Apples, sliced, lb	6 1/2 @ 7 1/2	do sweet cr.	— @ —
do evaporated	11 1/4 @ 12 1/4	do large box	— @ —
do quartered	12 @ 13	Green Peas, lb.	— @ —
Apricots	9 @ 10	do Sweet Peas, lb.	— @ —
do evaporated	16 1/2 @ 18 1/2	Lettuce, doz.	10 @ —
Blackberries	13 @ 15	Lima Beans, lb.	— @ —
Citron	28 @ 30	Mushrooms, lb.	8 @ 20
Dates	9 @ 10	Rhubarb, box	— @ —
Figs, pressed	6 @ 7 1/2		

List of U. S. Patents for Pacific Coast Inventors.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 250 Market St., S. F.

FOR THE WEEK ENDING OCTOBER 18, 1887.

- 371,659.—RIVETING MACHINE—Matthew Arnold, S. F.
- 371,729.—HAY LOADER—Arnold, Mitchell & Taliaferro, Hueneme, Cal.
- 371,660.—CABLE-RAILROAD CROSSING—E. B. Badlam, S. F.
- 371,666.—PIANO ACTION—V. H. Brown, Portland, Ogn.
- 371,819.—FEATHERING PADDLE—A. H. Carpenter, Stockton, Cal.
- 371,669.—RUBBER-DAM CLAMP—Oliver Carpenter, Oakland, Cal.
- 371,671.—SPlicing CABLES—John Collins, S. F.
- 371,673.—SPIRAL MOLDING MACHINE—J. H. Culver, S. F.
- 371,555.—ANTI-INDUCTION DEVICE—Jas. Curran, Portland, Ogn.
- 371,684.—FRUIT-DRIER—A. J. Hatch, S. F.
- 371,843.—BUILDING AND BRIDGE CONSTRUCTION—P. H. Jackson, S. F.
- 371,844.—BUILDING AND BRIDGE CONSTRUCTION—P. H. Jackson, S. F.
- 371,845.—PAVEMENT, SIDEWALK, ETC.—P. H. Jackson, S. F.
- 371,693.—ANIMAL TRAP—J. S. McKay, Big Oak Flat, Cal.
- 371,696.—ELECTRIC ALARM CLOCK—S. P. Meads, Oakland, Cal.
- 371,711.—HYDRAULIC CONCENTRATOR—F. W. Robinson, S. F.

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FIRES IN STORAGE WAREHOUSES.—In speaking of the danger of fire in furniture storage warehouses, a New York insurance journal calls attention particularly to the hazard offered by the carpets which, during the summer, are stored in such quantities in these buildings. "If a surveyor," it says, "finds greasy rags about a factory, he immediately makes a note of it, and usually grows so nervous about the presence of the little incendiaries that the owner promises never to have another such about the place over night again. Greasy rags are known to be very dangerous; they will condemn almost any risk. Dirty carpets are greasy rags, and when they are rolled up, put in an airy place and well covered over with kindling-wood in the form of light furniture, what wonder is it that they burn up? One of the worst elements of fire hazard known is ever present in furniture storage warehouses, and what is more, it cannot be guarded against."

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PACIFIC COAST WEATHER FOR THE WEEK.

(Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.)

DATE.	Portland.				Red Bluff.			Sacramento.				S. Francisco.				Los Angeles.				San Diego.				
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	
Oct. 20-26.																								
Thursday.....	.00	52	Nw	Cl.	.00	86	N	Cl.	.00	78	SE	Cl.	.00	82	N	Cl.	.00	90	W	Cl.	.00	80	N	Cl.
Friday.....	.00	5	S	C.	.00	86	Nw	Cl.	.00	74	Nw	Cl.	.00	76	Nw	Cl.	.00	92	W	Cl.	.00	80	Nw	Cl.
Saturday.....	.00	4	SE	Fr.	.00	78	N	Cl.	.00	78	Nw	Cl.	.00	79	Nw	Cl.	.00	82	S	Cl.	.00	70	SW	Cl.
Sunday.....	.00		Nw	Cl.	.00	76	N	Fr.	.00	74	Nw	Fr.	.00	72	NE	Fr.	.00	78	SW	Cl.	.00	66	W	Cl.
Monday.....	.00		N	Cv.	.00	76	N	Cl.	.00	78	Nw	Cl.	.00	60	W	Cl.	.00	66	SE	Cl.	.00	66	SW	Fr.
Tuesday.....	.00	54	Nw	C.	.00	72	Cm	Cy.	.03	64	S	Cl.	.00	56	W	Cy.	.00	68	W	Cl.	.00	66	Nw	Cl.
Wednesday.....	.00	58	S	O.	.00	70	S	Cl.	.00	66	SW	Cl.	.00	58	E	Cl.	.00	70	Nw	Cl.	.00	64	N	Cl.
Total.....	.00				.00				.00				.00				.00				.00			

EXPLANATION.—Cl. for clear; Cy., cloudy; Fr., fair; Fy., foggy; — indicates too small to measure. Temperature. Wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

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2. If subscribers order the discontinuance of their periodicals the publishers may continue to send them until all arrears are paid.

3. If subscribers neglect to or refuse to take their periodicals from the office to which they have been directed, they are held responsible till they have settled their bill and ordered their paper discontinued.

4. If subscribers remove to other places without informing the publisher, and the papers are sent to the former direction, they are held responsible.

5. The courts have decided that refusing to take periodicals from the office, or removing and leaving them uncalled for, is prima facie evidence of intentional fraud.

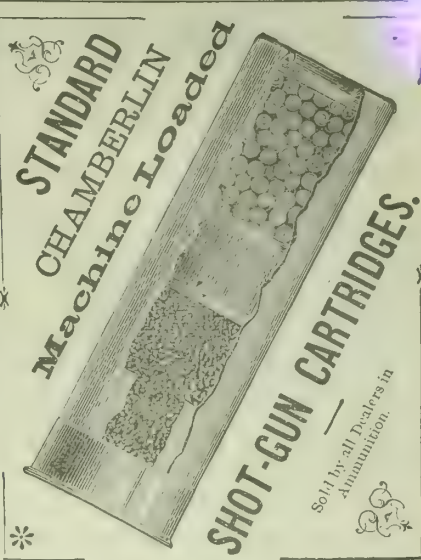
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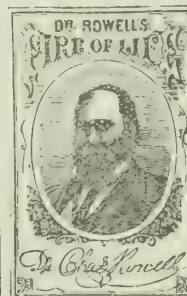
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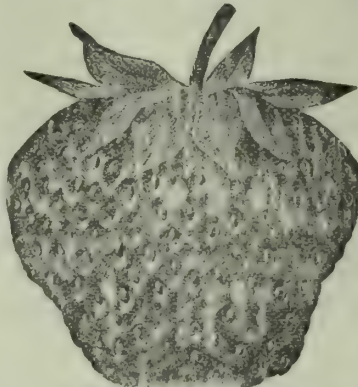
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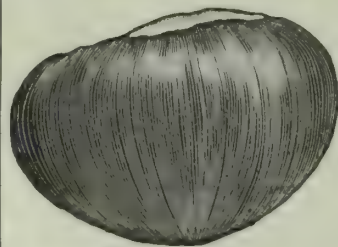
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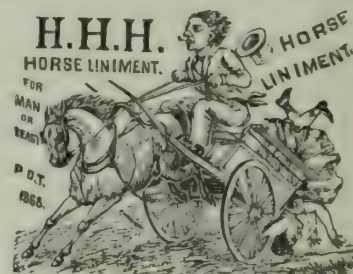
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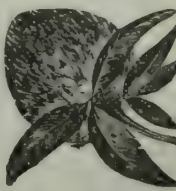
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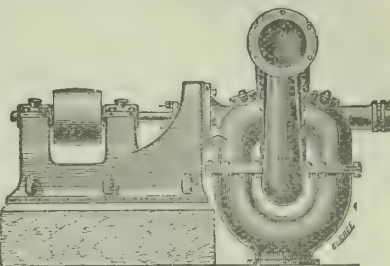
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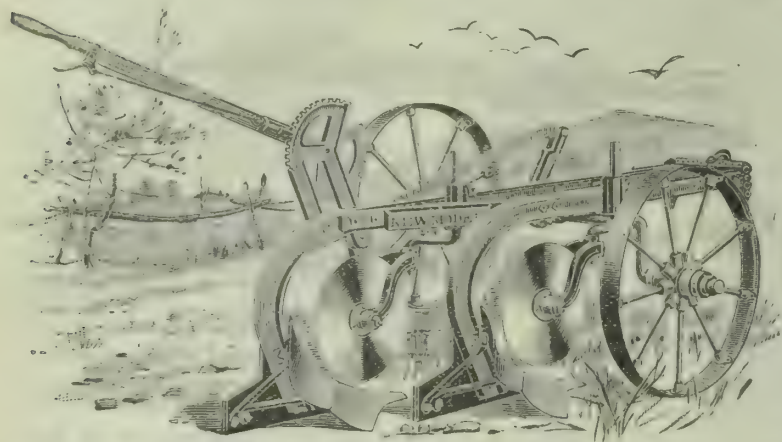
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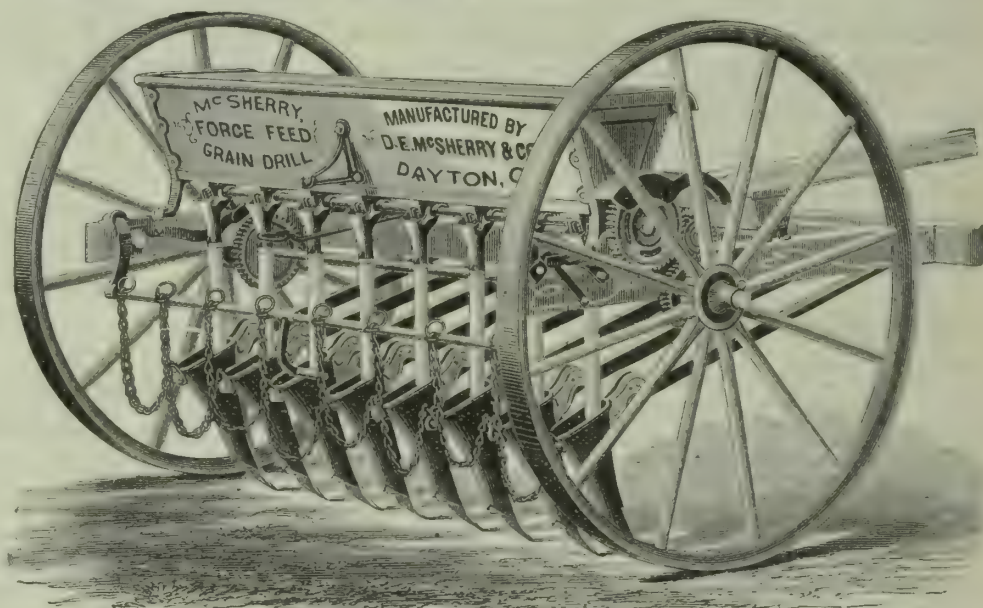
IT CAN BE REGULATED IN A MOMENT to sow any desired quantity per acre, with CERTAINTY of getting that quantity in the ground.

It NEVER CHOKES UP in the feeding arrangement, as is the case with Drills regulated by rendering the discharge openings larger or smaller. It sows EQUALLY WELL ON ALL KINDS OF LAND, hilly or level, and it is immaterial whether the horses are driven fast or slow. This Drill must and does sow the same quantity of seed with each revolution of the feed wheels.

It SOWS ALL THE GRAIN OUT OF THE HOPPER, and with the same evenness and regularity when the last grains are going out as when the hopper is full.

It has High Wheels with Wide Tires, giving great bearing surface on the oil, and enabling the Drill to pass over the loosely pulverized earth lightly.

It has Long Hoes of improved style and shape, with strong, wide, and polished steel points, working well in any soil.

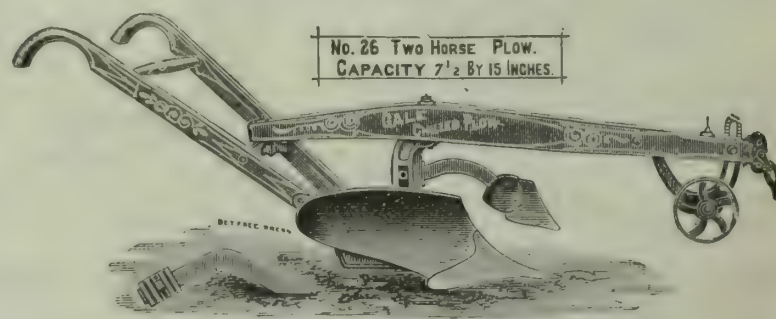


AGRICULTURAL IMPLEMENTS, BUGGIES, CARTS. HARNESS, Etc.

REDUCED PRICES OF GALE CHILLED PLOWS FOR FALL TRADE OF 1887.



WITH SLOPING LANDSIDES.



WITH STRAIGHT LANDSIDES.

No.		Weight.	Price.	No.		Weight.	Price.
32.	Two-horse, Light, General Plow, cuts furrow 6x12 inches,	94 pounds	\$12 50	26.	Two-horse General purpose Plow, cuts furrow, 7x13 inches,	120 pounds	\$13 75
34.	Three " Stubble " " 8x16 " "	29 " "	13 75	27a.	Two " " " " 7 1/2 x 15 " "	120 " "	13 75
35.	One " Garden " " 4x8 " "	51 " "	6 25	28.	Three " " " " 8x16 " "	135 " "	13 75
36.	One " " " " 5x11 " "	71 " "	10 00	31.	Two " Light General " " 6x12 " "	113 " "	13 00
37.	Two " General " " 6 1/2 x 13 " "	108 " "	13 00				
38.	One " Vineyard " " 5 1/2 x 11 " "	66 " "	10 00				

No. 38 Plow is made especially for our California Vineyards.

The above prices do not include Wheel or Jointer.

We are prepared to furnish Steel Points, also Slip Nose Points for Gale Plows.

CAUTION! CAUTION!

We carry a full line of Shares, etc., for these Plows, made by the Gale Manufacturing Company; as much of the success of a plow depends upon the Share, we caution all purchasers of the Gale Plows to be sure to get Shares directly from us or our agents, and not be imposed on by bogus goods.

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PACIFIC RURAL PRESS

TWENTY-PAGE EDITION.

Vol. XXXIV.—No. 19.

SAN FRANCISCO, SATURDAY, NOVEMBER 5, 1887.

\$3 a Year, in Advance.
SINGLE COPIES, 10 CTS.

Rev. Dr. O. C. Wheeler.

We give on this page the portrait of a gentleman who has achieved eminence in several walks of life in this State, and is one of our best-known citizens. We present the portrait and comment upon Dr. Wheeler's work from a different point of view than any of his recent biographers have chosen. We pass beyond his important church and educational work—they have been frequently described—and note his services to the industrial interests of this State, of which, no doubt, most of our readers are unaware. These services were rendered early, just when such services were of the highest importance, and many of those who have come to California during the last 25 or 30 years have never heard of them.

Dr. Wheeler was born in the rich agricultural region of Western New York, and, though he started out at the age of 21 to educate himself for the university, he never lost his liking and interest in the agricultural arts. He came to California in February, 1849, as the first Protestant missionary and built the first Protestant church in San Francisco. His fame as an orator spread fast, and he was selected to deliver the first Fourth-of-July oration ever delivered in San Francisco. Stress of pulpit and platform effort resulted in an affection of the throat which compelled a change of activity for a time. It was then that enterprising and progressive agriculturists began to feel the need of an opportunity to display their products and to acquaint themselves with each other's doings. There had been creditable displays under private enterprise, but the call was for a State Agricultural Fair. This was organized and Dr. Wheeler, though then out of the State but returning to it after an Eastern visit for needed recreation, was chosen Secretary. His work in this capacity for several years is that which we would specially signalize in this brief paragraph. If one will examine the reports of our State Agricultural Society from 1856 to 1860, he will be surprised with the important work done by the society during Dr. Wheeler's term as secretary. Everything was new and strange. There was a most earnest desire to know what was actually true about the California marvels in fruit and in mines. The society appointed "visiting committees," who went from place to place through the State recording the growth of tree and plant and live-stock, the methods employed in their culture, and noting, also, the development and production of the mines. The greater part of this important work was done by Secretary Wheeler, and it was said of him that he had "gone up every tree and gone down every mine in California in pursuit of information." These reports show it. They show the springs of all the greatness we have since attained in our various agricultural industries. Their practical value in extending important cultures at the time, and their historic value as showing what was actually done in those days and by whom, are both well-nigh inestimable. We have read those reports through and through, and the insight

they show into novel conditions, the recognition of factors which have since become of the greatest practical importance, and the discrimination with which the statements were made, have all given us a most sincere respect and regard for the master mind which guided their preparation.

Dr. Wheeler has done greater works since

THE ROUND VALLEY TROUBLE.—For some years past there has been trouble brewing in regard to squatters occupying land within the Round Valley Indian Reservation, and a few weeks since the U. S. authorities took active measures for their removal, and Gen. Howard, under instructions from the War Department, sent Captain Shaw with a de-

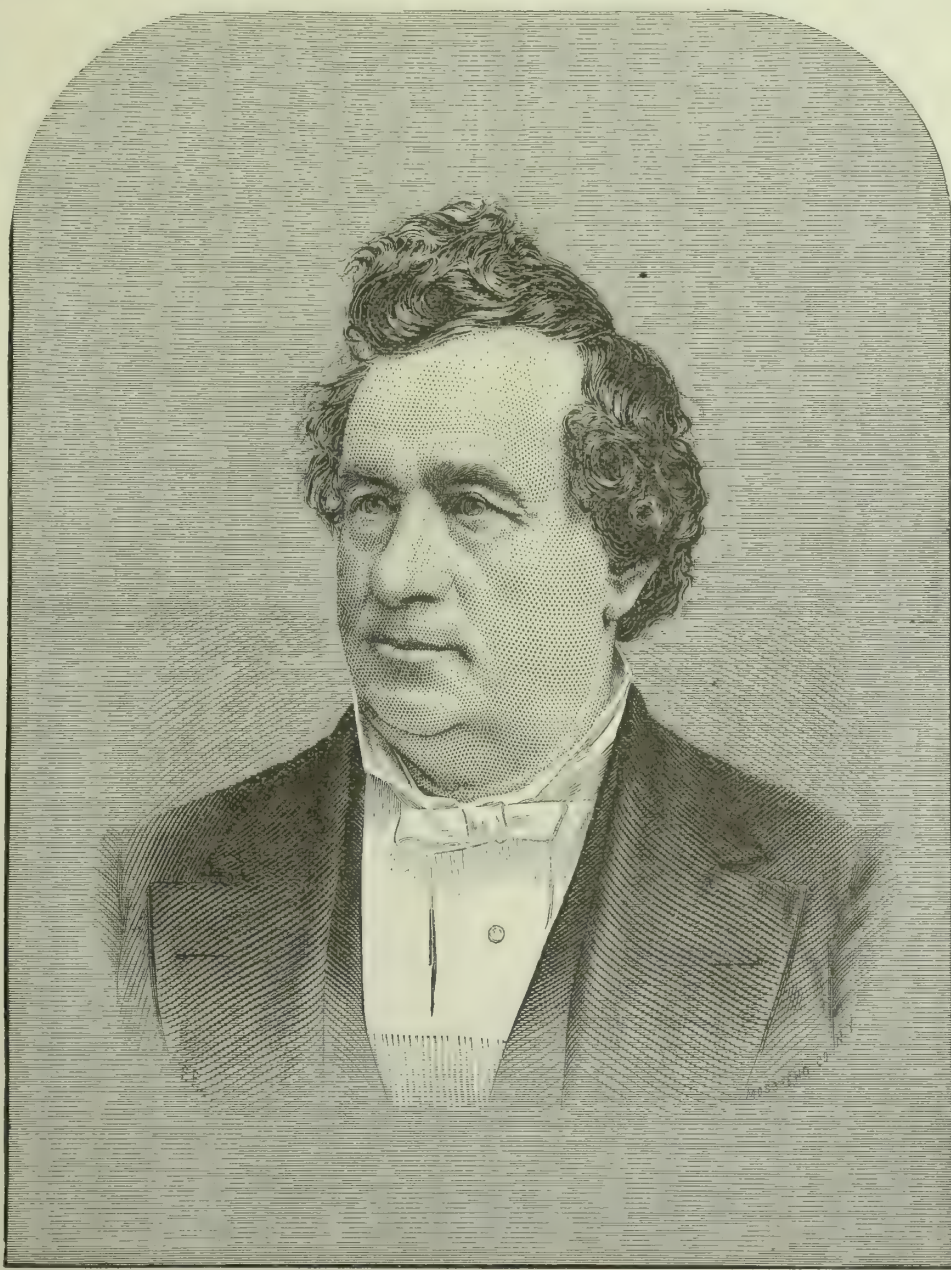
Beet Sugar.

The announcement that a grand beet-sugar enterprise is to be speedily inaugurated in this State naturally has attracted much attention from the farmers of California. It has long been known by the reports of Prof. Hilgard, supplemented by the statements of Prof.

Wiley after his visit to California, that there is a vast area of this coast suited to the production of a good sugar beet. This being the case, there is anxiety on the part of people in the different parts that the enterprise now being planned should be located in their several neighborhoods. To such it will be consolation to know that it is the plan of the projectors of the enterprise to establish perhaps as many as 20 beet sugaries contiguous to areas suited to produce good beets. It will be the function of these local sugaries to work up the beets each of its own district and the crude sugar thus obtained is to be shipped for refining to one large centrally located refinery, where the raw sugar from all parts will be put into marketable form. Each sugarie will then have its outfit for preparing the beet, extracting the juice, and vacuum pans for concentrating the juice and obtaining the raw sugar. At this point the local manufacture ceases and shipment is made to the refinery.

We are assured that this will be the plan, and that it will be in order for those who would like to grow beets to plan toward that end. We suppose it will require joint effort among the farmers in a locality so that the company can be assured that acreage enough will be sown to warrant locating a sugarie. We understand that Mr. Spreckels is desirous of meeting the farmers of other localities, as he has planned to meet the Watsonville people on Saturday of this week, and his chemist is ready to examine and report upon the fitness of any locality. We do not speak by authority in the matter, but such, we understand, is the fact. We shall be glad to have the benefits of the enterprise well distributed, by affording a market for the beets, which can be well grown in many localities, and the plan we have outlined seems to be one way to do it. Of course the field is open for capitalists, or for co-operative concerns to enter the business too, if they are inclined, and they have the assurance of Mr. Spreckels' practical belief in the business, in addition to all that has been already set forth by others. The plan now proposed seems to provide the capital for the factory and a market for the beets, and places upon the farmer only the cost of production. It is to be hoped that the arrangement will work well, and that a price will be set upon the beets which will give growers a good margin of profit.

FOREIGN CONTRACT LABOR.—It is stated that Senator Stanford and a French viticulturist, named Janssen, have entered into a contract, by the terms of which 100 skilled laborers are to be imported from France, to work upon the Senator's ranch at Vina, for \$30 per month and board.



OSGOOD CHURCH WHEELER, D. D., LL. D.

those early days which his biographers love to dwell upon, but in the industrial history of this State his fame is secure upon the results of those few years which perhaps he looked upon merely as recruiting strength for his chosen life-work. Dr. Wheeler is evidently one of those men who can only find rest in action. Fortunately, he has still many years of such life before him. Whatever may be his chief work, he may be trusted to retain his love for agriculture as a calling, and his zeal in promoting it as an industry. A token of these facts may be had in his recent contributions to our columns concerning a very rapidly advancing portion of Arizona.

tachment of troops from the Presidio to eject the trespassers by force, if necessary. Thereupon the Superior Court of Mendocino Co. enjoined the Captain from removing the sheepmen; but he, as under military orders, disregarded the injunction. The sheriff then procured a bench warrant for the arrest of Capt. Shaw for contempt of court, and a collision between the civil posse and the U. S. troops seemed imminent. The threatened conflict has, however, been happily averted by dispatches from Washington, authorizing Gen. Howard to withdraw the soldiers, pending the proposed transfer of the difficulty to the United States courts for settlement.

HORTICULTURE.

California Fruit-Growing in 1887.

The following is the report of Dr. John Strentzel of Martinez, Chairman of Fruit Committee for California, to the American Pomological Society at the biennial meeting for the year 1886-'87. The copy is furnished at our request for publication in the *RURAL PRESS*:

I beg to present a bird's-eye view of the advancement of fruit culture in California. The progress is rapid, owing to the facilities of intercourse by railroad travel spreading broadcast all desired information regarding the unique climate of the Pacific Slope, the richness of its virgin soil and the wonderfully multifarious resources, which attract the accumulations of Eastern capital to be freely employed in building up homes, embellished by all the resources of art, as resting-places for the lucky ones to enjoy life under most pleasing conditions.

With this transference of wealth, the energy of the old settlers is stimulated to substitute the varied fruit industries for the primitive routine of grain-growing. Close study is required in a careful selection of varieties most desirable for popular demand, to supply less favored regions with the most delicious fruits in Pomona's gift. We find the sunny, sheltered spots nourishing citrus fruits, unconfined to the southern part of the State, but extending along the Coast Range and the tributaries of the Sacramento and San Joaquin rivers to the northern boundary of the State, dispelling the old myth of the golden garden of the Hesperides, for our thermal gardens are found on a line of 800 miles, tendering a home to the tree clothed in living green, star-decked and crowned with gold.

Vineyards by the thousand acres now cover slopes formerly used for grazing. The raisin industry is extending with unexampled rapidity, doubling up during last year. Our wine is gaining favor and it is not questionable that sound table wines will be the potent means to reduce the use of ardent spirits and the twin habit in evil, that of tobacco. We find the olive bending under a load of fruit on saplings three to four years from planting.

The mulberry in its silk products, it is hoped will one day, in the near future, rival that of France and Italy.

The process of drying and packing figs, so well adapted to or carried on in small home-steads, is constantly improving and expanding.

Necessity, the great inciter to invention, is converting the fruit of many thousand prune trees to rival the French production.

It was feared that this year's crop of apricots, unusually abundant, would go to waste, but as the season passes we find them all utilized by exporting in the fresh state, by canning, and without enough left to supply demands for the dried fruit.

Owing to the great difficulty of drying pears, luscious Bartlett's crowded the market, and considerable quantities have been wasted; at present they are in short supply and at advancing rates.

Through efforts mainly of Mr. Hatch of Solano the production and dissemination of very choice quality of almonds is assured.

The process of common grafting now recognized as practicable with walnuts will expand nut-growing to a most lucrative industry. The Allegritti process of preserving fruit is gaining recognition, and promises to be the means of protracting the keeping of fresh fruit. By the happy blending of the interest of the grower with that of transportation companies, over-production has been measurably averted by securing daily conveyance at reduced rates. Carloads of our surplus fruit are now distributed to the Eastern markets, finding a ready sale, and the demand is increasing.

It would be idle to enumerate the quantity of work done. If those of great faith and unlimited resources have planted by the thousand acres, there are many thousands by the 10 or 20-acre plantings overtopping the resources of the millionaire and converting individual efforts with the most favorable results to humanity.

The accompanying biennial report of the California State Board of Horticulture offers statistics of reliable value and original essays upon fruit culture.

Shipping Qualities of Kelsey Plum.

EDITORS PRESS:—On page 300, Oct. 15th is one of your very interesting journal, in report of California State Horticultural Society, I notice the following under head of "Kelsey Plum":

A letter was read from H. E. Vanderman, chief of the division of Pomology, U. S. Department of Agriculture, to Prof. Hilgard, in which he spoke very highly of specimens of the Kelsey Japan plum which had been sent to him. They arrived in perfect condition, though sent in a close box by mail.

Two of these specimen plums were sent from Washington to me by Prof. Vanderman. They were received on the fifth day of this month, October. They were received by mail in close box in good condition; measured seven inches in circumference. At this writing, Oct. 23d, one of them is in perfect condition and promises to keep an indefinite time. This is certainly a wonderful keeper. The Kelsey plum has been fruited at several points in Texas. My experience with these specimens has most thorough-

ly proven its value as a shipper. The only trouble we fear in Texas is the early blooming of the Kelsey. This season it was killed in North Texas by the late frosts.

The American Horticultural Society will hold its next meeting in California, I am told. I am to attend this meeting and see the horticultural greatness of your State. J. M. HOWELL, Dallas, Texas.

[Mr. Howell is proprietor of the Dallas (Texas) Nursery and horticultural editor of the Texas Farm and Ranch. We are glad to have his letter and hope he will not fail to visit California.—EDS. PRESS.]

THE IRRIGATOR.

A Question of Water Rights.

EDITORS PRESS:—I would like your opinion, through the columns of the PRESS, of which I am a subscriber, as to what would be the probable decision of a court of justice on water rights under the following conditions:

First, the water consists of springs which rarely ever flow off my land (it being very open and porous), sinking very soon after flowing a short distance from the springs.

Second, all the land, at the time the ditch was made (about 18 years ago), was unsurveyed Government land. At the time the ditch was made one individual held and claimed by possessory title the whole tract. Soon after making the ditch he sold his possessory claim to the party which I now own, not making any reserve of water privileges in the quit-claim deed to the party buying. Soon after he sold his home place, not making any mention of said ditch or water right. This place has been sold and resold several times, but no mention has ever been made in any of the deeds concerning this ditch. In the mean time the party which I own was sold three times, my husband being the last purchaser. Nearly three years ago he (my husband) forfeited a homestead title to his piece of the original tract. During all this time the water flowed continuously through this ditch, except at such times as we used it all in irrigating our crops, which would be about two or three weeks each year.

This summer the party now owning the property of this individual made complaint to me about using all the water in irrigating a crop of potatoes which we were growing. I told him that I did not recognize, and never had recognized, that he had any right to any of the water of my place. He thereupon laid an injunction upon me, forbidding me to use over half of the water. The injunction calls the springs, which are well defined, "natural reservoirs." There are two natural water channels running through my place, and all the springs are located between them. So to convey the water away from my place, it was necessary to make some fluming in order to cross one of these channels. These channels unite very soon after leaving my place. They cannot be considered any other than wet-weather gulches, as the water only flows in them in the rainy season. None of the water from the spring flows into these gulches.

These are the facts as briefly as I can state them. I shall be thankful for your opinion, and, after the matter is settled in the court, if you think it will be of any interest to the readers of the PRESS, I will give you the result.

Oct. 18, 1887.

SUBSCRIBER.

[We understand the matter is now in the courts. We shall be glad to know the result.—EDS. PRESS.]

Irrigation in Stanislaus County.

EDITORS PRESS:—In these days of humbuggery, fulsome adulation and man-worship, it is refreshing to pick up a paper like the *RURAL PRESS*, which advocates labor and encourages the varied industries of the country. One can hardly find a paper in the United States that has not displayed headings and blazing puffs of baseball games, yacht-races, prize fights and horse-races, all in bold capitals. In my youthful days the newspapers devoted their columns to arguments in favor of material progress, of those industries that increased the value of the raw material, and increased the value of commodities and the nation's wealth. How many baseball games and yacht-races will make the nation rich? It is a maxim of political economy, that there must be more produced than consumed, or the nation will get poorer. The producer is now seldom mentioned in the daily papers, and not one out of ten knows where the great industries are located which add to the country's wealth. These signs of the times betoken no good to the nation at large.

But I began to write about one country. Well, there are two great enterprises on the tapis now: two irrigation ditches blocked out which, when completed, will make the county, the State, the nation, and the individual richer. These districts are created under the "Wright" irrigation law. The Turlock district embraces about 175,000 acres and the Modesto district over 100,000 acres, which, if irrigated, will be increased in value one hundred fold.

Though I am in favor of this enterprise, yet there are those who think the law unconstitu-

tional. They hinge their faith on several clauses in that instrument, among which are:

ART. I, SEC. 11.—"All law of a general nature shall have a uniform application."

ART. I, SEC. 14.—"Private property shall not be taken for public use" unless the money is paid up, etc.

ART. I, SEC. 16.—"No law impairing the obligation of contracts, etc., shall be passed."

ART. I, SEC. 21.—"No special privileges shall be granted, etc."

ART. I, SEC. 25.—"Subdivisions 19 and 20, in regard to exclusive privileges and exempting certain property from taxation."

Also, ART. 11, SEC. 4, in regard to uniform laws. Also, ART. 12, SECS. 4 and 8, in regard to corporations and their power.

Also, ART. 13, SEC. 1, in regard to the taxation of all property.

And, finally, in regard to the doctrine of riparian rights, claiming that the water cannot be used from a river if it deprives land-owners adjoining the river below of the water to which, by law and custom, they are entitled.

An attempt has been made to get rid of these dissatisfied parties by changing the boundaries of the district and shutting them out. But if I read the "Wright" bill correctly, there is no provision in it authorizing a change of boundary after the people have fixed that boundary by a vote. I wish there was such a provision for them. Oakdale and vicinity, which was shut out, might get a chance to be taken in again. There is much nice, level land around Oakdale, indeed, better suited for irrigation than any land in the district, as it is now formed.

Oakdale may yet be benefited, as the Modesto company is surveying a feeder to the main canal by taking water from the Stanislaus river, and the Modesto company might be induced to sell water to the people here, though it is questionable whether they can do this under the "Wright" bill. The main supply of the two companies is taken from the Tuolumne river up near La Grange. The two companies are to build a joint dam, which will furnish water for both districts, provided there is water enough in the river for that purpose.

Another legal question will arise about using the water. There are other companies who have bought the old mining ditches and flumes, and they claim the right to use the water first. There are always "thorns among the roses." The more is the pity, for this irrigation question is one of the most important issues that has arisen for many a day in our country. I hope to live yet to see this wilderness bud and blossom as the rose, and I hope to see this State and nation yet turn their attention to production, and not to the encouragement of pastimes and sports.

S. B. M'C.

Oakdale, Oct. 22, 1887.

THE STABLE.

Picking Out a Good Horse.

There is no work required of any horse, no matter how menial the duty may be, where intelligence, honesty and kindness will not be of material value, says the *Sporting Life*. Well-marked fullness of brain, half-way between the eyes and the setting of the ears, accompanied by breadth and fullness immediately back of the ears, are always connected with kindness of disposition and associated with ambition. If there be fullness in front and narrowness back of the ears, there will be a kindly disposition without ambition. If the development be the reverse of this, there will be an absence of kindly intentions with marked vicious tendencies. The ear is largely a fancy point, yet the manner in which it is set on and its motion furnish clear indications to experienced horsemen, and to other horses, of the character of the thought.

The ears have a language well understood by other animals, and when this is added to the expression of the eye, the whole story is pretty clearly told. As regards the neck, its peculiarities mainly minister to the fancy, and while the points touched upon are not necessarily keys to the breeding of the animals, the neck, to a considerable degree, is. While the neck may be said to be merely a flexible member, placed between the shoulder and the head for the purpose of carrying the latter, and enabling the horse to seek the way clearly to the right and left, and reach the ground, or the branches overhead, for food, that part of which it attaches at its base, the shoulder cuts a very important figure in the horse's value and durability, no matter what character of service he is assigned to. As is well known generally, the more upright shoulder is preferred for draught, because the force is required to be expended in a forward, horizontal direction, while the slanting shoulder throws the force of the exertion upon the lower part or shoulder point.

If a horse is selected, therefore, with a slanting shoulder, and put to drawing loads, it would be found that the horizontal effort will throw the lower portion of the collar upward against the lower portion of the neck, pressing the wind-pipe, creating distress in breathing. But for road work, speeding or for the saddle, no matter how worthy the animal may be in other respects, the upright shoulder prevents efficient service, and it matters not how attractive the horse may be in other ways, he cannot put himself into a form that is prevented by make-up, nor show a swinging gait and good reach, likening his fore-

leg to a pendulum, with this restriction in its movement, because not swinging freely forward and backward at its proper attachments.

In selecting a horse for any other purpose than draught, a very wide breast should be avoided, for in most cases a horse with this formation will paddle when he trots, a defect which should confine him to slow draught. For active service the breast should not be over medium width, and the forelegs should be reasonably close together. Between the forelegs and close up to the body the space should be so filled with muscle as to form an arch rather than to show a wide space, as in the case of a draught horse. An arm wide at its junction with the shoulder, rendered so by full development of muscles on the rear and anterior portion of the arm, should always be sought, for the opposite formation is always attended by want of precision, power and activity in the movements of the forelegs.

THE APIARY.

Controlling Fecundation of Queens.

Economic entomology is a term so much used of late in connection with killing injurious insects that the popular reader may forget that it includes the culture of beneficial insects as well as the destruction of injurious. Prof. C. V. Riley, as U. S. entomologist, therefore is giving earnest attention to the busy bee and the silkworm as well as to the pestiferous scales and other plant destroyers. The investigation into matters connected with apiary practice has been carried on under Prof. Riley's direction by N. W. McLain, and we give herewith his report on controlling the fecundation of queens, etc.:

The improvement which has been made in mechanical devices and methods of management by the scientific and practical apiarists of the United States during the past 25 years, has resulted in establishing the claims of the industry of bee-keeping to a place among the various branches of rural husbandry which are the acknowledged sources of a nation's wealth. Improvements in the art of bee-keeping and in the devices by which the art is practiced are continually being made, and the degree of advancement made in the past is an earnest of the progress awaiting development in the future.

Improvements in the devices and methods of management and importing races of bees reported to possess desirable qualities and characteristics, have chiefly absorbed the attention of American bee-keepers. It is not strange that reliance has been placed upon these resources as the means by which the best results were to be realized, rather than upon a persistent and skillful application of the laws of heredity and descent, and dependence upon the influence of intelligent selection and skillful crossing as a means for developing the highest attainable standard of excellence in the bee, the chief factor of permanent advancement.

The difficulties attending the control of the process of reproduction; of applying the laws of heredity and descent, and securing the influence of persistent, intelligent selection in breeding bees, have appeared to be almost insurmountable.

The very persistent efforts which have been made to improve the bees of the United States by yearly importations of the best races in their purity have also been attended with serious drawbacks and hindrances. These bees, bred for countless generations in the foreign habitat and under climatic conditions widely different from ours, are here submitted to conditions of domestication for which they all ill adapted. Any modification and adaptation of habits, instinct, and physiological structure which may have been secured by breeding a few succeeding generations under the altered conditions and requirements incident to domestication in the United States, have been lost with each fresh importation of ancestral stock, and the work of securing the variability and adaptability of instinct, habit, physiological structure, and functional capacity essential to domestication here, must be begun *ab initio*.

That some practical method might be discovered by which the process of reproduction could be controlled, has long been the hope of all progressive apiculturists. With the control of fecundation assured, progress in scientific apiculture would be rapid and permanent.

In obedience to your instructions, I have continued my experiments in striving to discover a practical method by which the fecundation of queen bees may be controlled. This I have endeavored to accomplish by two different methods, in both of which I have been in a degree successful. During the past summer, however, a drouth set in in May, almost with the beginning of the breeding season, which was said to be the severest and most protracted known in this locality for 25 years. No rain fell during 11 weeks, and during the four weeks next succeeding the 11 weeks without rain we had but three light showers, scarcely sufficient to lay the dust, practically resulting in an unbroken, all-consuming drouth 15 weeks in duration. Under such conditions I found it impossible to bring many of my experimental tests to a successful issue.

Having discovered last year that it was possible to introduce the drone sperm into the

spermatheca of the queen-bee during the term of orgasm, by artificial means, and that fecundation was practicable by such means, I attempted to perfect a method by which this could be done with ease and certainty. For the purpose of holding the queen-bee in position for introducing the drone sperm, I made what I call a "queen clamp," which consists of a block of wood two inches square and four inches long, in one end of which is an opening in size and shape like the upper two-thirds of a queen cell, with the small end up. This block is sawed in two in the middle, leaving half the cell-shaped opening on either half. Grasping the queen by the wings or thorax, I place her in one half of the cell-shaped openings and carefully close the other half over her. I then place a rubber band around the block and stand it on end. This leaves the queen in position, head downward, the lower half of her abdomen protruding, and confined in such a manner that she cannot receive any injury.

For the purpose of appropriating and depositing the male sperm I used a hypodermic syringe. I removed the sharp injecting needle, and in its place substituted a nozzle having an opening of sufficient size to admit a knitting-needle of medium size. Over this nozzle I slipped a small, smooth tube, drawn to a point so small that the opening in the small end is not more than half as large as that in the nozzle. After selecting the drone I wish to use, I grasp the head and thorax between the thumb and finger, and by continued pressure cause him to perform the expulsion act. I then remove the queen in which the spermatozoa are massed and squeeze the contents into a very small glass receiver, an eighth of an inch in depth and diameter. I then add a drop of glycerine diluted with warm rain-water, and take up the spermatozoa with the syringe, using the wide nozzle. I then slip the cap having a fine, smooth point over the nozzle and inject the spermatozoa into the vulva of the queen. The queen, which has been held in position by the clamp while the preparations were being made, naturally bends the abdomen downward whenever so confined. The vulva is easily opened to admit the point of the fine nozzle-cap when the abdomen is lifted up straight. Of 27 queens treated by this method the last week in May and the first week in June, six proved to be successfully fertilized. After that time, although I was persistent in my efforts to succeed, and made many and repeated trials, I met with success only occasionally.

Another method in which I succeeded in fertilizing a few queens in May, before the bees began killing the drones, was in the manner described in my report last year. I took a number of young queens from nursery cages, clipped their wings, and introduced them to queenless nuclei. When they were seven days old, orgasm being well progressed, I placed them each in turn in a queen clamp, and, holding them back downward, I picked drones from a comb taken from a populous hive, and caused them to expel the generative organs, and selecting those in which the contents appeared of the color and consistency of albumen, I placed drops of the seminal fluid upon and in the vulva of the queen, which were eagerly received. After the introduction of the drone sperm these queens were treated by the bees as fertile queens, and in one or two days assumed the appearance of fertile laying queens, and in from three to six days began to lay fecundated eggs.

The fact that I did occasionally succeed in fecundating queen bees by these methods, which proved upon trial as prolific as any queens I had which had been naturally fertilized, queens which I had hatched in an incubator and in nursery cages, whose wings I had mercilessly clipped as soon as they had crawled from the cell, and which I knew had never been upon the wing, seemed to furnish reason to hope that I would be able to discover a method that would be uniformly successful. The hope of reaching this much-desired result made me persist in the face of discouragements incident to experimental work in breeding bees during the prevalence of a protracted drouth. I am by no means discouraged by the partial success now realized. On the contrary, I am hopeful that under more favorable conditions better results may be obtained, and until other and untried resources fail, I shall not feel warranted in abandoning effort.

Observation and experiment lead me to believe that drone bees differ in degrees of procreativeness, and that the development and exercise of the procreative faculty are under the control of the worker bees.

First, there appeared to be drones of the impotent sort. If such be taken between the thumb and finger, no pressure short of crushing is sufficient to expel the sex organ. When forced to position external to the body, or if removed by a dissection, the organs are found to be nearly or quite empty, the few spermatozoa being massed in a hard lump, and but little mucus being present, and that little watery and clear and having no consistency.

Another sort of drones are those in which the mucus surrounding the spermatozoa is thick and curdy. With this sort I have not been able to fertilize a queen. The procreative principle is present in quantity, but the element in which it may be liberated and floated into the organs of the queen appears to be wanting.

A third sort of drones are those in which the sex organs are completely filled with spermatozoa and an abundant supply of albuminous fluid. It is only with this latter sort that I have been able to succeed in fecundating queens.

The facts observed seem to warrant the belief that it is the prerogative of the worker bees to determine the degree of development and dominate the function of the drones as they do the succeeding generations of workers and queens, the superior intelligence of the workers ordering the entire economy of the hive. During the first half of the severe and protracted drouth of the past season I was able to rear a few drones by resorting to the usual methods employed for stimulating drone rearing, but one-third of the entire number proved, on trial, to be of the sort which I believe to be impotent, and nearly all of the remaining two-thirds were of the second class, not more than 5 or 10 per cent of the entire number being furnished with the albuminous liquid necessary to enable the drone to voluntarily perform the expulsion act and complete the function of copulation, the filling of the spermatheca of the queen; for I am led to believe that the presence of this fluid, more than any odor or other influence from the presence of the queen during orgasm, excites in the natural frigid drones the sexual desire and assists in the execution of the expulsion act, and furnishes the element in which the spermatozoa are floated into the spermatheca, and also that the workers intelligently and purposely determine the sexual development and dominate the fitness, the desire, and capacity of the drone, as they do the physical development, the fitness, the desire and capacity of worker and queen bees for the natural performance of their individual functions; that is to say, if drones are reared during a drouth by artificially approximating the condition under which the desire for drone rearing normally arises, only a small percentage of the number will be sufficiently furnished with the food essential to complete sexual development, the counterpart of which is seen in a less degree in the rearing of worker larvae; and, further, if there is a failure of honey, or if for any reason the swarming impulse is absent and no emergency exists for the forming of a new colony, very few of the sexually mature drones are supplied with the food elements essential in producing the secretion which excites sexual desire and supplies the agency by which the spermatozoa are freed and floated into the spermatheca, the counterpart of which is seen in the refusal of the worker bees to copiously supply the queen with the rich glandular secretion essential to oviproduction whenever their instinct warns them that oviposition should cease and that further brood-rearing would only be a waste of energy, resulting in a generation of consumers and non-producers, for the queen is only a mother, and in no sense a majesty—only a machine, not a monarch. Other facts in my experience might be mentioned in support of this belief.

On October 15th Mr. Otis N. Baldwin of Clarksville, Mo., wrote me that he had met with success in practicing the method of fertilization described in my report of last year, and that he had discovered that drones were of three kinds, namely, "dwarfed, immature and ripe." As directed by your letter of instructions of November 5th, I went to Clarksville and interrogated Mr. Baldwin concerning his experience and observations, and I herewith give the substance of his statement made in reply to my questions. He said:

"I first go into my nursery and take the queens and cage them. I then go to the hive of drones and pick out as many as I think I may need, and then proceed in the manner you describe in your report of 1885. I believe the whole secret of success lies in the drones, and I am not able to tell how old the drone must be, or how the right condition is brought about, or whether it was originally intended that only a very small percentage of drones should be capable of fertilizing a queen. I have, however, discovered that there are three kinds of drones. First, the drone which, when squeezed, burst with apparently dry organs of generation. Second, drones which burst with an abundance of seminal fluid resembling a mixture made by adding bromides to a silver solution. Third, drones which bursting show a fluid resembling albumen. With the two former kinds I have not succeeded in fertilizing a single queen. With the latter I have fertilized over 200 queens the past season, with but few failures after I found out the difference in drones. I carefully grasp the thorax of the queen between the thumb and finger of the left hand, and with the right I pick up the drone which I have selected and press the thorax and abdomen of the drone until the generative organs are expelled, using as many as I need until I find one in which the color and consistency of the fluid suits me. Sometimes only a few of the right kind can be found in as many as 100. I place a few drops of the male fluid upon the vulva of the queen, which is eagerly received, using one, and only one, drone for each queen. I have fertilized queens by this method that were not a day old, and others more than 15 days old, and, after clipping their wings, introduced them to their colonies, and they began laying in from six to eight days, and were satisfactorily prolific.

"As nearly as I could tell, those fertilized early were more prolific than those treated after they were ten days old, but the right condition of the drone is very essential. It is very difficult to get drones ripe enough before the first half of May and after the first half of August, but during June and July this method may be operated with gratifying results. Queens fertilized by this method and directly introduced into a queenless colony are rarely ever molested by the bees. I clipped the wings of the first 20 or 25 queens that I succeeded in fertilizing by this method, and, finding the method worked to my satisfaction and with but few failures, I clipped no more wings."

The experience here detailed, as far as it relates to the procreativeness of drones, is an agreement with the facts within my own observation already set forth. The claim that a very large number of queens were successfully

fertilized as set forth, and that, too, with but few failures in the whole number attempted, is lacking in the element of absolute certainty and completeness of detail which would entitle it to acceptance as of any scientific value. Mr. Baldwin assured me that "there could have been no mistake about it;" but in order to effectually guard against all possibility of the test being abortive, all the queens claimed to have been artificially fecundated should have had their wings thoroughly clipped before they were liberated. But the fact that the repeated successes were realized when the young queens were clipped upon being taken from the nursery cage, never having an opportunity to bear their weight upon their wings, is an encouraging step in advance toward the solution of the most difficult problem in practical bee-keeping. Another season, with the presence of favorable conditions, will determine the practicability and value of this method.

Fertilization in Confinement.

Realizing that natural methods nearly always possess advantages over artificial methods, I determined if possible to gain control of reproduction by the fertilization of queens in confinement. That some inexpensive and practicable method might be devised by which the natural mating of queens in confinement could be secured, has very long been hoped for by all progressive apiarists. Very many attempts, in a variety of ways, some of which involved the outlay of considerable sums of money, have been made, but difficulties apparently insurmountable were encountered.

I removed the queens from six colonies which I had confined in the house for experimenting with bees and fruit—a house 10 feet by 16 feet, 8 feet high, partly covered on the sides with wire cloth, a wire-covered sash in the gable, and large screen wire-covered doors in each end. These were strong colonies, which had been confined in this house for 30 days and had learned the location of their hives, and from these the bees flew daily in great numbers, returning frequently to their hives. Into these six colonies I introduced virgin queens hatched from cells which I had placed in wire cages. In each colony the virgin queen was placed without being removed from the cage in which she was hatched. In due time they were accepted and liberated. The day these queens were five days old I liberated about ten drones near to the entrance of each of these hives. These drones were brought from hives in the apiary, and upon being liberated most of them persisted in flying against the wire-covered sides and windows in the gable, and but a few ever entered the hives. Here again there was frigidity or disability apparent among the drones. When the young queens flew from the hives seeking a mate they mingled among the drones, crawling over them and caressing them with their antennae, meeting with no response. These queens, with one exception, seemed to have no difficulty in getting the location of their respective hives.

The result of this trial was, one queen of the six was fertilized, and after she had laid eggs with regularity in two-thirds of the cells on both sides of one frame, after clipping the queen's wings, I removed this frame, with the queen and adhering bees, to a nucleus in the yard, and from the eggs laid in confinement worker bees hatched in due time, and the queen continued to lay as long as the nucleus was fed, there being nothing in the fields for the bees to gather. All the eggs laid by this queen were fecundated eggs. Being convinced that as far as the queens were concerned the difficulties in the way of success were not insurmountable, and that the main trouble was that the drones had not been furnished by the workers with the glandular secretion or the food suitable for producing the albumen-like secretion which I had been led to believe essential to produce sexual desire and to assist in the performance of the copulative act, from these same colonies I removed the remaining unmated queens, and to each I introduced another virgin queen as before.

I then went to a distant apiary and secured an unusually strong colony which was under the swarming impulse. A few queen cells were being built and a moderate supply of drones was present. This was late in the season. This colony had not cast a swarm during the year, and was the only one I could find, after considerable search and inquiry far and near, having any drones; and probably owing to the excessive drouth only an occasional one of the number examined had been prepared by the workers for the procreative function. I took this colony home and placed it in the wire-covered house at the end opposite that in which the virgin queens were located. I clipped the wings of the old queen so that she could not leave the hive, and upon being liberated the workers and drones of this hive made less effort to escape than those brought in from the apiary near by, and soon seemed reconciled to their new surroundings. The workers soon learned their location and drones were soon to be found in nearly every hive in the house. The result of this trial was that three of the six queens were fertilized, and as soon as they had each laid 500 or 600 eggs I clipped their wings and then removed them, together with their colonies, to the yard and fed them, and all the eggs laid by these queens produced worker bees. I am much encouraged by the success so far realized under conditions so unfavorable.

With the return of spring I hope to follow out your suggestions and continue the test,

using a large wire-covered inclosure for the queen; with hives so arranged on the sides that the worker bees may have unobstructed flight, while the drones and queens, being restrained by means of queen-excluding zinc placed before the outside entrance to the hive, may fly and mate within the inclosure and readily return to the hives from whence they came. If practical control of reproduction can be secured by so simple and inexpensive a method—and the facts from my experience as given above seem to warrant the conclusion that this is true—then the Rubicon of scientific apiculture is passed.

POULTRY YARD.

A Successful Method With Fowls.

EDITORS PRESS:—I have neglected to answer your request for an account of how I raised my chickens.

They are not shut up in pens, but have the run of an orchard and barnyard. That may be a great advantage above those who do not have the ground for such a run.

I use no incubator, but let the hens do the work instead. By being careful to look every day or two to see that all is well, I generally have good hatches. This can be done when hunting the eggs in the evening. If other hens will persist in laying in the setting nests, I mark the eggs with the date of the day they were set. Then I know what are setting eggs and when they will hatch.

I find the best time for hatching from December to April or May, when green feed is plenty and there is less trouble with insects.

I put the chicks and mothers in a pen for a few days or a week. Then there is not so much danger of their getting hurt by the larger ones.

The food is principally cornmeal, mixed with warm water or sour milk, sometimes a sprinkling of red pepper and salt. I feed no wheat or grain to chicks. I found it would bind up their bowels until they died, but when six weeks old it did not hurt them.

If one has it, Dutch cheese is a good relish, for both old and young. Also a plenty of green feed; alfalfa is one of the best plants for green feed.

The big fowls have shelled corn, grain and cooked potatoes, sweet or Irish; one seems as good as the other. They relish all scraps from the kitchen. On a farm, one can find plenty of small potatoes and poor fruit to cook, which makes a change in their food.

I scatter lime and ashes and sometimes sulphur in their roosting-places and about the yards where they dust themselves. Sometimes in early summer mites will trouble them, but lime and sulphur drive them out.

I put a little asafetida in their drinking water to prevent diseases spreading. The only disease among mine is what I call sorehead. It is a swelling on the head between the eyes and mouth. In a few days it bursts from the eye or mouth and runs a very thick yellow matter. Could you or some one else give a remedy?

Santa Barbara.

JENNIE HIGGINS.

[Readers will remember the statement of Miss Higgins' success with fowls which was given in the RURAL of Sept. 10, 1887.—EDS. PRESS.]

November Notes.

Chicks hatched in September and October should, during rainy weather, be confined in dry covered runs or sheds; if with hens, a number of broods may be kept in a comparatively small shed by cooping the hens. If in brooders, not more than 40 should be allowed to each brooder. Sufficient heat should be kept up to keep the brooder warm during the day as well as at night, and the sand or other material used on the floor of brooders should be cleaned or changed night and morning.

If the adult fowls have been well cared for during the molting season, and well fed, with an increased proportion of heat-producing food up to the first of November, they will be in prime condition to withstand the chill of frosty nights and rainy weather, which will penetrate to the bones of fowls that have been poorly fed before the rains come, no matter how much may be fed them during the cold weather, and many will take cold and die or be all winter getting over it. Besides, hens in prime condition may lay more or less now when eggs are highest.

Fall-hatched chicks intended for market in January and later should have unremitting care from the shell until large enough to ship. A little neglect now and then will wipe out all the profit of the enterprise. They must be kept warm, given the sunshine when there is any, and fed all they will eat (and no more) regularly as clockwork.

Air-slaked lime and carbolic acid, both valuable to the poultry-yard as disinfectants or deodorizers, make a splendid insect powder if mixed in the proportion of a teaspoonful of liquid acid to a gallon of lime. On account of its cheapness, this powder may be used quite liberally in nests in the dust bath, and on adult fowls, if necessary. It is also said to be a remedy for "gapes," by placing the chicks in a box covered with muslin, and dusting some of it through the muslin.—California Cackler.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Sacramento Pomona Grange.

EDITORS PRESS:—In looking over the record of the Sacramento County Pomona Grange, I find it started with 59 charter members, and they have since initiated 22, making 81 live members, of whom 48 are females, 33 males. They are distributed at various points in the county, as follows: Sacramento, Florin, Elk Grove, Galt, Brighton, Routers and Richland.

At the meeting in July the following report was submitted by the Grangers' Picnic Committee:

Receipts as reported in file.....\$513 25
Disbursements.....276 20

Balance on hand.....\$237 05

Also, Bro. G. C. McMullen offered the following preamble and resolution:

WHEREAS, We, the Grangers and farmers of Sacramento county, feel the need of a system of insurance, and are desirous of forming an organization whereby we can secure property at much lower rates than we are now paying, therefore be it

Resolved, That a committee of five be appointed by this Pomona Grange to formulate a plan of organization and system of insurance to be submitted to this Grange for action at our next regular meeting.

Accordingly a committee of five was appointed as follows: Thos. McConnell, Chairman; Wm. Johnston, E. Green, A. M. Plummer, D. Reese.

At the last meeting of the Pomona Grange held in Grangers' hall, Oct. 29th, the above special committee was called upon, but as the chairman had been absent East, no plan had been formulated, but some of the committee had devised an outline and at the call of the chairman some definite action will be taken, and a full report be submitted at the next meeting.

Bro. Geo. W. Hack having recently returned from the East, brought with him some papers and by-laws from Michigan; also the W. L., Dan'l Flint, had some important papers sent him from over the hill. These two were added to the committee, which is a strong one, and we look for some good plan that will operate well on this coast, and we trust be beneficial to the Order at large.

The Grange took some action in regard to collecting fruits, etc., to be sent East for the use of the National Grange, which will soon convene at Lansing. The Grange appointed the old committee on "County and State Exhibits," which will go to work and gather what they can to forward this week. The expenses will be met by the Grange.

One application of membership was received; two members took the fifth degree. The secretary was ordered to procure badges and jewels for members and officers; also to have a requisite number of copies of constitution and by-laws of said Grange printed.

The W. M. received a communication from the N. W. M. in answer to the former's inquiry as to which degree the business shall be worked in. The latter stated always in the fourth.

The subordinate Granges in the county keep up a good interest so far as heard from. Sacramento Grange will soon have a Harvest Feast and promote a class to the fourth degree. I understand a lively program is in preparation for making the day one of pleasure as well as profit.

All came back well repaid from the State Grange, having had a rich time among the young as well as the advanced. G. T. R.
Sacramento.

The City of Lansing.

Lansing, the capital of the State of Michigan, is the place chosen for the meeting of the National Grange, which begins on the 16th of the current month. The city is in Ingham county, at the junction of the Grand and Cedar rivers, 85 miles westward from Detroit, 37 miles north of Jackson and 208 miles northeastward from Chicago.

Its site was covered with forest in 1847, when it was selected for the seat of Government. In 1859 Lansing was incorporated as a city; in 1860 its population was somewhat over 3000; in 1880 it had grown to 8300, and has now close on 10,000 inhabitants. It is on the line of the Detroit, Lansing & Northern R. R., where that crosses the Chicago & Lake Huron R. R., and the Jackson & Saginaw R. R., and is the northern terminus of a branch of the Michigan Southern R. R., connecting with the main line at Jonesville.

The city contains a beautiful Statehouse, 15 churches, a State library of 40,000 volumes, two national banks, a savings bank, a high school, the State reform school, the Michigan State Agricultural college, an opera-house and manufactories of flour, lumber and bricks, barrels, artificial stone, sash, doors and blinds. One daily and four weekly newspapers are published.

THE Lincoln Grangers' hall has been replastered overhead, the sides calcimined and new carpets and furniture supplied, all which is considered a great improvement.

Victory Through Organization.

[By M. WHITEHEAD, National Lecturer.]

Another complete victory of organized farmers in the Grange has been achieved by the Patrons of Husbandry of Vermont. The Interstate Commerce Commission has decided in favor of the State Grange in its case against the Central railroad of Vermont, for its violation of the fourth section of the law in charging more for a short than a long haul. Farm products were being carried from Canada and distant points to the Boston and other Eastern markets over this road and right through the State for less freight than that charged farmers for the same service over a shorter distance. The decision is a righteous one and will be of vast benefit to the farmers and other shippers of the State. The Commission has ordered an immediate reduction of local rates to at least the through charges. The railroad cannot raise its through charges without losing that business, hence a reduction is made of about 33 per cent on local rates, or one dollar saved out of every three heretofore paid.

There is no way by which the Central Vermont can avoid complying with the order of the Commission. The reduction in the local rates that must follow will consequently be due to the State Grange, and will make a saving that will be worth a great many dollars to every farmer in the State. If in return farmers not now members of the Order do not rally to its support, it will show that they are not awake to their own interests. It is the greatest single achievement that has been accomplished by the Grange in any of our Eastern States. Other work is yet to be done. Organize, farmers.

This is one more proof of what farmers can do in a good cause if they will but organize and act together. Vermont is a small State—one of the smallest in the Union—but a small proportion of her farmers, about 2000 in all, are members of the Grange; and yet this compact, determined little band has brought the greatest corporation in the State to its knees, under the wise and just provisions of the Interstate Commerce law, secured after years of effort by the National Grange, and farmers organized under its banner in all parts of the United States.

If one small State can do so well through the Grange organization, what vast results for their good could be accomplished by the great agricultural States in other portions of our country, if farmers generally would see their interests, and unite in the Grange for mutual protection and advancement.

The Work Going On.

Brother J. D. Huffman has for several days been preparing for shipment a fine exhibit from San Joaquin county to the National Grange. We received a telephone message, Saturday afternoon, that San Jose Grange had resolved to take hold of the matter at once. When San Jose Grange puts its hands to the plow, it means lots of good work.

Bro. Cyrus Jones has returned from an Eastern journey and is working as earnestly and effectively with his Grange co-workers as ever.

Word comes from Sacramento that a splendid effort will be made by a committee of Pomona Grange. They can secure a good exhibit by themselves, no doubt.

The time is short, but from what we hear from various parts of the State, we are confident that the ball is now well rolling, and that the display at Lansing will not be wanting on the part of California Granges. A regular fruit car will be run from Sacramento. We hope to receive and publish a full list of all the articles sent.

Views of scenery and remarkable products and curiosities, which may tend to give information of our section of the Union, should be sent in the carload, or mailed in time to reach Brother Overhiser, in Lansing, by the 15th of November. Let every Grange and each Patron who can, forward something.—*Patron.*

Birthday of the Grange.

We suggest that each county, or district, having a number of subordinate Granges, unite in jointly celebrating the birthday of the Order on Saturday, the 3d of December, (the anniversary coming on Sunday this year). For instance, the Granges of Sutter and Yuba Counties might unite at Yuba City, or any other more convenient location; San Joaquin and neighboring Granges at Lodi or Stockton, and so on throughout the State. We think such Patrons as cannot attend a general meeting, should one be held in Oakland, should have arrangements made in advance for appropriately commemorating the day in their own Grange. There is no Grange in the State, we think, but that by a little painstaking on the part of a committee, could carry out a programme of exercises that would do credit to any assemblage on the memorable occasion. Let us hear from all Granges on the subject.—*Patron.*

We Have Been to the State Grange.

MESSRS. EDITORS:—Another convocation of Patrons, another roll-call of the State Grange answered, and while the ayes of most of the old stand-bys were recorded, new names were called, new Masters and new Matrons joined the circle, and from the ring of their responses these memberships will be no weakening powers in this Pacific monument that is being reared to the glory of Pomona, Ceres and Flora.

Patrons of the Atlantic seaboard, this infant colony of Grangers afar off on the Pacific shore to you send greeting, and while we gladly open to your messenger ships our barring golden gates, and greet your flying steed, the locomotive, as he finds his way around our serrated mountain heights, and count California's years in comparison with those of our older sister States, even as the months of the prattling babe are to the years of the venerable greybeard, yet we vie with you in zeal and love to our cause, though numbers must perforce fall short in the balance.

Santa Rosa opened wide her doors, gave the welcoming hand, and friends from the north, south, east and west met as many, having in view the one good of all; differences, of course, but these were soon hewed into harmony with words of argument and reason.

Perhaps the most startling variance was upon the woman suffrage question, which had its ultras both of ayes and noes. Sisters, old and young, took up the gauntlet against themselves, supplementing their words by their vote, but despite a very outspoken no the ayes were victorious, and the coming woman has the Godspeed of the California State Grange.

Life is like unto the growing grass today and to-morrow it is cut down; by this reaping holocaust of death is pierced the great Beyond, whose unfathomable shores are brightened by the severed links of many Grange homes.

One evening was given to memorial services for those who since our last pilgrimage to Marysville had gone to their long home. Hon. D. Wyatt Aiken, of South Carolina, who in the early rising of our Order, and when our whole country was in an upheaval to its very center, said to the honest tillers of the soil, "We know no south, no north, no east, no west, but one undivided country, as was the heritage of our forefathers, and of the swords of brother and brother, be ours the mission of turning them into the plow and pruning hook, and be ours the burden and pleasurable duty to make the four points of the compass vie each with the other in beauty and wealth of the soil, and meet in one common measure of fraternal thought."

These verified facts in the growth of the Order, for which this brother placed himself on record, was supplemented by words of tribute from our Past Masters, who had not only grasped his hand but profited by his earnest, consistent Grange work. Such records give rise to silent, prayerful thought, to longings that our each life labor may be as rich and fruitful in fraternal work and sympathy as was that of our revered brother Aiken.

Our own State dead were not forgotten, and the scroll of their memory was brightened by many heartfelt words. Music, sweet and low, helped deepen the spell of sadness, and the mystic wail of the "Sweet By and By" almost charmed us into forgetfulness of the narrow confines of this tearful present.

As usual Pomona, with her attendants, Ceres and Flora, commanded the homage of many brave sons and bright daughters, and when these initiates had paid court to Pomona's shrine they were led by the Santa Rosa brass band to tables filled with the fruits, flowers and nuts of our fabled land. Sister Roache as Pomona, in her own happy manner, made an earnest appeal on "equal rights," after which equal rights was exemplified by patrons and friends eating, talking and dancing till the wee, sma' hours warned drooping eyelids of the loss of beauty sleep.

Patrons, your sheaves are being gathered, your fruits are being transported across the continent, supplementing in agricultural relays the almost fabulous golden tales that were written by the pickaxe and cradle in the days of '49. In fact, our Golden Gate is always open to the denizens of every clime, and the Patron household holds her doors ajar, beckoning the farmer and his family to cast their lines in these pleasant places, to join in that mission of making two blades of grass to grow where but one grew before, and join with us in that triumphant refrain of "Labor" and its wondrous echo of rest:

"Thrice blessed, rather is the man, with whom The gracious prodigality of nature,

The balm, the bliss, the beauty, and the bloom,

The bounteous providence in every feature, Recall the good Creator to his creature, Making all earth a fane, all heaven its dome!

To his tired spirit the mild heather bells
Ring Sabbath knells;
The jubilate of the soaring lark
To chant of clerk;
For choir, the thrush and the gregarious linnet;

The sod's a cushion for his pious want;
And, consecrated by the heaven within it,
The sky-blue pool a font.

Each cloud-capped mountain is a holy altar;
An organ breathes in every grove;
And the full heart's a psalter,
Rich in deep hymns of gratitude and love!"

MRS. MARIA B. LANDER.

Martinez, Oct. 24, 1887.

TO P. OF H. AND OTHERS.

The following circular was hastily written and circulated on Saturday last. We hope all who can will aid in the important enterprise.

To Pomona and Subordinate Granges, County Boards of Trade and Kindred Organizations:

Through the California State Board of Trade the S. P. R. R. will afford free transportation for a full carload of agricultural and other products of California for exhibition at the National Grange, Patrons of Husbandry, which opens in the State Capitol buildings in Lansing, Mich., on the 16th of November.

Ex-Senator Wm. Johnston, who represented the State Grange, as Master, at the National Grange in 1886, made a small collection of California dried fruits, nuts, raisins and other products, which attracted so much attention that the National Grange resolved to invite and provide for displays of agricultural products from all the States of the Union, hereafter.

The exhibit made by California Granges last year elicited a large amount of correspondence from various parts of the U. S., from home-seekers, many of whom evidently have their eyes and hearts attracted to our Pacific side. So much encouragement having been received, W. L. Overhiser of Stockton, present Master of the State Grange, and Representative to the National Grange, has taken it upon himself to make extra efforts to have an exhibit this year which will both please and astonish the thousand or more leading and representative Grangers who will doubtless be present, as members or visitors, at the National Grange, whose ten days' sittings partake largely of a social, literary and educational character. Many of these representative farmers and their wives are correspondents of daily and local newspapers in the various agricultural sections of the Union, therefore it is believed that this is one of the best opportunities yet offered for extending thorough and practical information of the true character and worth of the soil, climate and other superior advantages of the Pacific Coast.

The exhibit will be accompanied by a thoroughly competent and reliable assistant of Worthy Master Overhiser, so that all exhibitors can rely upon their exhibits being properly and effectively displayed, explained, and in every way well cared for.

All articles should be accompanied by the name and full address of the exhibitor and producer, the name and other particulars concerning the article exhibited. A duplicate of the same memorandum should also be furnished to the California State Board of Trade, No. 12 Second St., San Francisco.

Photographs, books, pamphlets, etc., containing really desirable information, will be received and distributed in reasonable quantities.

All exhibits should be addressed to W. L. Overhiser, care of E. K. Alsip, Sacramento, in time to be received, without fail, by the morning of Nov. 6th.

Fail not to use your best efforts, immediately, to have your section well represented, as it is desirable to have California make a good exhibit, and one which represents the State as generally as possible. Make the trial anyway.

On behalf of the Patrons of Husbandry of California and the welfare of our State.

Yours truly, A. T. DEWEY,

Secretary State Grange of California.

No. 220 Market street, S. F., Oct. 20, 1887.

P. S.—Articles can be sent by mail or prepaid by express as late as Nov. 9th, addressed W. L. Overhiser, Master of California State Grange, Lansing, Michigan.

G. N. WHITAKER of Bennett valley, the Democrat says, has just received his appointment as statistical correspondent of the Department of Agriculture at Washington. Mr. Whitaker's reputation as a practical farmer and prudent business man is a guarantee sufficient in itself that the duties of the office with which he has been honored will be carefully and satisfactorily discharged.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

TREES AND BUGS.—Oakland *Enquirer*, Oct. 25: Horticultural Commissioner A. D. Pryal has been making an annual inspection of the orchards of this end of the county to see how the farmer is faring in his eternal warfare with insect pests. Mr. Pryal finds that in the orchards whose owners make a business of selling fruit, the bugs are kept pretty well in subjection, the orchardists finding it pays to wash and spray their trees. But there are numerous small orchards around Oakland in which the insects swarm. The owners of a few trees, who do not raise fruit to sell, seldom take the trouble to fight the insects, and in consequence the bugs hold high carnival. To stir these people up and make them go after the bugs is the principal part of the Commissioner's work. Codlin moths and several species of scale abound.

FRUIT SHIPMENTS.—Haywards *Journal*, Oct. 29: There were 37 carloads of fruit shipped from San Lorenzo station this season, aggregating 10,650 boxes, being an average of 450 boxes to the car. Thursday the largest carload of the season was shipped, consisting of 540 boxes. The crop of pears last year was much greater than this, but the superior size this year made it more profitable by one-third. The largest shippers were E. T. Crane, 2533 boxes; H. W. Meek, over 1300; T. Bridge, Fruitvale, 1000. J. C. Anderson has shipped over 3000 boxes since cherry season, including all varieties.

Butte.

CITRUS FAIR.—Chico *Enterprise*: The Oroville people are pushing their citrus fair with a vim, and it has been decided that holiday week—from Dec. 26th to 31st—shall be the date. A large tent is to be erected in the courthouse square, 50x100 feet, and the orange trees growing in the yard will be inclosed in the tent. This of itself will be a novel sight.

Fresno.

HEREFORD IMMIGRANTS.—Fresno *Expositor*, Oct. 26: L. Dow Scott, who arrived here with his family from Illinois last week, has just received ten head of fine thoroughbred registered Herefords from that State. Mr. Scott has been breeding fine stock in De Witt county for a number of years, but concluded to make Fresno county his home and go into the business of raising fine cattle. He had two fine cows and eight calves shipped here, and will locate them near Selma for the present. This breed furnishes good milkers and fine beef cattle.

PUTTING IN GRAIN.—An immense area of land is being sown to grain; in fact, almost the entire country from about four miles east of town to the hills, 20 west, as well as north and south.

Humboldt.

RED CLOVER.—Petaluma *Courier*, Oct. 26: T. C. Putnam of Vallejo returned last week from a visit to Humboldt county. He brought with him a bunch of red-top clover five feet in length. He saw several thousand acres of this clover growing on and near the banks of the Eel river, some of which was seven feet in height from the ground. It keeps green all the year round, and dairymen have an abundance of the best of fresh feed in fall or winter the same as in the summer. Mr. Putnam saw some Danes who own small farms in this red-top clover section who said they could easily keep a cow in good condition on an acre of such feed as he saw. The soil is a rich sediment, and, before being cleared, was chiefly covered with alder and willow trees.

Lake.

RAVAGES OF FIRE.—Gravelly Valley Cor. *Clear Lake Press*: Standing on the summit of Mt. Hull, one can see from 100,000 to 200,000 acres of as fine pine land as lies in the State; but if forest fires rage for a few weeks more as at present, this whole area will be devastated. Much of this territory has not been burned over for 10 or 15 years, and a fine growth of young pines has sprung up; in many places the second growth exceeding in quality the larger timber. Where these forest fires do not rage fiercely enough to destroy the larger trees, all this younger growth will be deadened and incalculable damage done, hastening the time when our beautiful forests will be but an expanse of worm-eaten stubs. It would be better for future generations if our Government, instead of prosecuting those who take timber from public land for necessary purposes, would spend the money in ferreting out and punishing those who wantonly set the fires that cause such widespread destruction on our mountain sides.

APPLES AND SPUDS.—Avalanche, Oct. 27: L. Sailor is ahead on potatoes at the Farmers' Exhibit, having brought in one potato that weighs 4½ pounds. Thos. Porteus has brought in seven different varieties of apples in fine condition, which are as follows: Hubbardston Nonpareil, Swaar, King of Tompkins county, Baldwin, Golden Russet and two varieties of Spitzenburgs.

Lassen.

A LAKE VANISHES.—Susanville *Mail*: The drying up of Honey lake leaves uncovered a stretch of country 12 by 25 miles, but whether it will ever become valuable for farming purposes is doubtful. At present the lake-bed is covered with alkali from the sixteenth part of an inch to four inches in depth, and a thick

growth of salt grass is springing up away out from what was once the shore. So much water from Susan river is used for irrigation that very little ever reaches the lake, and the water from Long Valley creek is all taken out. Bereft of these supplies, Honey lake will hardly be able ever to show up again—at least this is the notion entertained by settlers along its shores.

WILD HONEY.—The woods west of town are full of wild bees. A large amount of honey has been secured by the successful bee-hunters.

Los Angeles.

RAIN ON RAISINS.—A. H. Millar of Olive writes the *Orange Tribune* as follows, Oct. 24: Mr. Bennett, living just south of Nathan Fletcher's, had his Muscats out, uncovered, in all our last rain. After the storm, as it still looked like rain, he stacked up his trays, thinking it would still do some good if more rain fell. They remained stacked up some 48 hours, and then were spread out to dry, and, to his surprise, the raisins were not discolored, as were those not covered or stacked up. My theory is that the sun, if allowed to shine on the wet raisins, discolors them—the stems particularly. If this is the fact, we need not, after this, so much dread the rain.

Placer.

MOUNTAIN CROPS.—M. & I. *Advocate*: Mr. Bartlett, at Blue canyon, 4500 feet above the sea level, raised a fine crop of corn and potatoes this year. He sold 100 dozen of corn and 2500 pounds of potatoes, aside from what he used, and all from a small tract of less than two acres.

GOOD KEEPING PEARS.—Auburn *Republican*, Oct. 26: At Lander last July, J. E. Dawson gathered 40 or 50 Bartlett pears from a young tree on his ranch, and, wrapping each one carefully in paper, put them away in a bureau drawer. When picked, they were not quite ripe, yet somewhat riper than those usually shipped to market. They ripened nicely and he has them all now in perfect condition. Not one of them shows a sign of decay, and they look as if they might be kept a long time yet. The tree on which they grew has never been irrigated.

BEGINNING TO SOW.—The Lincoln ranchers began sowing grain on summer-fallow about a week ago, but the acreage will not be quite so large as last year. However, if the rains come early, so that plowing can be done in time, the total acreage of grain for 1888 will be larger than the past season.

San Bernardino.

CUCUMBERS ENOUGH.—S. B. *Index*: As an instance of what can be grown on our soil, and what a small area of ground will produce, we were shown a lot 50x50 feet, where this summer ten barrels, 52 gallons each, of cucumbers were raised. Besides this amount, Charles Lindner, the owner, has supplied the tables of the Pearl restaurant with this vegetable for the past three months.

San Luis Obispo.

REMARKABLE DISPLAY.—In speaking of the recent fair at San Luis Obispo, the *Tribune* says: A specially instructive exhibit was that made by J. V. Webster from the Huer-Huero. We noticed last week the superb growth of hops, which are pronounced as fine as can be grown in the State. Mr. Webster made a fine exhibit of forage plants also, and informed us that his sugar-cane produced 144,000 pounds to the acre, and sorghum 175,000. His fig trees show a growth of six feet this year, and peach trees of the same height from the bud in March last. He also presented fiber flax, squash, beardless barley running 75 bushels to the acre, millet, peanuts, very fine grapes, cotton, etc. Mr. Webster's work so far is largely experimental, but his efforts have met with the greatest success, and the next season he proposes making sugar and syrup and cultivating extensively hops and other products that it is demonstrated can be produced on the Huer-Huero to perfection.

Santa Barbara.

WALNUTS.—Santa Barbara *Press*, Oct. 21: Frank E. Kellogg brought in town yesterday a \$300-load of walnuts from his ranch in Goleta. The walnuts were raised on ten acres of ground, and the trees were only six years old. About 200 tons of beets were also raised on the same ground this year.

LOMPOC MUSTARD.—Record, Oct. 15: McKay bought over 2000 bags of English mustard last Saturday at two cents per pound. The biggest yield of mustard yet recorded is handed in by Mr. Tolliday, renter on the Manthie tract, where he says he thrashed and sacked 37 sacks per acre on the best portion of his land. At two cents per pound, he receives \$74 per acre, and at the price paid last year it would amount to \$106 per acre. Who will dare say such land is not cheap at \$150?

Santa Clara.

DON'T LIKE CARP.—Los Gatos *News*, Oct. 28: The lake reservoir being nearly empty, the water company is taking advantage of it to exterminate the carp, which are about as desirable to keep the water clean as a drove of hogs would be, since they burrow in the mud and keep it in a state of agitation. Further, they are worthless for the table, unless kept for awhile in clear water and fed on clean food, such as ground barley or other grain.

MOUNTAIN GRAPES.—San Jose *Times*, Oct. 21: D. C. Feely of the Santa Cruz mountains raises table grapes of magnificent size and delicious flavor. The *Times* has seen samples of his Purple Damascus, Cornichon, Flame Tokay,

Large Bloom, Emperor, Bowker and Rose of Peru. The quality and appearance of these fruits are unsurpassed, and would make an Eastern visitor believe he had struck Paradise sure. Mr. Feely has 18,000 vines in his vineyard, besides an orchard of 10 acres. He intends to send a carload of grapes to Chicago for cold storage, to see how that will work. These mountain grapes will alone make a fine advertisement for Santa Clara valley.

Santa Cruz.

GETTING OUT STUMPS.—*Courier-Item*, Oct. 29: John Uebler, a German farmer of Corralitos valley, has during the past three years grubbed up, on his little farm of 24 acres, 400 redwood stumps, most of them large and many of huge proportions. His method of getting rid of them is to dig a trench about six feet wide all around the tree, to the depth of three or four feet, by which all the main roots are cut away from the stump. The stump is then blown to pieces with giant powder and removed, the cavity refilled and leveled over. The present appearance of the land where the giant redwoods grew in former years, bears no resemblance in its well-tilled and productive fields to the primeval forest.

Shasta.

BEEF AND POTATOES.—Cottonwood *Index*, Oct. 27: Turner, Sigourney & Cox brought down a band of fine beef cattle from Goose lake, 18 carloads of which were shipped Sunday. They will ship about the same amount to-day. Otis Smith sent us seven Irish potatoes which he dug from his place near Shingletown that weighed 12 pounds, the largest nearly four pounds. They were raised without irrigation. Al Logan brought in 13 sweet potatoes Monday that weighed 30½ pounds, the largest weighing over four pounds and measured 18 inches in circumference.

Solano.

THE ISABELLA AS A RESISTANT.—Suisun *Republican*: The phylloxera has ravaged the vineyard of F. S. Jones, Green valley, to a considerable extent, and he is setting out olive trees where he has uprooted his old vines. He says that the Isabella vine has not yet been attacked by the phylloxera, and he intends to graft on that stock if it continues to withstand this scourge.

Sonoma.

GRAPE PRICES.—Santa Rosa dispatch to *Chronicle*, Oct. 27: The grape harvest in this section is about at an end. The prices paid for grapes have been very unsatisfactory to raisers. Mission grapes have sold as low as \$9 per ton. The average prices paid for all varieties will not exceed \$14 per ton. Many producers declare their intentions to crush their own grapes in the future, thereby rendering themselves independent of the combinations of wine-makers to keep prices down.

Tulare.

COUNTY JOTTINGS.—Delta, Oct. 27: Very little grain is being shipped to the bay compared with the amount that was being sent forward at this time last year. The mast is said to be very good in some portions of the foothills, but is somewhat spotted. Nevertheless a large number of hogs will be kept there during the fall and winter. Wild geese are becoming quite plenty and are frequently heard flying overhead in flocks. The lake is well populated with them.

LAND-OFFICE BUSINESS.—Delta: The figures following show the amount of business transacted at the land office in Visalia for the three months ending September 30th, and during no quarter before has the business reached such proportions: There have been received from 13 commuted homestead entries, 1878.89 acres, \$4297.23; from 31 pre-emption claims, 4823.44 acres, \$12,575.58; from 64 private entries, 20,730.95 acres, \$25,913.21; from 105 timber-land entries, 16,131.71 acres, \$40,329.19; from 48 original desert land entries, 22,636.56 acres, \$8378.20; from 1 final payment on desert land, 640 acres, \$640. The total number of acres taken up, therefore, is 64,458.87, for which the land office received the snug little sum of \$99,220.12. At that rate the large amount of land which was formerly held by the Government will soon all pass into private ownership, and when this vast amount of land is all brought under cultivation we will see a prosperous condition of affairs here the like of which was never dreamed of even by the "oldest settler."

Yolo.

PRICES AND SHIPMENTS.—Woodland *Democrat*, Oct. 27: The price of beef cattle in this county is not a paying one to the producer, being only 2½ cents on foot, and a good-sized steer will not bring over \$30 or \$35. Hogs are a little better—four cents on foot, which is more than they were worth at any time last year. The price paid for the second crop of grapes is from \$8 to \$10 per ton, which seems very low, but doubtless is as much as the wine-men can afford to pay, considering the price they receive for the wine. The shipping business at the depot has been quite lively of late in cattle, sheep, hogs, wine, brandy, grapes, fruit and other products of the soil. But little wheat has been shipped, as the holders refuse to sell at present prices. Large trains of empty cars come up the road and return heavily loaded with the products of this valley, which is a healthy business sign.

Yuba.

ALMONDS A PAYING CROP.—Marysville *Appeal*: The almond crop of the orchard owned by R. H. Hoskin has been picked and shipped

to S. F. Mr. Hoskin says: "My crop this year was exceedingly light; only 120 weighing 6840 pounds, were taken from trees, which is very light for 45 acres. The market price at present is 13 cents per pound, and the cost of picking, hauling and care is about one-fourth, which will leave me about \$675 profit for the year's work with the almonds. Of course the old land has brought in a return, but you can see that almond-growing, even with a very poor crop, is more remunerative than all the wheat that could be put in the same acreage. . . . Where new trees were near the Languedoc the latter gave a surprising yield. I only put in three hard-shell and three new paper-shell trees, and they have grown nuts very prolifically within the last year. In them I think there is more profit than in the favorite varieties."

NEVADA.

CATTLE MOVING.—Reno *Gazette*, Oct. 25: A train of 22 carloads of cattle passed through today from Winnemucca, shipped by L. Godchaux, and en route to the California ranch of M. Brandenstein & Co. for pasture. Owing to the scarcity of hay in Paradise valley, consequently upon diverting the water of the Humboldt from its natural channel by large landowners, feed is very scarce in that region; hence the large shipments to the lower country.

MULES FOR CALIFORNIA.—Gazette, Oct. 27: J. F. Shaeffer of Gridley, Cal., passed through Reno yesterday with 19 head of the choicest mule flesh that has ever been shipped from the sagebrush country. They were three-year-olds, 17 hands high, and when they have attained their growth will tip the beam at 1500 pounds. They were purchased of Geo. W. Crum of Battle Mountain, and were sired by the celebrated jack "Munyon," for which Mr. Crum paid \$1700 four years ago.

SHEEP AND WOOL.—J. B. Hollingsworth, a leading sheepman of Eureka county, has recently purchased 80 head of Spanish merino rams of W. Williams of Colusa county, Cal. Mr. Hollingsworth reports a very prosperous wool season in Eureka county, although the price paid for wool is so low. He has been offered 18 cents a pound for his clip of 45,000 pounds, but refused, as he is confident the market will be stronger ere long.

WILD RICE.—Silver State, Oct. 21: The Legislature last winter made an appropriation for the purchase of wild rice seed, with a view of sowing it in the streams and lakes of Nevada. Fish Commissioner Cary has been informed that 26 bushels of it has been shipped to his address from Port Hope, Wisconsin, where it sells at \$1.50 per bushel. The directions for sowing are as follows: Put the rice in coarse linen bags and sink it in water for four hours before sowing. It will be pretty well soaked by that time. Sow from boat; all seed that is good will sink to the bottom. Sow in water from six inches to six feet deep, soft mud bottom, low marshy places, where it is covered with water the year round if in lake; in bags if in river, out of current as much as possible. The best time to sow is just before the water freezes up and the ducks are all gone.

OREGON.

SWEET POTATOES.—Rogue River *Courier*, Oct. 28: The sweet potato is a very desirable table vegetable, and one that can be grown profitably with a little care in starting. E. Dimick had a very good crop this year. His plan is to start the tubers in some kind of hot-bed and then transplant to the garden. All that is then required is a little cultivation, keeping the ground mellow, etc. Our thanks are due Mr. Dimick for a nice basket of sweet potatoes.

APPELATEG VEGETABLES.—This week Mr. A. J. Williams of Bammers Creek brought us a cornstalk over 12 feet high. The ear was 8 feet from the ground and about a foot long, well developed and with a particularly long tooth. The variety was not mentioned. Mr. G. A. Bunch, also of Applegate, brought us sugar beets weighing 8 and 10 pounds, and Mr. O. Sargeant, from the same neighborhood, a mangel wurtzel weighing 13 pounds.

WASHINGTON TERRITORY.

HOP INTERESTS.—Assoc. Press dispatch from Tacoma, Oct. 22: There have been shipped to date from this point on account of Puyallup valley growers only 1222 bales of hops, the smaller portion of which is consigned to parties in London, England. An Eastern order for a carload of choice hops, on immediate delivery, was filled last week at the rate of 14½ cents per pound; while some smaller lots have been closed out to local buyers at 13 cents. Many prominent growers have been agitating the formation of a hop-growers' union. The opinion prevails that a combination exists with dealers and brewers to beat the market until the growers are forced to sell. No evidence, however, has been obtained to sustain this view, excepting the general concurrence in the belief that the world's markets are short. Ezra Meeker, the largest individual grower in Washington Territory, who claims to be posted by private advices from England, says prices are sure to go up, and has advised growers to hold on.

O. H. SANFORD, whose term had expired, has been reappointed Horticultural Commissioner by the San Diego supervisors.



The Way It Is Said.

The sultan awoke with a stifled scream; His nerves were shocked by a fearful dream. His wise men assembled at break of day, And stood by the throne in solemn array. And when the terrible dream was told, Each felt a shudder, his blood ran cold; And all stood silent, in fear and dread, And wondering what was best to be said.

At length an old soothsayer, wrinkled and gray, Cried: "Pardon, my lord, what I have to say. 'Tis an omen of sorrow sent from on high; Thou shalt see all thy kindred die." Wroth was the sultan; he gnashed his teeth, And his very words seemed to hiss and seethe As he ordered his wise men bound with chains, And gave him a hundred stripes for his pains.

The wise men shook as the sultan's eye Swept round to see who next should try. But one of them, stepping before the throne, Exclaimed in a loud and joyous tone: "Exult, O head of a happy state; Rejoice, O heir of a glorious fate! For this is the favor thou shalt win, O sultan, to outlive thy kin."

Pleased was the sultan, and called a slave, And a hundred crowns to the wise man gave. But the courtiers, they nod with grave, shy winks, And each one whispers what each one thinks. "Well can the sultan reward and blame; Didn't both the wise men foretell the same?" Quoth the crafty old vizier, shaking his head, "So much may depend on the way it is said."

—New Orleans Picayune.

In a Pullman Sleeper.

[Written for the RURAL PRESS by FANNIE I. SHERRICK.]

It was a gay party that boarded the night train at St. Louis, bound for the long journey overland to San Francisco, and a large party, too, for beside the bridal couple, May and Harry, who were in that ecstatic state of bliss which ignores the presence of third parties, there was Emma, the bride's pretty sister, who had been first bridesmaid at the four-o'clock church wedding, and Susie and Bella, Mary's cousins, who had also been bridesmaids, and their mother, Aunt Katherine, who made a charming background for her lovely twin daughters. Then there was Will Tracy, who had been first groomsmen, and who, society whispered, was devotedly attached to the bride's dark-eyed sister, and his friend Arnold Fleming, who went to join his father in the mercantile business in Los Angeles.

At Reno they were to meet Uncle John, the good angel of the family, long interested in the mines of Nevada. He was the traditional wealthy bachelor uncle, always helping the family matters over financial difficulties, giving the girls sweet surprises in the shape of lovely trinkets gathered in his travels, and dropping in unawares upon the family banquets with his pockets stuffed full of good things for the babies. He had none of the traditional crustiness of the typical old bachelor, either, and his nieces adored him, wondering that no good woman had appropriated this paragon, yet rejoicing thereat exceedingly.

A right merry party they were, just fitted to make one another happy during that six-days' journey overland.

Not a thing had been left undone to assure the bride's happiness. The traditional old shoe had been thrown after the departing carriage, the bride had worn her mother's wedding veil, and no rain had fallen upon her wedding day. What more could a happy bride demand?

And aside from all her supreme happiness and these favorable auguries, May Harmon felt all the satisfaction that a society girl feels in having had a successful wedding chronicled by the newspapers as the grandest event of the season. What more ecstatic bliss for a mortal maid than eight bridesmaids, all dressed in pink satin, and eight flower-girls strewing roses in her pathway, to say nothing of her own creamy satin gown embroidered with seed pearls, and a train longer than herself? What triumph to walk down the long church aisle, the cynosure of all eyes and the envy of her dear 500 friends, and to lead the bridal cortege out of the church to the triumphant strains of Mendelssohn's sublime wedding march. And then to be described in the evening papers as "a fairy-like creature with lovely brown eyes fringed with long lashes, teeth like milk-white pearls, and a swan-like throat;" to be acknowledged as the loveliest bride of the year, and to have half-a-dozen former beaux sending their broken hearts in the shape of the costliest wedding presents.

No wonder her cup of vanity as well as happiness was full to overflowing; and yet May was at heart a sensible, sweet-dispositioned girl who would probably make the most loving and devoted of wives. Her vanity was due to a foolish mother's training and the flattery of society rather than to any innate love of display. She had been worshiped from her cradle, and,

as her mother said when she entered the carriage to be driven to the church, "the loveliest girl that ever breathed."

And she was not the only one who was happy, for there were several romances budding about her, and two people at least who looked forward to their long journey overland and their visit to Yosemite and the other far-famed wonders of California with joyful anticipation.

It is astonishing how quickly one begins to feel at home in a sleeping-car, and how soon passengers find their congenial fellow-travelers. After a few days the overlanders find themselves united much as one jolly family party. The parcels, valises and satchels all seem to fall naturally into place, the colored porter assumes a benign aspect much as the head of the family, showing his white teeth whenever there is the remotest possibility of falling heir to fugitive quarters, and the ladies lounge and gossip and read much as they do at home.

There was one exception to this general friendliness, however, in this instance—a tall, pale woman attired in deep mourning, who occupied a berth at the far end of the sleeper. She seemed engrossed in her books and thoughts and oblivious to those around her. Her face sometimes wore an indescribable look of joy and sorrow mingled, though her habitual expression was a sad one. It was as though a lifelong sorrow had been crowned with a sudden joy.

"I am sure she has a romance," Emma said one morning, as she lounged on the pillow the porter had just taken out for her, with the curtains pulled down to exclude the glaring sunlight. Emma had a decided penchant for finding out people's romances and she had been speculating on this fellow-traveler's history ever since they had left St. Louis. She had noticed her then, sitting with her elbow on the window-sill, her dark eyes looking a little sadly upon the crowd thronging the Union depot. She seemed quite lonely then and preoccupied.

"Don't be foolish, Em," said May, who was not possessed of her sister's curious fascination for other people's romances. "She may be the most commonplace individual in the world."

"No!" Emma shook her pretty head until her solitary earrings flashed all the colors of the rainbow. "She is a woman with a history. Such lovely creatures, with figures like goddesses and magnificent dark eyes, do not go through this world without leaving their impress upon the hearts of men, and I am certain hers is a strange story."

May absolutely laughed. "You should have been a *bas bleu* and written stories for the periodicals," she said with the most exasperating unconcern. She was too much wrapped up in her own happiness to be looking for broken hearts and unwritten tragedies by the wayside. "Really, if it were not so absurd," she continued, "I would believe you capable of conjuring up romances about Uncle John next."

"He may be bringing you home an aunt from the Fiji islands next," retorted Emma, much to the amusement of Susie and Bella, who were as eager for romance as herself.

"What did she say to you last night?" demanded Bella, with eager eyes.

"Well," said Emma, who enjoyed such an enthusiastic audience, "our conversation was mainly of books and not of people. She is very cultured and speaks German and Spanish fluently. I was afraid to air my smattering of language in her presence. She read to me a little from the French of Lamartine, and her accent was superb."

"Perhaps she's a teacher," suggested Bella.

"No," Emma scorned the idea.

"Or maybe a lady's companion," chirped Susie; but Emma squelched the idea without ceremony.

"You will be making her a book agent next," she said with indignation. "I am sure that she is well-born and that her history is tragic. Doubtless she has had an unhappy marriage and a separation."

"Nonsense!" interrupted Aunt Katherine, who had been dozing over her favorite poems. "You are three foolish children who ought to be playing with your dolls instead of talking about matrimony and imagining vain romances about people you never met before."

So the subject was dropped for a time.

When they left Ogden, all were enthusiastic in their praises of Salt Lake as the road wound around it. The sun was just setting. It was a glorious sunset, the tall, misty peaks looming up across the blue waters tinged with the blood-red colors of the fading sun.

The lake is so mysterious and beautiful, no wonder it appeals to the imagination of all travelers. Silent and motionless it lies with its shadowed walls. No waves disturb its azure swell, no ships sail upon its bosom. What human hand can lift the dusky veil that hides the past and reveal its history? In ages past it filled the land, yet no man can tell us how it rose and fell, nor how it swept backward at some stern command. In sullen pride it sleeps guarded by the purple ranges that fade away at even-tide into the dusky twilight.

In a brief time our little band of travelers sat at the windows enjoying the quiet glory of the scene, but soon the dusk hemmed them in, shutting out the misty peaks, the shadowy shore and the great plains stretching out before them, and they left the darkness of the night to enjoy the genial brightness and luxury of their fast-moving home.

The lamps were lit and there was a glitter of reflected lights and a richness of coloring that was quite pleasing to the tired travelers. There

are few prettier sights than a palace sleeping-car at dusk, and surely none more comforting to those who travel overland. Whirling through the darkness, shut in from the outer world by a frail mechanism of steel, wood, glass and iron, it gives one a sense of nearness and companionship with his fellow-travelers that is as delightful as it is comforting.

Far ahead is the great iron monster puffing and snorting and flinging his scorn to the rain and the winds as they meet him. Away he flies through the country, past lonely farm-houses, through the valleys and over the mountains, dragging his precious freight with him. He is throbbing with life, yet dull to the lives about him. Little he knows of the aching hearts, the romances and the sorrows, the loves and the follies he carries with him! His mission is a glorious one, to speed through the land on lightning wings, freighted with the messages of joy and woe, to brave the winds and defy the storms, to conquer the stern old mountains and join with his swift-winged power the lands of the East and West. He knows not sorrow, he knows not woe, yet the night-breezes whisper strange tales as he plunges through the darkness and he bears with him ever the burden of humanity, the immortal souls who find a thought for him even in their supreme joys and their darkest despair.

But one would have thought there was never a care in the wide world had he gazed into the interior of that palace car as the train swept through the darkness. The dazzling mirrors reflected bright faces, and above the roar of iron wheels rose the melody of fresh young voices and the plaintive music of Emma's guitar.

Then Tom, the colored porter, brought his banjo and sang some of those sweet songs from the South which never fail to touch the heart. All his African soul seemed to vibrate in those tender melodies.

At the sounds of the "Swanee River" the pale lady came silently and joined the circle. Her face wore the look of one who hears again long-forgotten melodies—Emma fancied there were tears in the dark, dreamy eyes. She put forth her hand and drew her near. She longed to love this woman, though she could scarcely tell why.

Looking upon her tall, slender figure, her lovely features clear cut as a cameo, and her dark eyes with their half-veiled passionate fire, one could not wonder that Emma had said "She's a woman with a history."

"I am sure she is a Southerner," Emma said an hour later when Tom was making up the berths and she and Bella were in the stuffy little dressing-room putting up their bangs in curl-papers, "for she seemed so moved by those Southern songs."

"Yes," said Bella, sleepily, brushing out her luxuriant Langtry bangs before the mirror. "She has lovely eyes and such a figure. She always reminds me of those ancient Greek goddesses."

Emma laughed. "You dear little stupid," said she, with her mouth full of hairpins, "did you ever hear of a Greek goddess in mourning?"

"Well, no," reflected Bella, contemplating her cousin thoughtfully. "I don't suppose Madame Niobe or Miss Venus traveled around the country with half a dozen Saratogas as my cousin Em does; yet, if history tells the truth, some of these divinities might well have worn mourning for their sins."

"How logical the little puss is growing," laughed Emma, kissing her good-night, and retiring to her berth just in time to escape a lecture from Aunt Katherine, who did not approve of curl-paper matinees and could never see what girls could find to talk about until midnight.

The next day, after a long and dusty ride over the alkali plains, they arrived in Reno. The girls could scarcely restrain their impatience to see their uncle, and he did not disappoint them, for scarcely had the train halted at the depot before he was on board. The girls nearly smothered him with caresses, but his arms and heart seemed large enough to hold them all.

When they set him free once more, he turned aside from them all and walked down the aisle to where the strange lady sat drinking in the scene with eager eyes. To their utter astonishment, she flung her arms around his neck, and he held her in a long, tender embrace. Dumbfounded they beheld the meeting.

"Well!" cried Emma, when she had recovered her breath, "has Uncle John made a mistake, or does he intend to share his affections with the whole trainload?"

But that gentleman came very calmly to the front. "Allow me to introduce you to my future wife," he said, coolly.

"Wife!" There was a surprised chorus of feminine voices.

"Yes; a minister waits at my residence, and a wedding supper for you all."

Aunt Katherine and the twins could only gasp for breath, while Emma and May looked at one another, laughing and crying in one breath. It was the sensation of a lifetime.

Uncle John rather enjoyed their emotional surprise for a moment; then he said, smiling:

"My bride will give you our romance at our home. Tell the porter to bring your traps to the carriages as quickly as possible."

The lady in black was nearly overwhelmed with affectionate greetings for a few moments, which she seemed to welcome. She was quite as surprised as they to know of the new relationship, for she had never dreamed that the "Uncle John" so frequently spoken of was the

man who had won her supreme love. Emma could scarcely believe it was not a dream, it was all so delightfully surprising and romantic. She felt almost ready to write a novel. She had been longing to get into somebody's romance; in fact, had been making a desperate attempt to conjure up one between Susie and Arnold Fleming; but he was so dreadfully prosaic and weighed two hundred. It was discouraging, and Susie was such a babyish sort of girl! She cared more for chocolate caramels than for nice young men with rich papas in Southern California.

In the brilliantly illuminated parlors of Uncle John's handsome home, his sister and nieces learned for the first time the romance of his life. It was the same old story of love eternal as the hills, yet which will always be as beautiful as they, for the springtime of every heart brings renewed verdure.

She had been the daughter of a wealthy Southern planter. At the close of the war they had removed to the North. They had resided in one of the lake cities, and here, when not much more than a mere child, she had met John Marsden. An attachment sprang up between them which proved lasting. But they were both young and poor.

"Make your fortune," had been her father's answer to the young applicant for his daughter's hand, "and you may have her." Ardent and earnest, the young lover had set out for the far West. Before 30 years of age he was a rich man. But fate is sometimes cruel. In the meantime she had been forced into an unwelcome marriage by her father, who was ambitious for his daughter's future.

Her husband was a senator, and she moved in the highest circles of Washington society, but it was always with an aching heart. Day and night her soul longed for that absent lover who had been wronged so cruelly. A faithful wife she had been, yet a desolate, unhappy woman.

Her husband had been dead nearly two years ere John Marsden learned of her widowhood. When he did, he had written in his eagerness a second offer of marriage. She had accepted his love and acceded to his wish to be united without delay. Neither had expected such happiness as had come to them, and it was in the hush of a great joy that they stood united at last in one home. It was as if a deathless love had conquered fate.

"I know I shall not sleep a wink to-night," said Aunt Katherine later in the evening. "My nerves have been completely shattered. I don't see why folks can't be married rationally and not shock their relatives into a nervous fever." But in spite of her groanings over Uncle John's lunacy, as she termed it, there was no one who rejoiced more sincerely in his happiness than she.

Two weeks later they were all in the Yosemite Valley enjoying that wonderland of nature.

"Cousin Em," interrogated Bella, swinging lazily in a hammock under a giant oak one dreamy afternoon, "what do you think happened this morning?"

"Couldn't guess," answered Emma, laconically, looking up from the ferns she was ascertaining. "After the events of the past two weeks, my brains are not equal to the emergency."

"Arnold Fleming proposed to Susie and me jointly. He says he don't know which one he likes best, but we can draw straws and settle the matter between us."

Emma laughed. "And your answer?"

"I told him if he would reduce himself 50 pounds we would consider the matter."

Emma buried her face in the velvety grass and almost shouted. How very comical this absurd little Bella was.

"Good!" she cried, wishing that every one could be as happy as she was; for had not her blonde lover whispered something that was very, very sweet in the moonlight the night before? She would always remember it with the music of the white-foamed falls and the harmony of the tall pines that swept through the narrow, granite-walled valley.

She whispered a little of her happiness to Bella as the sun went down behind the South Dome, leaving a crimson trail upon the far white peaks.

"I will have a 4-o'clock wedding," she said grandly, "and you and Susie shall be first bridesmaids. And if you are both madly in love with Mr. Fleming," she said naively, "we can leave you in Salt Lake City on our return."

Bella smiled with all the arrogance of one who had never met her fate. She pretended to scorn all lovers. Yet she went to bed that night dreaming of orange-blossoms and a romance begun in a palace sleeping-car.

CIGARETTE SMOKING.—The Chicago Mail, in speaking of this vice so prevalent in that city, warns parents in this wise: If your sons smoked tobacco the result would be bad enough, stunting to their growth, enervating to their nerves, and blinding to their minds, but they do worse than that. They inhale the poisonous odors of chemically prepared paper, opium, and the very poorest quality of tobacco. The effects of the prevalence of this vice among growing children will not be at once perceptible. There is just stimulant enough in the cigarette to create a demand for something stronger, and the effects upon the nervous system are just powerful enough to make that demand a confirmed appetite before they are very far advanced in years. The time will come when the cigarette will not satisfy them. Then it will either be whisky or morphine.

Hygiene and Moral Courage.

In view of the discussion, at a recent Teachers' Institute, of physiology and hygiene, morals and manners, "Y. M." sends the Martinez *Item* extracts from the amended School Law of the State, with observations as follows:

CHAP. CXXIII, Sec. 1665.—Instruction must be given in the following branches, in the several grades in which each may be required, viz., reading, writing, orthography, arithmetic, geography, grammar, history of the United States, elements of physiology, and hygiene, with special instructions as to the nature of alcoholic drinks and narcotics, and their effects upon the human system, vocal music, elements of book-keeping and industrial drawing, and practical entomology.

SEC. 1667.—Instruction must be given in all grades of schools, and in all classes, during the entire school course, in manners and morals, and upon the nature of alcoholic drinks and narcotics and their effects upon the human system.

We all know that a teacher who properly governs his or her school has more psychological power over the children than the parents of the children themselves.

It is a sad fact that many parents are lacking in a knowledge of moral precepts, as well as the courage to execute them.

Nearly all parents who do set a good example before their children are willing and anxious that their children should be taught the truth with reference to health of mind and body.

Moral courage is necessary to the execution of any known precept.

Many children have inherited weak wills—the result of their parents having no control over their appetites and passions.

Hence, teachers having strong psychological powers over children with weak wills can, by constant daily efforts, instill into the minds of the children not only knowledge, but moral courage.

The school law is just as explicit in the latter obligation as in the former.

Parents are toiling early and late to give their children an education. The State aids the poor to educate their children. The schoolteachers are the co-laborers for this self-same end.

The children of to-day are to be the citizens of to-morrow, the voters and law-makers.

Parents are not raising children for themselves alone, but for the State.

The State has a right to demand a return for the money she expends upon the public schools.

Is the principal object of an education simply to pass a creditable examination by the mere use of memory, or shall we see the boys and girls of to-day become honest, thrifty and thoughtful men and women, using their knowledge of mathematics, science and art for practical, every-day benefit?

Without strength of character, a school education is often an aid to evil.

Let all unite to put down evil in every form, and to forward the right use to knowledge; aiming to develop in the growing generation stronger and healthier bodies and better balanced minds than those of the present parentage, or the next century will be a rapid decline into a ruin of the most glorious government ever established upon earth.

HOW TO CHOOSE SILK.—A writer in the *Hartford Courant*, speaking of the various kinds of black silk, gives the following directions for detecting the spurious from the genuine article: Take ten fibers of the filling in any silk, and if on breaking they show a feathery, dry and lack-luster condition, discoloring the fingers in handling, you may at once be sure of the presence of dye and artificial weighting. Or take a small portion of the fibers between the thumb and forefinger, and very gently roll them over and over, and you will soon detect the gum, mineral, soap and other ingredients of the one, and the absence of them in the other. A simple but effective test of purity is to burn a small quantity of the fibers; pure silk will instantly crisp, leaving only a pure charcoal; heavily dyed silk will smolder, leaving a yellow, greasy ash. If, on the contrary, you cannot break the ten strands, and they are of a natural luster and brilliancy, and fail to discolor the fingers at the point of contact, you may well be assured that you have a pure silk that is honest in its make and durable in its wear. Good silk must be soft and heavy, but it must never be gummy or stiff. Ladies prefer a gros grain because it is fashionable; but they will have it light, though "full in the hand." They do not look so much at the grain as at the gloss they pull out of it. If this process of investigation is not allowed, they pinch the specimen on the cross, then pull it in a contrary direction. If the crease looks like a fold in paper, they reject that piece; but if it smooths out and disappears they are secure. They also imperceptibly touch the sample with the tip of the tongue, for the presence of iron used in dyes is thus detected. As regards the color of black, there are very unreliable green-blacks and dun-blacks. A black, singularly enough, and without the slightest desire to appear ridiculous, should be blue. The raven's wing has a blue haze over it. No one not in the business can know how difficult it is to get a glossy blue-black. A dead black is not such a feat. Cheap qualities of silk would not reward the manufacturer for his time, therefore a brown or green-black are of finest fiber. There is not a more useful investment to be made than money expended for a really good black silk.

YOUNG FOLKS' COLUMN.

Dora.

A Story for Girls.

[Written for the RURAL PRESS by MARTHA T. TYLER.]

"Dora! Do—"

"Well, what is it, Belle?" said Dora, suddenly appearing in the doorway. "Don't rouse the neighborhood. One would think you were trying to sing a scale and didn't know how."

"Oh, you dear, snappish old thing!" I laughed; "if you live long enough you will be exactly like your Aunt Johanna."

"Belle," said Dora, a change creeping over her face like a cloud, chasing the mischievous light from her eyes and the quizzical pucker from her pretty brow—for Dora was pretty—"do you really think I shall ever be like Aunt Johanna? Sometimes I am afraid of it myself.—when I feel particularly hateful."

"You are never really hateful, Do. You are the oddest, brightest, dearest girl I know, and I love you. Can't you go over to the pinery with me this afternoon?"

"But there are all those little cotton trousers to be made," she answered ruefully, "and if Aunt Johanna should return to find I have taken a holiday without permission, she would say, 'You have no sense of duty, miss.'"

"O Do, don't make such a face! Come along. We will have just a little run, and a little breath of air and a little chat. You can sew twice as fast when you come back, and make up for lost time. How dreadful it is that you must be always stitching away on those horrid old things!"

"Well," said Dora, shading her brown eyes with her hand, and looking longingly across the meadow to the green fringe of woodland beyond, "we won't stay long, and I'll tell her of it; that will clear my conscience. I have been sewing so steadily all the afternoon," she continued, as if to herself, in self-defense, "I'll go, and if she scolds me, it will only add one to the sum of my experience. One is a small matter, comparatively," with a queer little laugh.

So we plunged, I, the tempter, and Dora, the sinner, into the heart of the warm, still afternoon.

Dora was an orphan. Her mother had died during her infancy, and when she was 11 years old her father married again. He was an artist—a grave, absent-minded man, very gifted, but simple and childlike concerning worldly things. He was always poor, and the thrifty little Dora had early learned to manage for papa and to depend upon herself. They had been very happy together, the artist and his small housekeeper, until Mr. Dartmouth, concluded that he wanted a second wife.

Mrs. Blanden was a widow with two daughters and some money. She was rather handsome, and could be pleasing when she tried to conceal the undercurrent of vulgarity which was natural to her. She thought it would be very nice to marry a gentleman of Mr. Dartmouth's genius. It would be more difficult to explain his preference for her. Perhaps he believed that, having fatherless daughters, she would be kind to his motherless little girl. Some said her money attracted him, but this was a calumny. He was much too large-hearted and innocent to have been influenced by mercenary motives. They were married, and Dora's troubles began. He did not live long, and his daughter, like a modern Cinderella, was left to the mercy of her step-mother and sisters. I do not mean that she had to scrub and cook and clean, but when things went wrong it was always "Dora." Dora was in everybody's way, and the quondam Mrs. B. complained that it was a hard matter that she should have the support of a girl who was "nothing on earth to her!"

Dora did not sit down in the ashes humbly waiting for something better. She fretted under a sense of injustice and grew sullen and rebellious. Her step-mother finally discovered that the "wretched, naughty child" should be sent to her grand-aunt Johanna, who, according to the good lady's opinion, "should be made to look after her own flesh and blood." Now Aunt Johanna was not a fairy godmother. She had not heard of Dora until her nephew's widow wrote asking her to take the girl.

"I am glad," thought Dora. "I shall have some one of my own to care for." But when the grim old lady's answer came declaring in effect that she would accept the charge, not because she wanted to, but "from a sense of duty," Dora cried a little and felt more lonely than ever. Her aunt was not fond of her from the first; indeed she was fond of nothing in this world unless it were her cat. Her heart seemed closed to all gentle influence and tender feeling. Yet the stern old lady had her own little romance buried somewhere in the depths of youthful memories. She had loved Dora's grandfather and had never been able to forgive her sister for having married him. Their only child, the artist, she had never seen, but had been for years leading a secluded life in C—, our pretty country town, where it was that Dora came to her.

With all her hardness, Aunt Johanna had her good qualities. She was thoroughly honorable. She tried to be strictly just, frequently sacrificing herself, and more frequently poor Dora, to her "sense of duty." In some respects she was very charitable—that is, she gave liberally to the needy, and spent most of

her time in making up various garments for them which her "society" assisted in distributing. Though she was not beloved in her little world, she was at least very generally respected. Her niece had been with her now for nearly four years. They had been very busy and not altogether unhappy years for Dora. In the morning she had her painting, for she had inherited much of her father's talent, and while Aunt Johanna depreciated it as a useless gift, she let her have lessons because, as she would say contemptuously, "It's the only thing you're good for." The mornings were well enough, but the afternoons—oh! the long, summer afternoons!—so monotonous indoors with those interminable garments forever on hand, so beautiful over there in the pinery where there were wonderful mosses, and buds, and a brook that sang too! How pleasant to spend an hour there sometimes, where Aunt Johanna's sense of duty would be almost propitiated, and Industry would be rewarded with a taste of freedom. Poor little Industry! She had very few such rewards.

When Dora and I returned from the "pinery" on this particular occasion, it was later than we had imagined. Dora knew she had not done just the right thing in leaving her work, and was prepared for awful consequences, especially as Aunt Johanna had reached home before her, and would be therefore the more incensed to have found the garments scattered about the sitting-room in a state of maddening confusion.

The glass door which opened on the veranda was ajar, and as we passed we could see her sitting very white and still in her favorite arm-chair, her pet, the yellow cat, stretched out near her in a patch of sunlight that streamed in through the western window.

I stood outside on the steps watching and listening for the storm I felt sure would follow, but Dora walked quietly in with a calm courage which surprised me.

"O Aunt Johanna!" she began, "I know you will be angry, but I was so tired of—" here she paused, for there was that in the old lady's troubled countenance which showed that something more serious than Dora's delinquencies was affecting her.

"Sit down, girl," she said, in her stiffest manner. "You may as well know the worst. The firm in which most of my money was invested has failed. I shan't have a dollar. The roof must be sold over our heads. I don't suppose it will hurt you much," she added, almost with a sneer. "You can go back to your step-mother, doubtless. For my part, I shall enter a charitable institution. I can hope for nothing better at my time of life, and"—with a sudden break in her voice—"I am quite alone."

She did not ask for sympathy; evidently she did not expect it. She told her story as if it were a lesson she had been schooled to repeat. Only the slight tremor in her tones as she concluded betrayed that she suffered. As she said, she felt she was in her poverty what she had chosen to remain in her wealth—alone, but with this difference, her self-sufficiency was failing her.

"O Aunt Johanna!" cried Dora, "you are not alone. You have me. O Aunt Johanna! I have always wanted your affection. When I am 18, you know," kneeling by the old lady and clasping the wrinkled hand in her own smooth, young fingers, "there will be a small sum coming to me from my mother's brother. You shall have it all, dear, and I can teach drawing, and—and take in sewing if necessary," with her little laugh. "I am so glad you taught me to sew! Dear, dear auntie, how good you have been to me in all these years, and I have so tried your patience."

"Dora," said honest Aunt Johanna, with a sob in her throat, "I did it from a sense of duty."

"But now, dear," asked Dora, timidly, "we shall love each other, shan't we?"

Aunt Johanna made no direct reply to this question. She put her hands on Dora's shoulders and looked straight into the brave, dark eyes for a moment, then she said in a low voice: "I believe you are like your grandfather, my dear. I never saw before that you were so like your grandfather." The scales had fallen from her eyes in regard to many things.

Dear, unselfish, noble-minded Dora! She was the staff of the old lady's age. All of her little plans were successfully matured, for "God helps those that help themselves," and so do kind hearts and willing hands.

They went to live in a cottage where there were plenty of flowers and sunshine, and they were much happier than they had been in the larger house. Aunt Johanna is gradually softening under the influence of Dora's affection, and if she is sometimes her old, querulous self, Dora is ever patient, "because," she says, "I know she loves me."

COFFEE acts upon the brain as a stimulant, inciting it to increased activity and producing sleeplessness; hence it is of great value as an antidote to narcotic poisons. It is also supposed to prevent too rapid waste in the tissues of the body, and in that way enables it to support life on less food. These effects are due to the volatile oil and also to a peculiar crystallizable nitrogenous principle, termed caffeine. The leaves of the plant likewise contain the same principle, and the inhabitants of the Island of Sumatra prefer an infusion of the leaves to that of the berries. Its essential qualities are also greatly changed, the heat causing the development of the volatile oil and peculiar acid which gives aroma and flavor.

DOMESTIC ECONOMY.

APPLE DUMPLING.—Three teacupfuls flour, two heaping teaspoonfuls of baking powder, one tablespoonful of butter mixed well through flour, and one teaspoonful salt. Mix with sweet milk to a dough stiff enough to roll out upon the molding-board. Roll into a sheet half an inch thick, spread with chopped apples. Roll dough up as you would roll rolled jelly cake. Pinch ends well together, so juice cannot escape. Place in well-buttered steamer and steam one and a half hours. Serve with cream or milk and sugar, or hard sauce.

LAYER CAKE.—Two cups sugar, one-half cup butter, three-fourths cup milk, three cups flour, four teaspoonfuls baking powder, whites of eight eggs beaten to a stiff froth, and put in last little at a time. Jelly for above: One-half pint milk, place vessel holding milk into boiling water. Beat one egg, one-half cup sugar, large one-fourth cup flour together, and then stir it into the boiling milk; flavor when cool. Spread between layers and frost the top.

SODA CAKE.—One pound flour, one-half pound currants, one-fourth pound raisins, one-fourth pound butter, six ounces sugar, two ounces orange peel, two ounces almonds, one teaspoonful of carbonate of soda, flavor with essence of lemon; add milk enough to make cake rather stiff, and put in one-half a nutmeg.

PEACH PIE.—Line a deep pie-plate with good, but not rich paste. Fill with pared peaches, stoned and cut in halves. Sweeten well, and if the peaches are not soft add a little water. Cover with rich paste and bake. This is a delicious pie if eaten on the day it is baked.

MOCK MINCE MEAT.—One and one-half cups powdered crackers, one cup each molasses, chopped raisins and vinegar, two cups sugar, one-half cup warm water, same of melted butter, one cup currants if desired, one teaspoon each of cloves, cinnamon and nutmeg.

EXCELLENT BUN.—Take one quart of flour, mix with it one-half teaspoonful of salt, three teaspoonfuls of baking powder, mix thoroughly. Then rub in one-half cup of butter, four eggs, one pint of milk. Pour the batter into gem pans and bake in a quick oven.

BREAD FRITTERS.—Cut thin, round slices of bread, butter them very lightly, spread with jam and stick together in pairs. Fry in boiling lard, after dipping in a batter of one egg, one pint of milk, a pinch of salt and flour enough to make a pancake batter.

SOUR MILK BISCUIT.—One quart of flour, two level teaspoonfuls of soda, two large tablespoonfuls of lard, two cupfuls of sour milk. Mix with the hand as bread dough, only not so stiff. Roll out about an inch thick, cut and bake in a moderate oven.

COCOANUT CREAM CANDY.—Three cups of white sugar, water enough to dissolve it, and a pinch of cream of tartar. Boil ten minutes. When nearly done, add one cup of cocoanut. Spread on buttered paper and cut in squares.

SAUCE.—One cup of sugar, half a cup of butter, one even teaspoonful of flour, two tablespoonfuls vinegar; beat all well together; pour over it one pint of boiling water, and let it come to a boil. Spice with nutmeg to taste.

ROASTED QUAILS.—Pluck, draw, and singe them; wrap in vine leaves and slices of bacon; wrap in buttered paper; if the paper burns put on more, roast them until well browned, and serve them on pieces of toasted bread.

WILD GRAPE JELLY.—Boil and strain the grapes; to one pint of juice allow three-fourths of a pound of sugar; boil the juice about 20 minutes, heat the sugar and add the juice, boil five minutes and put in tumblers.

CREAM SPONGE CAKE.—One egg beaten in a cup, fill with sweet cream, one cup sugar, flour enough to make a stiff batter, heaping teaspoon baking powder; season with vanilla or lemon extract, just as you choose.

FRIED CHICKEN.—Cut up the chicken, and salt and dip in flour; have a dripping pan with plenty of boiling lard, into which lay the chicken; put in a well-heated oven; fry brown on both sides.

SPICED FRUIT.—Four quarts of ripe fruit, three and one-half pounds of brown sugar, one pint vinegar, one teaspoonful each of cinnamon, allspice, cloves, a little nutmeg. Boil one hour.

BROILED TRIPE.—When the tripe is well boiled, cut in pieces that can be accommodated upon the gridiron and broil quickly. Season with plenty of butter, salt and pepper to taste.

OMELET.—Beat eight six eggs, add one cup milk, two tablespoonfuls of flour, one teaspoon baking powder well mixed with the flour; season with salt and pepper and fry in hot lard.

SNOW CAKE.—One cup of white sugar, half cup of butter, one and a half of flour, half cup of sweet milk, teaspoonful of baking powder, whites of four eggs; flavor with almond.

STEWED POTATOES.—Pare and cut into lengthwise strips, cover with boiling water, and stew 20 minutes. Turn off nearly all the water, put in a cupful of cold milk with salt.

GRAHAM COOKIES.—Take two cups of sugar, one cup of sour cream, half a teaspoonful of soda; mix quickly, roll rather thin, and bake in a moderate oven.

APPLE WATER.—Roast some half-dozen apples, when cooked pour over them a pint of boiling water. Mash and strain them. Add sugar or honey.



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See Advertising Columns.

The Week.

All reports are of activity everywhere. The "excursions" are arriving in rapid succession, and a wonderful throng of people is rolling in out of the snow and ice and chilling blasts of the Eastern winter. Those who are good at analyzing these masses of humanity, declare that there is more of the "come to stay" element than usual, and the records of real estate transfers in the different towns and counties certainly show that there is much buying being done. A good arrival of mechanics, chiefly carpenters, is noted, and this is a good thing for builders, for there is a vast amount of lumber issuing from our mills and a great call for men to make houses of it. Railroad extension, ranch subdivision and general notes of settlers and settlements are the chief notes of the industrial music in the air.

There is great activity in the grainfields in parts where dry sowing has proved successful practice. Dry plowing and seeding summer-fallow is employing all available men and teams. Late fruits are being gathered, and certainly there can be no complaint of this year's harvest-time. It is just according to rule, and when it begins to rain, the prophet says, it will be no shower. The only objection to delay is the anxiety for drenching out the fires which have continued during the week, and in some localities have done great injury. The rain will indeed be welcome to farmers still under menace by the flames.

The Larger Pests.

Quite a vigorous campaign has for years been in progress, with State countenance and aid, against the lesser pests which beset our fruit-trees and vines. Much still remains to be done to bring this menace to our horticultural interest under control, and yet it must be acknowledged that great progress has been secured.

It is quite time that there were better provision made for the reduction of other pests as well as those of the orchard and vineyard. The sheep-grower should be aided in the repression of the scab by the passage of proper scab laws and provision for their enforcement. This has been found important in other wool-growing countries. Quite a strong effort was made to secure it for California at the last session of the Legislature, but our sheepmen have not yet learned to pull together to secure their ends, as the orchard and vineyard-men do, and the measure fell through for lack of popular pressure upon the Legislature. Better results should be had in 1889.

Then, too, there should be better arrangements for the repression of the larger pests which seem now becoming more numerous and more aggressive. There has been very wide complaint during the last year of coyote. Flock-owners are subscribing money to add to the bounty which is paid in some counties, and though considerable numbers are killed, there are still many to beset our flocks and seriously reduce the woolgrowers' rewards for his labor and investment. Rabbits are multiplying very fast in spite of all the efforts made to destroy them, and they levy a heavy tribute upon pastures, grainfields, and upon orchards and vineyards. Other similar pests are worthy of attention. It seems to us that there should be a careful and systematic effort made to reduce these foes of the industry and wealth of the State. Very much could be done if a good commission with a competent executive officer should study the destruction of all these vermin, and take the lead in repressive measures. Unless something effective is done, we shall have to sustain a constant and heavy drain upon our resources and free investment in improvements and productive enterprises will be checked.

There is much for us to learn of State work against vermin in the experience of other commonwealths. The Australian Colonies perhaps stand at the head in such undertakings. There was a general meeting of delegates from the different colonies a few months ago, and in the course of the discussions much interesting information was brought out. It was stated that up to the end of 1884, Queensland had expended over \$350,000 in destroying marsupials, no less than 6,000,000 scalps of kangaroos and wallabies having been paid for. New South Wales is spending \$500,000 a year in fighting these same pests, and on the whole there seemed to be a slight reduction in their prevalence. During 1885 it was stated that 855,676 kangaroos, 506,372 wallabies, 922 wild pigs, 5878 hares, 8474 native dogs, and 55 eagle hawks had been killed. These wild dogs and tame dogs did about equal amounts of sheep killing—the loss from both together being about \$250,000. New Zealand has been paying \$1,000,000 a year in killing rabbits, and the destruction of value by rabbits up to the end of 1885 is estimated at \$25,000,000. These pests eat the new grasses on the pastures, so that the sheep suffer in loss of wool, the ewes are unable to provide milk for their lambs, and ranges do not carry more than one-tenth as many sheep as they did before the rabbits multiplied to the present extent. By the expenditure of money in destroying rabbits, it is now claimed that in some districts the carrying power of the land is rising again, and the yield of wool and lambs increasing.

It was reported from Tasmania that the numbers of sheep had declined 250,000 and the wool export 323,000 pounds, because of the rabbit nuisance. The percentage of lambs used to be 70 to 80; now it is only 50 to 60 per cent. During the six months ending June 30, 1885, there were 1725 men employed killing rabbits, and they destroyed 2,841,911; during the last half of the year about the same number of men killed about one-third as many rabbits.

There seems to be some progress being made in turning the pelts of these pests to some account. Tasmania sold 2,872,896 rabbit skins

for \$112,860. In South Australia, where the warfare against the pests has been long continued, the kangaroos have become so much reduced that their hides have sold at about \$20 per dozen, and the paying of scalp money has ceased for the present.

After the presentation of reports, of which we have given but a few leading items, the delegates had a long discussion of repressive measures. There seemed to be a general feeling against the hiring of hunters and trappers, as they seemed disposed to make their places permanent. The use of phosphorized oats, the introduction, multiplication and conservation of animals that prey upon the rabbit, and the employment of rabbit-proof fences made of wire netting at least three feet high, and set into the ground so as to prevent burrowing, seemed most in favor. The cost of the approved style of fence was put down at \$150 per mile.

Of animals destroying the rabbit, the ferret is most largely employed, especially in New Zealand. The wildcat and tame cats turned loose are also rendering good service. Weasels and polecats also do good work, but their liking for poultry is against allowing them to multiply. Within fenced land the use of bisulphide of carbon and the digging out of burrows are regarded as best, and legislation making such treatment compulsory was said to be necessary.

Late advices speak of a "rabbit annihilator" which has been tried in Victoria with very gratifying results. It is apparently a new apparatus for using carbon bisulphide. The device consists of a rotary fan, with an air-tight vessel of tin in front of it. This vessel contains carbon liquid, in which is immersed an endless woolen web, running over a pair of rollers. The blast from the fans, passing over this endless web, saturated with the poisonous liquid, forces the deadly fumes through a nozzle and rubber hose into the pest-harboring burrows. The machine weighs 26 pounds and is carried by two handles. It was applied to natural burrows at Bacchus Marsh, Sept 21st, and dead rabbits were afterward taken out at depths ranging from 12 to 30 feet. We hope this method will prove highly helpful in ridding our Australian neighbors of the ravaging rodents. The use of bisulphide by simply pouring in the holes is an accepted way of killing squirrels in this State.

CONDITION OF THE CATTLE INTEREST.—Col. Colman, Commissioner of Agriculture, addressed the Cattlemen's Association at Kansas City on Monday of this week. He said that the cattle industry of the country, representing \$1,200,000,000, was under a cloud of misfortune at present, but he was satisfied that the population of the country was increasing far more rapidly than its beef supply, and that this circumstance would rectify matters. He then proceeded to read a semi-official statement of the work of his department in fighting the pleuro-pneumonia. In regard to the needs of the Bureau for the next year, Mr. Colman said that about all that was necessary was a sufficient appropriation, as work was progressing smoothly and systematically. It has been estimated that this cattle disease in the past 45 years has cost Great Britain \$500,000,000. It exists there to-day in almost as bad a form as it ever did. They have strong laws, but they leave the execution of them to the local authorities. Col. Colman believes that there must be heroic treatment to stamp out the disease, and for this purpose Government funds are needed. A quarantine has been declared against cattle from Scotland and the association applauded when Col. Colman said it might be necessary to quarantine against all Europe.

WAS IT THE COCKLEBURS?—J. M. Bassford, Jr., recently reported to the *Breeder and Sportsman* the death of several valuable horses and cattle in his neighborhood from some obscure cause, but in the course of his description mentioned the growth of cockleburrs in the pasture. W. Meese of Danville writes his belief that the cockleburrs were the cause of the deaths, and says: "I have lost a great many hogs by eating young cockleburrs, when they first come up, while they are young and tender, before they get the second leaf. I have lost as high as 50 head in 24 hours after turning out of the pen, on a sandy lot, when they were just coming up above the ground. They are deadly poison, worse than strychnine." What experience and observation have our readers?

Another Roll of Portland Butter.

The dairy sensation at Portland is assuming the form of a serial. We have had almost weekly chapters. The story reaches a climax this week, but may not close with it. Since our last issue, according to the telegrams, Mr. Dunbar, who was arraigned for selling false butter, was unanimously acquitted of the charge by the jury. The State had no new evidence for the second trial. The defense claimed that the butter which the Dairy Commissioner took and had analyzed was not what he procured from Dunbar; also that the sample given Professor Rising to take home and analyze was not California butter, but some manufactured here by a chemist employed by the commission. The decision will also end all the cases brought by the Commissioner against sellers of California butter.

This is a climax, and must be taken as indicating the purity of California butter, but it seems likely that the matter will not end at this point. It was telegraphed from Portland on Tuesday of this week that the parties arrested by the Commissioner and acquitted by the jury now propose to move actively against the Commissioner. The following is the telegram:

An information has been filed before the Grand Jury charging Albert Sunderland, State Dairy Commissioner, with perjury in connection with the recent trial of the State against Dunbar, charged with selling adulterated butter. The basis of the complaint is that the commissioner obtained a roll of butter light in color from Dunbar, and the samples he gave to the chemists were highly colored. Sunderland claimed that butter will gain color by exposure or in time. The sample he handed to Professor Rising of California was highly colored. Stearine fat was distinctly recognized and oils not thoroughly mixed, and the microscope failed to show the presence of ordinary butter crystals. Local chemists testified that Sunderland handed them a light-colored article, and it was 90 per cent pure butter. The conclusion is forced that he gave the local chemists one lot and Rising another, and neither that obtained from Dunbar.

This is the statement. Of course it is not known whether the Grand Jury will indict the commissioner or not. It is likely if the confusion in the samples can be explained that no indictment will be found.

There is another part of the dispatch from Portland which does not altogether suit the California reader. It is as follows:

Among dealers and many people in Portland the view that these prosecutions are for the purpose of warring on California butter more than to see that justice is done, gains ground.

Governor Penney insists that the California article is bad, but has had his faith shaken somewhat lately. The costs in the last case were over \$1000, which the State of Oregon will have to pay. The merchants will not touch California butter now until the whole question is thoroughly settled. They are tired of putting up money to defend themselves, while California puts up nothing for testimony.

The last sentence is decidedly in error. The fact is that the Dairy Exchange of San Francisco acted promptly and liberally in the matter. They put forth every exertion to secure evidence in defense of the purity of the California butter which some of the members shipped to Portland. They paid for the analyses upon which the Portland merchant was acquitted and the expenses of all the witnesses who went north to testify at the trial. They seem to have done everything possible to maintain their business integrity and the reputation of the California product.

The boycott on California butter which is charged upon the Portland dealers we do not consider of much importance. There is not a very great amount sent there, anyway, and at this time of the year none. We do not fear but that if there is money in California butter when the time comes around for our large production next spring, there will be merchants in Portland to sell it.

VISIT OF GRAPE EXPERTS.—Prof. Viala of France and Prof. F. Lamson Scribner of the U. S. Department of Agriculture, whose coming to California was mentioned in the *RURAL* a few weeks ago, have concluded their work and have returned eastward. They visited a number of vineyards and wineries and apparently made good use of the time they had at their disposal.

PINK EYE is said to have developed among the horses in San Diego stables; but it is in a mild form, so far, and only a single fatal case is reported.

The Hawaiian Islands.

The Island Kingdom is our near neighbor. It is closely allied with the commerce of this country, and its people are rapidly falling in with American thought and ways of doing things. Queen Kapiolani was kindly received in this country last summer, and the Masonic excursionists to the islands were most hospitably entertained. Hawaii is within easy sail of San Francisco; palatial steamers ply to and fro with the rhythm of a weaver's shuttle, and the growing number of tourists and excursionists may be the first threads in a loom that may weave these people in one common destiny with our own land.

Although so near, and so much has been written about this wild, weird, unique conglomeration of paradise and perdition; its volcanoes, lava, lust and leprosy; its emerald seas, cocoa groves, mango trees, coral reefs, and many other interesting features, the country is still a marvel. Abraham Fornander, in his valuable contribution to history and ethnography, "An Account of the Polynesian Race," in treating of the traditions and genealogies of the Hawaiians, shows conclusively that we can trace back the history of this people for nearly a thousand years. He tells of interesting movements that took place in the islands of Polynesia about eight or nine hundred years ago, and of numbers of remarkable voyages that were made from one part of the great Archipelago to the other, showing that the art of navigation was more advanced than among the natives of a subsequent period. Voyages were made to points distant 2000 miles or more, and were so well directed as to be comparatively free from danger. It is in these voyages of the old Polynesian navigators that may possibly be found the solution to the vexed question of the peopling of America. There is no doubt about the unity of the origin of the Polynesian race, as their language or dialects abundantly prove. Even to-day an Hawaiian and a New Zealander can readily understand each other, although their respective countries are separated by a distance of upward of 5000 miles. Now, if the Polynesian seamen of the early period above mentioned could safely steer their barks from the Friendly and Samoan to the Society and Marquesas islands, and from all these to the Hawaiian group, there is no reason for supposing they did not voyages till farther east and reach the shores of America.

Through the courtesy of Mrs. Wm. Johnston, well known to readers of the RURAL through her entertaining letters describing the Masonic excursion to the islands last summer, we are permitted to present our readers with an en-

graving of one of the Government buildings in Honolulu, and a glimpse of the lava beds that have to be passed over on the way to the great volcano.

Business Failures and Success.

There are many who think that because a man has happened to fail in his business under-

It has been truly said that the paths of some of the world's greatest men, both living and dead, were marked with financial disaster, and they achieved success in the end only by liberally exercising this one quality of "grit."

Peter Cooper failed in making hats, failed as a cabinet-maker, locomotive-builder and grocer. But as often as he failed he "tried again,"

Home Industries.

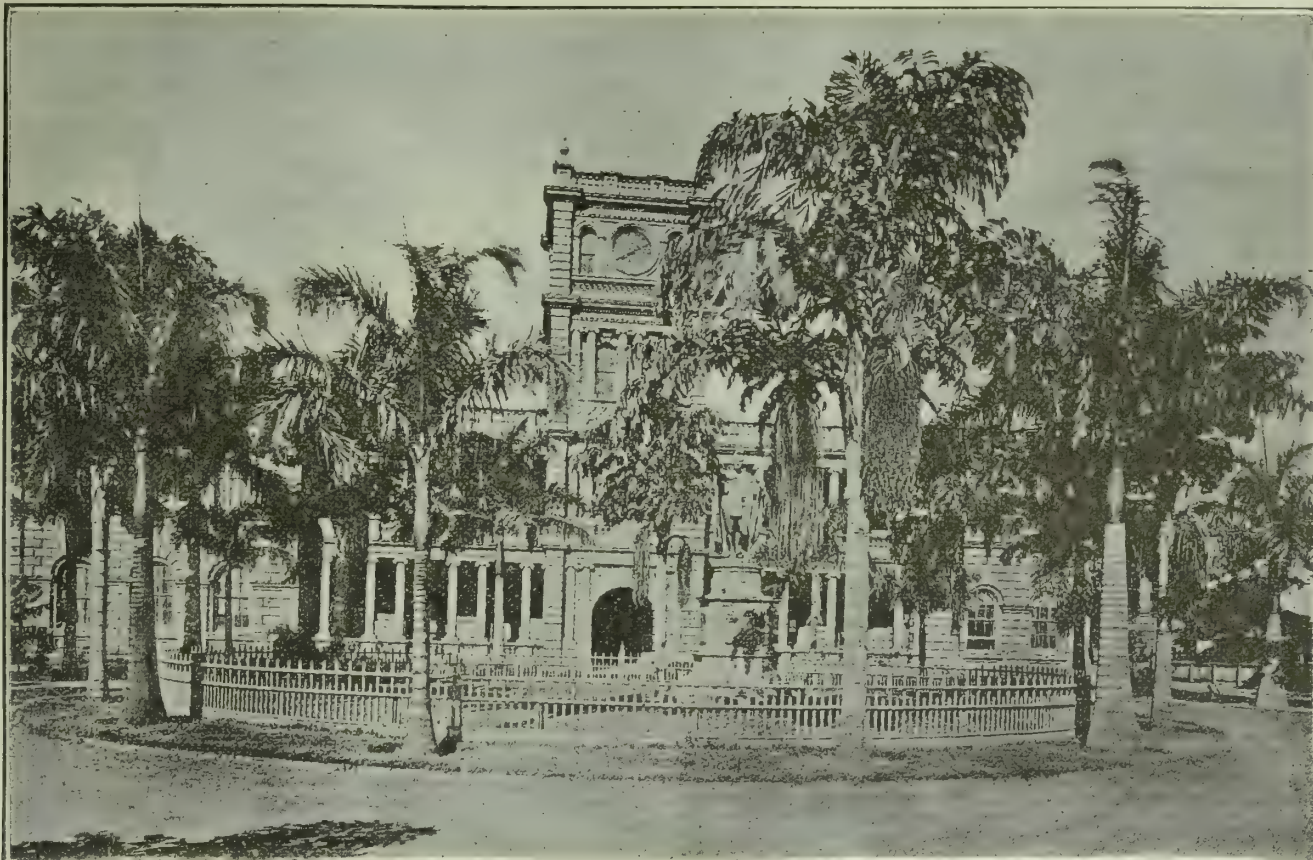
It must be evident to every thinking American that our very existence as an industrial people upon our present labor basis depends upon multiplying our domestic industries rather than diminishing them. Every new industry and every extension of an old one that can be maintained, and which supplies a want needed by the people, is a gain in every way—in giving employment to workingmen, in keeping profits at home by paying wages to our own people instead of those of other nations, in using our own instead of foreign raw material and tending in every way to make us as a nation industrially independent of the rest of the world. Of course the policy here outlined includes farming as well as manufacturing and mechanical enterprise. The farmer is thus doubly benefited—first, by being protected from foreign cheap labor, and secondly, by having a home market at his very door. As a contemporary has most truthfully said:

"The very highest form of national life is that which exists with the widest possible diversification of industry. England suffers to-day because she has intensified her manufactures and neglected to cultivate her soil thoroughly. Ireland and India suffer because they have agriculture without manufactures. We give our people a chance in every direction, and so we possess the highest prosperity and the most robust national life."

What has been said above in relation to nationalities is equally true of isolated States like California and other States and Territories on the Pacific Coast. We should strive, as far as practicable, to establish and support our own industries. We should manufacture our own boots and shoes, our own clothing, and especially all other industries, the raw materials for which can be produced upon our own soil. In so doing we save a double transportation across the continent, and give employment to our own wage-workers. It is only by such a policy that we can hope to build up an industrial empire upon the western slope, which we all so much desire.

WALLA WALLA WHEAT IN ENGLAND.—Col. F. J. Parker, who was commissioned by Gov. Squire to represent Washington Territory at the American Exposition in London, and has lately returned to Tacoma, says he found that Walla Walla wheat makes a large proportion of the London bread.

ACKNOWLEDGMENTS.—We are indebted to Hon. Leland Stanford for a package of recent Government publications relating to the industrial affairs of the country, which we shall find very valuable for reference.



GOVERNMENT BUILDING, HONOLULU, HAWAIIAN ISLANDS.



A GLIMPSE OF THE KILAUEA LAVA BEDS, HAWAIIAN ISLANDS.

taking he should be pronounced of "no account." There are many things in the business world that may bring about a failure which no human foresight could have anticipated or prevented. The simple fact of a "failure" should not be set down to the disadvantage of any man. It is the circumstances connected with the failure which should be taken into account in estimating a man's ability or honesty. Even if a man fails more than once, he should not be unqualifiedly condemned. The person who has never failed cannot possibly know whether he is possessed of the requisite amount of "grit" to constitute a successful business man.

until he could stand upon his feet alone, and crowned the victory by giving \$1,000,000 to help poor boys in time to come.

Abraham Lincoln failed to make both ends meet by chopping wood, failed to make his salt in the galley-slave life of a Mississippi flat-boatman. He had not wit enough to run a grocery, and yet he made himself the grandest character of the 19th century.

Horace Greeley tried three or four lines of business before he founded the *Tribune*, worth to-day \$1,000,000.

Patrick Henry failed in everything he undertook until he made himself the orator of his age and nation.

DEVELOPMENT MATTERS.

Joaquin Miller's Open Letters.

To the man who is waiting for the "boom":

A great many years ago a great man, the greatest man in all England, arose in his place in the House of Lords to address his peers on the subject of England's foreign policy.

He began his speech thus: "Shall I tell you how to maintain the integrity and the power of England at home and abroad forever?"

Every head was turned that way, and the great peer continued: "Shall I tell you how to make England and the English language the Eone land and the one language of the earth?" eagerly every face reached and turned toward the speaker. He took half a step forward in the narrow and prescribed little crescent wherein the peer of England transacts his official work, with the top of his hat for a desk, and reaching his long, bony finger far out toward the faces that reached toward him, he hissed, "Get land! get land! get land!" Then, clenching his two fists so tightly that he almost buried his nails in his palms, he shrieked, "Get land! get land! get land! and never let go a single handful of sand!"

I have not set this speech and scene down in detail or at all exactly, for it would take too long. I only give the substance and the spirit of the policy which was born there and then and which has made England what she is to-day. All over the world and at all times this one idea is, and long has been uppermost, "Get land! get land! get land! and never let go a single handful of sand!"

It is the national policy and it is the individual policy, both abroad and at home, whether under the British flag or the flag of another nation; this one vast and vehement idea is uppermost; Get land! get land! get land! and never let go a single handful of sand!

And now, my friend, you who are waiting for the "boom," shall I tell you how to bring a "boom" right to your door and keep it there for generations? I will tell you exactly how to do it.

But in the first place let me tell you that I hate "booms." They are bad for the country, bad for buyers, bad for sellers, bad for everybody, and most especially are they bad for the man who simply sits by and waits for a "boom." I hate "booms," "boomlets," "boomers," and all of that ilk heartily. The "boomer" never yet built a house or planted a tree; and he never will. He sits by and watches and waits for something to turn up. My friend, "a watched pot never boils." Go to work!

Meantime I will tell you how to secure your much-desired "boom." The method is simple. It is the great Englishman's recipe for maintaining the integrity of the British Empire: Get land! get land! get land! and never let go a single handful of land.

But this beating the bush for a "boom," this swapping half-dollars, this persistent and fabulous lying, which your new and most numerous real estate dealers indulge in, is simply ruinous; ruinous to yourselves most especially. It would be hard work to ruin a land like this. But if it could be ruined at all, I think the real estate dealer, this meddlesome and audacious "middle man," could do as much toward it, almost, as a first-class Italian earthquake.

No, don't misunderstand me now. There are real estate dealers and dealers in real estate. Gold and brass look much alike. You can hardly tell the difference at first sight; but the difference is great. And the difference is about as great between the legitimate real estate agent and the mushroom man who has two or three lots on a ten-cent margin and is sitting by waiting for a "boom." This idle and irresponsible "real estate agent" has suddenly become a very numerous nuisance.

When a man rushes out on to the sidewalk, sweeps out a big dry-goods box, creeps inside of it, labels his big dry-goods box a "real estate office," and sits down to wait for the "boom," I want to see his box blow over. And, really, if the wind would only blow half as hard as he blows, there would be but little left of his dry-goods box, or him either, before the full of the moon.

I was pleased to note the construction of two very elegant and spacious churches in East Oakland last month, and I spoke to my pastor about it recently, remarking that Oakland, good as she was, was growing better every day.

"No; growing worse every day."

"Why, how is that?"

"Well, those two new churches were needed badly enough, I can tell you; for the liars have suddenly become so numerous and their lies so large that we had to build those two spacious structures to contain them."

"You alarm me! What? who?"

"The new real estate dealers."

When will man learn that he rarely if ever deceives anybody but himself? The cold, frozen fact is when a man sets out to deceive the world he is about the only man in it who is really and truly deceived.

The loud-mouthed man who is working up his "boom" is simply an impertinence; he is an insult to the State, and he is a very, very serious damage to it. Let this nuisance, so far as it may be, be abated.

But the people are coming in spite of all his froth and Fourth-of-July nonsense. They are coming for the very solid and very simple rea-

sons that I briefly set down in my letter to the New York Herald.

Here are two letters, two out of 23 of nearly the same dates. I give them because they are brief, refreshing in their simplicity and ignorance (a sawmill at Oakland!) and because they are sincere and come from honest men of honest little towns of which few folks ever heard. The greater number of such letters come to me from the West. Four of the 23 mentioned above came from Wisconsin.

WALTHAM, Mass., Oct. 4, 1887.

Mr. Joaquin Miller—DEAR SIR: I must ask you to pardon me when I send you this letter, but I am besieged with a multitude of questions about the land you mentioned in your last letter in the *Rural Press*—near Oakland, and the two questions I would like to ask are: What chance would a man with \$5000 cash have to locate near Oakland to start a sawmill? Then, would a man with \$1000 or \$1200 do anything by establishing himself in the poultry-raising business?

We want to leave here, 60 of us, some time in November, but have not got things arranged as yet so we can get away. Some are desirous of getting near San Francisco and go into the truck farming or raising vegetables for the markets. We have not found any information in regard to that in any of the circulars that we have secured.

Hoping I have not intruded on your time too much, and that you can conveniently favor me with a little information as desired, I am, dear sir, Most respectfully yours,

259 Moody street.

SAM'L A. CHRISTIE.

And here comes a party of flying tourists all the way from New Jersey. The leader of the other party wants to put up a sawmill in Oakland; but it is clear that the people from New Jersey never yet have heard of Oakland—at least, they express no desire to go hunting in the woods, nor do they express one tremor of fear from prowling savages. Surely, surely they have never yet heard of the new dealers in real estate that now infest the forests of this wild region, that has not even a sawmill, called Oakland!

SOMERVILLE, N. J., Sept. 28, 1887.

Mrs. Miller gives me your address. In May, 1888, I want to take 50 to California. That now is your land. Present plan is to go via Canadian Pacific to Vancouver, south to San Francisco, then East. Where should I stop, if at all, save at Tacoma, Portland and San Francisco and then Salt Lake. We will have only 35 days in all. I do want to see your land, as you would have me, but as that is impossible, should I stop, save as above named? Would Eugene City, Mt. Shasta, Sacramento or any other spots pay for a 24 or a 48 hours' stop-over? I must arrange far ahead with hotels, etc., and also suit 50 people as well as myself. Answer.

A. V. D. HONEYMAN.

My California friend, in town or country, keep away from the horde of "middle men," and keep your land in your own hands. The people are coming, and they are not fools. Don't treat them as if they were by turning your property over to some loud-mouthed loafer who stands on the corner and howls up his "boom." He will frighten people away. Let him return to his original employment of drummer or book agent. Real estate is too royal for him; it is too kingly. The very word "real" is excellent Spanish and means "royal" or "kingly."

But the prodigal abundance of land out here has lost to us much of the imperial importance and dignity that ought to attach to royal estate.

In England a man is fairly content to make one per cent per annum out of the land which grows his ancestral oaks. He takes the rest out in his sense of possession and power. He feels that he is nearer the throne than the man who has no land. He can house and can feed the stranger. He has a home from which nothing but the hand of God can banish him. We ought to have, we are about to have, I hope, something of that feeling out here. I tell you proudly, land is worth a great deal more than you can cash it for in the market. Its title deeds, tracing back to the kings of Spain, or the highest power in the United States, bear the seal of dignity and character that should not be cheaply sold.

Twenty years from this date, ten? five? you will see such a chasm split open and yawning between the man who has land and the man who has not in this country as you never dreamed of.

Are you aware that within this year about all the Government land available for the plow passed forever from the hands of the Federal State? Well, it is a fact, and a fact that must be continually borne in mind when you come to cast up your balance-sheet and try to estimate the value of lands this year as against former years. Up to almost this date millions upon millions poured into the Federal treasury for lands. Suddenly these lands are all swept from the maps. They are in the hands of the people, the people who have got that grim old Saxon idea in their heads: "Get land! get land! get land! and never let go a single handful of sand!"

Of course, I don't mean all this literally. There is a lust for land that is base and miserly; it is a lust that should be despised. But I mean to say keep your lands well in hand, get more if you can, and hold on till your friends or your friends' friends come on from the States, then sell a part and sell at a good round sum in your own good time. If your young land agent wants a job, let him dig your potatoes.

Yes, the people are coming, and they are coming in spite of that brass band which San Diego has sent forward to frighten them away. They are coming in spite of all the multitudinous and multifarious lies that the land agents have told and are still telling about this tranquil and delicious dreamland.

But, oh, the idea, the impertinence of that

brass band! Still, as said before, the people will come for all that. There are Christians, still, in spite of the drum of the Salvation Army. And the claim of the land-blind and sand-blind people of San Diego that it is their brass-band energy that has started people to this coast is about on a par with the claim to Christian converts of the man who beats the drum under the red banner.

Dear, dear, delicious San Diego! If ever there was a tranquil spot on this earth—a place for love and lovers, a land of eternal afternoon, of absolute calm and content, of peace and rest and poetry—it is that bay and its serene and Sabbath-like environment away down yonder on the sunlit edge of Mexico. And yet that brass band! Not content with driving everybody daft in their midst, they have opened the thing out all over the States.

And the boomer strikes an attitude and shouts: "See what I have done! See what a fine climate I have made; fine seas, fine sunlight! Boom! boom! boom! let the band play!"

Oakland, Cal.

JOAQUIN MILLER.

PUBLIC AFFAIRS.

Tariff on Fruits.

EDITORS PRESS:—As the Annual Fruit-Growers' Convention will soon assemble in Santa Rosa, when probably a protective tariff on California fruits will be considered, it may be well to state in advance a few points on the policy and fairness of such a protective tariff.

The General Government now exacts duties on all fruits imported into this from foreign countries, not so much probably for the purpose of protecting the interests of domestic fruit-growers as for revenue purposes. Yet to the extent of this tariff of duties, the domestic fruit-grower has all the benefits of protection. In addition to interest, insurance, freights and commissions, the importer must pay the tariff duties on his importation before he can place his goods on our markets for sale. These tariff duties then enter into the cost of the fruit so imported. Upon the sum of these costs of the fruit the importer must make a commission on his sales, which is paid by the consumer, else the importation would be attended with positive loss to some one interested in the importation.

This fruit tariff is so light, however, that it does not sensibly affect the amount of importations. It is so light that the consumer in making his purchases makes little or no account of it; but the Government gets the revenue from the importation all the same.

Now, as the tendency of all imports on importations is to lessen importations and thereby restrict trade and commerce, it becomes a question of national policy how and to what extent these imports can be levied without injury to the trade and commerce of the country and without bearing heavily on the people generally.

It ought to be, and I assume is the policy of every well-ordered Government to guarantee equal protection to every branch of industry—to agriculture, to commerce, and to manufactures. To give to any one of these great industries peculiar and exclusive privileges without considering how the other great interests might be affected thereby would be dangerous legislation.

The commerce of the United States is largely concerned in the fruit trade, both green and dried. The imports of prunes alone, it was stated at one of the meetings of the State Horticultural Society, not long since, for the year ending June 30, 1887, were 90,000,000 pounds. To that add the imports of raisins, of dates, of oranges, lemons and other tropical and semi-tropical fruits, and the total value of the same amounts to many millions of dollars. Then the United States are very large exporters of dried fruits, apples and peaches, mainly to those countries which furnish us with the bulk of our prunes. This trade gives employment to many ships and men to man them, to merchants, clerks and factors, and incidentally to thousands who in one way and another furnish supplies.

Any legislation which would seriously and perhaps injuriously affect this vast trade ought to be approached with great caution. Would not the high protective tariff contended for by the California raisin and prune-growers seriously and injuriously affect this commerce? By such a high protective tariff the raisin and prune-growers hope and expect to materially lessen importations and thereby give them the control of the home market. Now is this fair, is it just? The people of Europe have raisins, prunes, more than they want. The people of the United States have peaches and apples, and soon will have dried apricots more than they want. A trade in these commodities to the mutual advantage of all has been carried on for years. Shall this trade be restricted and crippled in order to give the raisin and prune-grower of California a monopoly of the home market? This is what in effect he is contending for, although he may not be aware of the far-reaching consequences dependent on the adoption of the protection he contends for.

But does the raisin and prune-grower need any additional protection to what he now has? Is he not at the present time reaping rich returns in reward for his enterprise and outlay of capital? Has he not in the past years been growing richer and richer in prosecuting these

industries? His success has been so constant and so apparent as to induce others to enter upon the same industries in such numbers as to exhaust the annual stock of young trees in the nurseries of the State. Such being the fact, additional protection cannot in fairness and honesty be urged. But driven from that point, it is asserted that the old abandoned vineyard lands of France are now being planted to prunes, and that unless the importation of prunes be restricted the prune-grower of California will be compelled to abandon his orchard and resort to something else for a living. In reply, I will say, "Sufficient unto the day is the evil thereof." I think it will be time enough to pay our respects to the enemy when he puts in an appearance. In the meantime, if prices recede somewhat from what now prevail, more prunes will be consumed, trade and commerce will thereby be stimulated, and the prune-growers will still prosper.

The prune crop of California last year was about 3,000,000 pounds, or about one-thirteenth the consumption of the country. Now in view of this fact, is it not a little presumptuous to demand a high protective duty on prunes in order to lessen importations, and thereby advance the price of prunes to consumers, the more especially as nothing is offered the consumer in exchange for the special protection demanded? Higher wages to the laborer is not proposed. Neither is it proposed nor expected to guarantee the consumer any higher price for anything he may have to sell and the prune-grower may want to buy, than he probably would obtain irrespective of this increased duty contended for. It seems to me the spirit of an oppressive monopoly is conceded in this demand for an increase of duties on prunes and raisins. With equal reason and justice may the orange and lemon-growers of California demand a high protective tariff on those fruits of foreign importation, and all at the expense of the consumer for which no return is proposed. Let us continue to tarry at Jericho awhile longer and try to acquire evidence in the light of experience.

WM. C. BLACKWOOD.

Haywards, Oct. 31, 1887.

The Fairs.

The Downey Fair.

The forming of the Los Angeles County Agricultural Association in 1884 was so largely due to the farmers at and around Downey, that that was the place chosen for holding the fairs of the society. Their fourth annual exhibition opened the first Tuesday in October with a favorable showing in the various departments, although the occasion was saddened by the death of one of the most active directors, T. R. Tierce, an old and respected citizen of Downey, to whom Hon. A. E. Davis made feeling reference in his opening address.

The interior of the pavilion was profusely but elegantly decorated with evergreens and flowers, and the display of fruits and field productions is said to have excelled all previous ones, not merely in variety but also in quality and arrangement, showing that the interest grows from year to year.

Among the many exhibitors, W. H. Carter made a fine display of apples, including Fall pippins, New York pippins, Bellflower, Limber Twigs, Rhode Island Greening and a dozen other varieties. M. J. McGaugh had a conical stand, six feet high, supporting 31 varieties of apples and eight of pears, beside pomegranates and quinces. James Stewart's collection included 21 kinds of fine table grapes, 24 of apples, four of pears; also oranges, figs, quinces, corn, etc., all of his own growing. The peaches of H. Hood and T. L. Cooper, and the lemons exhibited by E. L. Barnett and J. W. Cate, each of whom had a large and varied outlay, were specially mentioned. In L. W. Houghton's extensive display of citrus and deciduous fruits were apples 15 inches in girth and weighing a pound and upward. But we can name only a few of the exhibitors.

Passing the tempting arrays of jellies, preserves, etc., the vegetable prodigies of Los Nietos and all that fertile neighborhood were well exemplified. There were corn-stalks 20 feet in height, on some of which were counted six well-matured ears, measuring up to 12 and 15 inches long, with 20 perfect rows of corn to the cob. Pumpkins and squashes, two yards in circumference and weighing 200 pounds apiece, were scattered about the hall, with six-pound potatoes that measured five inches through and 12 inches in length, and sweet potatoes, yellow, white and pink, from five to ten pounds each. Then there were cabbages, turnips, onions, etc., marvelous, indeed, to the Eastern visitor; and of sugar-beets, four monsters, exhibited by Mr. Fox, aggregated over 200 pounds, while other specimens weighed 75.

The live-stock entries were numerous and creditable. Among the horses L. B. Weller's magnificent Percheron "Vendee," imported directly from Norway, stood 16½ hands high and weighed 1675 pounds. A two-year-old stallion, out of L. J. Rose's "Del Sur," belonging to George Clark, and J. H. Leihy's "Capt. Clark," from "Capt. Jack," were greatly admired.

C. B. Woodhead of Fulton Wells had fine cattle of several varieties, among which was noticed a three-year-old Jersey bull, valued at \$1500. His sire sold at St. Louis for \$5600 when but one year old. T. J. Kerns showed a Jersey bull, also a fine cow and calf; and J. G. Chapman a beautiful Jersey bull calf. C. A.

Coffman had a thoroughbred Durham bull one year old, a noble fellow, also a fine cow, with a calf two months old, and a graded Durham cow. T. D. Cheney showed three imported and several California-born Holstein cows, together with a fine bull bred at Syracuse, N. Y.

For poultry J. D. James exhibited excellent Brown Leghorns, Plymouth Rocks and White Leghorns. Walter Pratt and W. H. Mason showed some guinea pigs, and John Hamerton nine specimens of English rabbits.

The races, the ladies' riding match and the baby-show we can barely mention. The list of awards that has reached us appears too incomplete for republication; and we will only add that the Los Angeles county fair of 1887 is averred by visitors to have been the best held yet under the auspices of the society, and great praise is accorded to the people of Downey and the officers of the association.

Contra Costa Fair.

The exhibition of the Contra Costa Agricultural and Industrial Association, which took place at Concord fair grounds, Oct. 3d to 8th, is highly spoken of by those who attended. The new pavilion, placed under spreading oaks near the west side of the track, is a great improvement on the old structure, and gives ample room for displaying not only field and orchard products, but the quilts, embroidery, pictures and fancy-work of the ladies.

Among the fine exhibits which drew special notice was that from Gen. Wagner's "Oak View Farm," embracing 60 varieties of fruit and grapes. R. C. Terry of Clayton showed this season's product of four vines, as follows: Mataro, 35½ pounds; Rose Chasselas, 49½ pounds; Sauvignon Verte, 52½ pounds; Berger, 54½ pounds. These vines are only five years old, and, being planted seven feet apart, average 840 pounds to the acre. Mr. Terry has 22 varieties of grapes in his vineyard.

E. B. Smith displayed fine Grenache, Golden Chasselas, second-crop Zinfandel, White Malaga, Mataro, Black Malvoisie, Petite Buche, Black Burgundy, Cabernet Malbee, Rose Chasselas and White Nice; and Siverio Soto's English walnuts were excellent.

The stock parade Wednesday comprised over 80 horses led by the handsome prize thoroughbred Lame Deer, followed by the magnificent Norman stallion Vienot, Seth Cook's superb Cleveland Bays, and many others named in the list of awards. The Polled Angus and Holstein herds, with one grade Durham bull, made up the cattle.

Besides those published in our last week's issue, we note the following:

Additional Awards.

HORSES—2d roadster, mare 4 yrs old, Nellie, W. Hawes; sucking colt, Allan C., W. Caven; draft stallion 3 yrs old, Napoleon, J. Cantua. Sweepstakes—G. T. Wilds, best pair work horses, 4 yrs old, Swift and Long; M. W. Hall, 2d do, Napoleon and Bonaparte; S. Cook, stallion for all purposes, 4 yrs old, Baron Hilton, and 2d do, Royal Studley; A. Boss, best mare, 4 yrs old, Nell; J. Coats, 2d do; D. M. Bollman, best mare, 3 yrs old, Betsey; Van R. Sherman, 2d do, Tony Oakes; A. Boss, best sucking colt, Lady; F. S. Swart, 2d do; B. S. Clark, best family colts with sire, Lame Deer.

AGRICULTURAL IMPLEMENTS—C. Jaquith, mowers, single plows, 6-horse gang plow, spring-tooth horse rake; M. Kirsh, wooden frame spring-tooth harrow, steel frame spring-tooth harrow; J. A. Bilz, light training cart, 2-horse and 1-horse vineyard plow.

POULTRY—Best exhibit poultry for breed, condition and variety, geese, Van R. Sherman; ducks, Mrs. A. Boss; bronze turkeys, E. W. Williams; Jap. geese, H. Miller.

MISCELLANEOUS—Best butter, T. Wagner; 2d do, Miss C. Durham; dried apricots, P. Wells; English walnuts, S. Soto.

Arroyo Grande Fair.

The three-days' fair held at Arroyo Grande, San Luis Obispo county, October 6th to 8th, was a genuine agricultural exposition, without races. The stock parade, however, was one of the main features, and the display of fine horses and cattle did credit to the breeders of the valley. There was keen rivalry, too, among the mothers of babies under 12 months old, and the stage in the pavilion Saturday afternoon was transformed into a general nursery.

This region has become famous for its fine apples and huge vegetables. J. F. Beckett, nurseryman, whose general display of fruits was adjudged the best, showed 45 varieties of apples, 3 of pears and 4 of peaches, besides grapes, figs, raspberries, almonds, blackberries and prunes.

Among the vegetables on view were pumpkins of 190 pounds weight, a 64-pound cabbage, a 69-pound beet, and a 5-pound onion, 23 inches in circumference. Silk of fine quality, made in the city of San Luis Obispo, was displayed. The flower show was spoken of as lovely. The visitors were many, and enthusiastic in admiring praise.

We append the awards, excepting for preserves and jellies.

Awards—Live-Stock.

DRAFT HORSES—Best stallion, not thoroughbred, 3 yrs or over, J. M. McGlashan; 2d do, H. D. Albright; stallion, 2 yrs old, F. M. Gibson; mare, 3 yrs old or over, H. J. Price; mares, 2 yrs old and 1 yr old, W. D. Sevier; sucking colt, J. Sheehy; matched team, J. V. Young. Special mention—Draft horses (two colts, 3 and 4 yrs old) J. M. McGlashan; draft horse, 2 yrs old, W. A. Henry; match team, for all purposes, F. M. Gibson.

ROADSTERS—Best stallion, 3 yrs old or over, P. Donohue; 2d do, yearling stallion, 2-yr-old mare and single carriage-horse, N. H. Fitzwater; best

mare, 3 yrs old or over, J. C. Barnett; 2d do, H. A. Conrad; sucking colt, E. F. Conrad; best span matched roadsters in harness, A. Phillips; 2d do, E. F. Conrad. Special mention—Best match team for all purposes, F. M. Gibson.

CATTLE—Thoroughbred Holstein—All awards, E. W. Steele.

ANGORA GOATS—D. F. Newson.

SWINE—Thoroughbred sow, Poland China, best grade boar, W. A. Henry; sow and pigs, J. V. N. Young; grade sow, S. M. Findley.

POULTRY, ETC.—Best general display, and trio, Light Brahmas, J. G. Stevenson; White Leghorns, Brown Leghorns, E. Leedham; Plymouth Rocks, G. O. Taylor; Buff Cochins, J. F. Gibson; geese, W. A. Conrad; Pekin Ducks, J. S. Lewis; Irish Setter pups, P. J. Black.

Grain and Vegetables.

Best 25 lbs common barley, W. A. Conrad. Rye, R. Farmer. Yellow corn and corn on stalk, W. E. Aholt. White corn, J. G. Stevenson.

Best 65 lbs small white beans, A. Phillips. Pink beans, J. G. Stevenson. Peas, J. Gregory. Largest sunflower, Jos. Gibson.

Best general display vegetables, best gourds, carrots, onions, sweet potatoes, largest cabbage, string peppers, J. V. N. Young. Largest and heaviest squash, R. Farmer and I. B. Records. (The two squashes weighed the same.) Five heaviest squash, H. J. Price. Best assortment table squash and best display cabbages, S. M. Findley. Six largest beets and heaviest Mangel Wurtzel beets, J. D. Roberts. Table radishes, T. B. Records. Potatoes, J. S. Lewis. Turnips, J. G. Stevenson. Display cauliflower, A. B. Hasbrouck. Largest cauliflower, H. Hess. Tomatoes, E. W. Steele. Cucumbers, C. Grieb.

Fruit.

Best general display, largest variety apples and plates Fall pippins, Jonathan, Roxbury russet, Ben Davis and Winesap apples, J. F. Beckett; R. I. greenings, E. W. Steele; Belle Fleur and Golden Russet apples, peaches, quinces, J. V. N. Young; W. W. Pearmain, Newtown pippins, Nickajack and Smith's cider apples and plums, J. Gregory; Baldwin and Vandever apples, G. O. Taylor; King of Tompkins Co. apples, E. Leedham; Skinner's pippins, blackberries, strawberries and Bailey sweet apples, W. N. Short; Seedling apples, T. Seeley; Spitzenbergs, Mrs. Grieb; pears, best 5 boxes apples, C. J. Mason; display grapes, A. B. Hasbrouck; plate grapes, H. Hess; oranges, J. Barnett; walnuts, Mrs. Kennedy; almonds, J. J. Monroe; display dried fruit, Mrs. E. W. Steele; pickled olives, D. F. Newsom.

Dairy Products

BUTTER—M. M. Olive. **CHEESE**—A. B. Hasbrouck, D. F. Newsom.

Plants and Flowers.

Best coll. cut flowers, most tastefully arranged bouquet, Mrs. G. O. Taylor; best and largest display house-plants, Mrs. J. L. Eddie; second do, Mrs. John S. Rice; gen. display trees and plants, J. F. Beckett; best floral design, Miss Rilla Young.

Stockton Fair Awards.

From the official report of the directors of the San Joaquin Valley (24 District) Agricultural Association, on premiums awarded at the fair lately held in Stockton, we make extracts as follows. Exhibitors are of Stockton, unless otherwise specified.

Horses.

THOROUGHBREDS—Stallions—Grover Cleveland, 3 yrs old, Matt Storms, S. F., \$25; Bolero, 3, D. J. McCarty, S. F., \$15; Surento, 1, same, \$10; Duke of Stanislaus, 1, S. Miller, Modesto, 2d, \$4. Mare or gelding—Adeline, 3 yrs old, D. J. McCarty, S. F., \$15; Narcola, 3, M. Storms, S. F., 2d, \$5; Rose-dale, 2, same, \$10.

ROADSTERS—Stallions—Hawthorne, 8 yrs old, L. U. Shippee, \$25; Lynwood, 7, P. Visser, 2d, \$10; Ebony, 3, C. Dorsey, Oakdale, \$15; Reliance, Jr., 3, J. K. Baldwin, Bellota, 2, \$5; —, 2, L. M. Morse, Lodi, \$10; Colonel, 2, S. P. Bailey, 2d, \$3; Pericles, 1, W. R. Bailey, \$7.50; Combination, 1, A. C. McDowell, Pleasanton, 2d, \$2.50. Mare or gelding—Charlie, 4 yrs old, C. H. Wakefield, \$15; Mag, 10, C. Lamasney, \$5; Bohemian Girl, 3, R. E. Stowe, \$10; Amy H., 3, S. Hewlett, 2d, \$3; Hawthorne Maid, 2, L. U. Shippee, \$7.50; Carrie Vernon, 2, J. A. McClelland, 2d, \$2.50; Flora, yearling filly, C. Lamasney, \$5.50; Sarah Vernon, yearling filly, G. W. French, 2d, \$2. Matched roadsters owned and used by exhibitor—Geo. and Lady Washington, R. C. Sargent, \$20; Lady and Mollie, J. F. Visser, 2d, \$7. Colts—Billy Vernon, trotting sucking colt, W. French, \$4; —, P. Visser, 2d, \$2; Flora, trotting sucking filly, L. U. Shippee, \$4; —, P. Visser, 2d, \$2.

ALL PURPOSES—Stallions—Comet, 12 yrs, S. Acker, Oakdale, \$25; Prince Blone, A. Clark, 2d, \$16. Two yrs old—Doctor, F. R. Shaw, Salina, Kansas, \$10. One yr old—Nephew, Jr., N. Nevin, \$9; Joe, J. C. Bowden, 2d, \$3. Sucking colt—Priam Jo, W. L. Morris, \$3. Mares 3 yrs old—Clara G, G. Erlich, \$10. Two yrs old—Nellie Vernon, A. Gross, \$7.50. One yr old—Victoria, Wm. Thomas, Douglas Flat, \$5; 2d, \$2. Sucking filly—Jennett, S. Hewlett, \$2.

DRAFT HORSES—Stallions 3 yrs old—Fasian, C. K. Bailey, \$25; Eureka, same, 2d, \$10. Two yrs old—Sir Francis, F. R. Shaw, Salina, Kansas, \$15; Arab, E. R. Elliott, Lodi, 2d, \$5. One yr old—Prince, J. Roberts, Irvington, \$9; Sampson, A. McCormick, Linden, 2d, \$3. Sucking colt—Roxey, A. B. Sperry, \$3. Mares three yrs old—Lady Smith, F. R. Shaw, Salina, Kansas, \$10; Jessie, U. Martin, 2d, \$4. One yr old—Francis, A. B. Sperry, \$5. Sucking filly—Vic, U. Martin, \$2. Match team (draft) owned by exhibitor—Princess and Milkmaid, A. B. Sperry, \$15; Princess Beatrice and Lady Smith, F. R. Shaw, Salina, Kansas, 2d, \$5.

CARRIAGE ANIMAL—Mem and Jack, R. W. Russell, \$20; Jim and Bill, C. Hunting, Acampo, 2d, \$7.

SHETLANDS—Matched span and saddle pony—J. D. McCarty, S. F.—special premium recommended.

Mules, Jacks and Jennies.

MULES—Spans, Mollie and Collie, L. U. Shippee, \$15; Dock and Sam, F. B. Haslam, 2d, \$5. Jacks, 3-yr-old, Big Tom, H. Hamilton, Grayson, \$25; Jim, T. P. Heath, 2d, \$10; 2-yr-old, Tomy,

L. U. Shippee, \$15; Frank, same, 2d, \$5; 1-yr-old, Washington Eclipse, Jr., L. Carter, Ceres, \$9; sucking jack and all jennets, L. U. Shippee.

Cattle.

DURHAM—All awards to C. C. Younger, San Jose.

JERSEY—Bull, 1-yr-old, Sneath, Jr., W. A. French, \$9.

AYRSHIRE—All awards to G. Bement & Son, Redwood City.

HOLSTEIN—All awards to F. H. Burke, Menlo Park, save 2-yr-old bull, Pio Pico, W. H. Mayes, \$15.

HEREFORD—All awards to Jas. Kay, Sacramento. **GRADED**—3-yr-old cow, Bessie F., W. A. French, \$10.

Sheep.

Cotswold ram, 1-yr-old, C. C. Younger, San Jose, \$10.

Southdown ram, 2-yr-old, Geo. Bement & Son, Redwood City, \$10.

Swine.

Essex and Berkshire boars, Black Dick, Berkshire, L. U. Shippee, \$10; Stockton Chief, Berkshire, A. B. Sperry, 2d, \$4. Sows, —, L. U. Shippee, \$9; Peggy, C. A. Stowe, 2d, \$3. Sow, Queen Bess and 8 pigs, C. A. Stowe, \$10.

Poultry.

Plymouth Rocks, L. U. Shippee, \$2.50; J. C. Bowden, 2d, \$1.25.

Brown Leghorns, W. A. French, 1st and 2d, \$2.50 and \$1.25.

Bantams, J. C. Bowden, \$2.50. Geese, Toulouse, Frank H. Burke, Menlo Park, \$2.50.

Turkeys, Bronze, L. U. Shippee, \$3; Jap., W. A. French, 2d, \$1.50.

FARM PRODUCTS RAISED IN DISTRICT NO. 2. Bale hops, J. V. Putnam, Clements, \$5. English walnuts, S. Y. Strait, \$2. Soft-shelled almonds, Mrs. Jos. Hale, \$2.

Vegetables.

Largest variety raised on ranch of exhibitor, Mrs. C. C. Castle, \$10. Largest exhibit of vegetables, fruit, etc., by one person, C. V. Thompson, \$20.

Grain and Grasses.

Thirty bunches grain not less than 7 varieties, and most artistically arranged display of grain, J. D. Huffman, Lodi, \$10.

Horticultural Department.

Largest and best collection apples, Mrs. E. A. Hill, Olanche, \$15; 2d do., Jos. Putnam, Clements, \$5. Collection pears, Jos. Putnam, \$15; 2d do., H. Quinn, Chinese Camp, \$5. Twelve quinces, L. U. Shippee, 1st, \$3; 2d do., Mrs. W. B. Harrison. Collection grapes, Geo. West, \$10; 2d do., W. B. West, \$5. Collection figs, L. U. Shippee, \$3; 2d do., F. Yost, \$1. Collection pomegranates, Mrs. B. Keef, \$3. Six figs, Mrs. J. C. Reid, Stockton. Largest and best exhibit fruit raised in the district by one person, J. Putnam, \$20. Dried prunes, Mrs. E. J. Lockett, Brighton, \$3; 2d do., Mrs. J. Hale, Brighton, \$1. Raisins, Mrs. E. J. Lockett, \$3; 2d, V. A. Lyons, \$1. Dried figs, Mrs. J. Hale, \$3; 2d, J. C. Reid, \$1. Dried plums, V. A. Lyons, \$3. Dried peaches, Bahach Plantation, Merced county, \$2; Mrs. J. Hale, honorable mention. Dried pears, Mrs. E. J. Lockett, Brighton, \$2. Dried apricots, same, \$2. Dried nectarines, H. S. Jory, \$2. Dried cherries, Mrs. E. J. Lockett, Brighton. Fruit preserved in spirits, Mrs. J. Hale, \$5; 2d, Mrs. J. C. Reid, \$2.50. Fruit preserved in sugar, Mrs. J. Hale, \$10; 2d, Mrs. J. C. Reid, \$5. Jellies, Mrs. J. C. Reid, \$5; 2d, Mrs. I. A. Reid, \$2.50.

Floral.

Flowering plants in bloom, E. C. Clowes, \$5. Collection ornamental foliage plants, same, \$2. Bouquets, same, \$2. Collection plants suitable for greenhouse, same, \$2. Cut flowers, Mrs. R. W. Russel, \$3. Hanging baskets, R. S. Bates, \$2. Ornamental grasses, Miss M. Marshall, \$2. Best and largest display floral pieces, same, \$15. Single floral piece, same \$3. The board awarded special premium to Mrs. R. S. Bates for floral display and exhibitions, \$10; 2d best display of pieces, Ladies' Committee of 100, \$5. Best single piece, Mrs. R. S. Bates, \$7.

Silk Culture.

Display cocoons, Mrs. J. D. Utt, \$8; 2d, Mrs. J. C. Reid, \$8. Reeled silk, same, \$8.

Agricultural Implements, Etc.

Best mowing machine and plow for all purposes, J. H. Condit; comb. clod-crusher, harrow and pulverizer, gang plow, farming-mill, cultivator, churn, Grangers' Union; fruit-drier, H. S. Jory; farm wagon for general purposes, M. P. Henderson & Son; hay press, grain-cleaning attachment for thrasher, and best display of agricultural implements by any one house, California manufacture, Stockton Combined Harvester and Agricultural Works.

Special Mention.

The committee recommend special mention and special premiums as follows: Trace and whiffletree guard, L. A. Lasher; grape crushers, S. Rothlis-burger; cleaner for combined harvester, Stockton, C. H. & A. Works; Triumph reaper, Excelsior sower, and 8 different plows, H. C. Shaw; plungers and valves for deep and shallow wells, John Jackson; pulverizer, D. Lubin, Sacramento; Golden Gate separator and picket fence, J. C. Bowden; machine for making fence, machine-made fence and fire escape, Charles Green; churn-dasher, Baxter & Goodfriend; coll. French walnuts, W. B. West; banana trees, Mrs. I. D. Hamilton; tobacco, A. Thornton, New Hope; dried strawberries and dried blackberries, Mrs. E. J. Lockett, Brighton; general display of fruit from one ranch Buhach plantation, Merced; watermelon cab-in 20x20 feet square, Ladies' Committee, Lodi; mountain quail, Rhodes; Redwood plank 6 inches thick by 55 inches wide and 17 feet long, H. C. Smith; county exhibit, San Joaquin county, \$150; steam irrigating pump, W. T. Garrett & Co., S. F. gold medal; horse-power or windmill pump, Fred Ruhl, \$40; 2d do, John Jackson, Stockton, \$20; 3d do, Root, Nelson & Co., Sacramento, \$10.

THE Pacific Coast Conference of Charities is to meet in this city December 13th and have a four-days' session at Union Square hall.

DEATH IN THE WATER.

IS THE ELEMENT WE DRINK DECIMATING THE PEOPLE?

How a Universal Menace to Health May be Disarmed.

A few years ago the people in a certain section in one of the leading cities of the State were prostrated with a malignant disease, and upon investigation it was found that only those who used water from a famous old well were the victims.

Professor S. A. Lattimore, analyst of the New York State Board of Health, upon analyzing water from this well, found it more deadly than the city sewage!

The filling up of the old well stopped the ravages of the disease.

Not long since the writer noticed, while some men were making an excavation for a large building, a stratum of dark-colored earth running from near the surface to hard pan. There it took another course toward a well near at hand. The water from this well had for years been tainted with the drainings from a receiving vault, the percolations of which had discolored the earth!

Terrible!

A similar condition of things exists in every village and city where well water is used, and though the filtering which the fluids receive in passing through the earth may give them a clear appearance, yet the poison and disease remains, though the water may look never so clear.

It is still worse with the farmer, for the drainage from the barn-yard and the slops from the kitchen eventually find their way into the family well!

The same condition of things exists in our large cities, whose water supplies are rivers fed by little streams that carry off the filth and drainage from houses. This "water" is eventually drunk by rich and poor alike with great evil.

Some cautious people resort to the filter for purifying this water, but even the filter does not remove this poison, for water of the most deadly character may pass through this filter and become clear, yet the poison disguised is there.

They who use filters know that they must be renewed at regular periods, for even though they do not take out all the impurity, they soon become foul.

Now in like manner the human kidneys act as a filter for the blood, and if they are filled up with impurities and become foul, like the filter, all the blood in the system coursing through them becomes bad, for it is now a conceded fact that the kidneys are the chief means whereby the blood is purified. These organs are filled with thousands of hair-like tubes which drain the impurities from the blood, as the sewer pipes drain impurities from our houses.

If a sewer pipe breaks under the house, the sewage escapes into the earth and fills the house with poisonous gas; so if any of the thousand and one little hair-like sewer tubes of the kidneys break down, the entire body is affected by this awful poison.

It is a scientific fact that the kidneys have few nerves of sensation; and, consequently, disease may exist in these organs for a long time and not be suspected by the individual. It is impossible to filter or take the death out of the blood when the least derangement exists in these organs, and if the blood is not filtered then the uric acid, or kidney poison, removable only by Warner's safe cure, accumulates in the system and attacks any organ, producing nine out of ten ailments, just as sewer gas and bad drainage produce so many fatal disorders.

Kidney disease may be known to exist if there is any marked departure from ordinary health without apparent known cause, and it should be understood by all that the greatest peril exists, and is intensified, if there is the least neglect to treat it promptly with that great specific, Warner's safe cure, a remedy that has received the highest recognition by scientific men who have thoroughly investigated the character of kidney derangements.

They may not tell us that the cause of so many diseases in this organ is the impure water or any other one thing, but this poisonous water with its impurities coursing constantly through these delicate organs undoubtedly does produce much of the decay and disease which eventually terminate in the fatal Bright's disease, for this disease, alike among the drinking men, prohibitionists, the tobacco slave, the laborer, the merchant and the tramp, works terrible devastation every year.

It is well known that the liver, which is so easily thrown "out of gear," as they say, very readily disturbs the action of the kidneys. That organ, when deranged, immediately announces the fact by sal-low skin, constipated bowels, coated tongue, and headaches; but the kidney, when diseased, struggles on for a long time, and the fact of its disease can only be discovered by the aid of the microscope or by the physician who is skillful enough to trace the most indirect effects in the system to the derangement of these organs, as the prime cause.

The public is learning much on this subject, and when it comes to understand that the kidneys are the real health regulators, as they are the real blood purifiers of the system, they will escape an infinite amount of unnecessary suffering, and add length of days and happiness to their lot.

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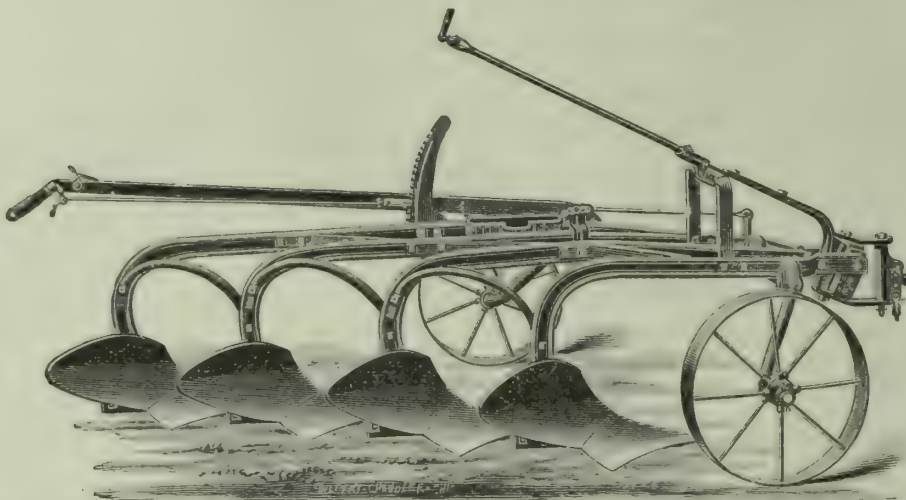
THREE,

FOUR

—AND—

FIVE

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THE VINEYARD.
Growing Table Grapes in California.

The State Horticultural Society met in this city Oct. 28th, President Hilgard in the chair. In connection with the reading of the minutes of the last meeting, Gilbert Tompkins called attention to statements made of the very small pits which some varieties of Japanese plums contain, believing this to be a feature to be considered in forming an estimate of their value.

Mr. C. E. Hathaway of San Lorenzo was elected a regular member; Mrs. J. M. Dyer of San Francisco, H. E. Amore of San Francisco and Noah G. Rogers of Los Gatos were proposed for election next month.

As remittances of dues from members had been slow to arrive, the secretary was given until the next meeting to prepare a financial statement for the year.

The election of officers for the ensuing year was had with the following result:

President, E. W. Hilgard; vice-president, A. T. Hatch; secretary, E. J. Wickson; treasurer, R. J. Trumbull. Directors—J. A. Wilcox, L. Coates, F. C. De Long, W. C. Blackwood, D. Lubin.

Memorial to Matthew Cooke.

As supplementary to the resolutions adopted at the last meeting, the following was unanimously adopted:

WHEREAS, The fruit-growers of this State owe the late Matthew Cooke a debt of gratitude as being the first intelligent leader in the battle against the depredations of insects; and

Whereas, His advice and counsel have saved the State untold millions; and

Whereas, It should not be forgotten that Mr. Cooke contracted the germs of his fatal sickness during the time of his holding the office of Horticultural Officer of this State through his ceaseless devotion to his duties; and

Whereas, We believe that the fruit-growers ought to give an expression of this gratitude worthy of his memory, therefore be it

Resolved, That a suitable memorial be erected on his grave, and be it further

Resolved, That a committee be appointed to take the necessary steps, and that a subscription list for the purpose be opened immediately.

Resolved, That a copy of these resolutions be forwarded to the bereaved family of the late Matthew Cooke.

W. G. KLEE, Chairman.

The resolutions were favored by several speakers. Mr. Tompkins remarked that the memorial could take a practical shape by fruit-growers subscribing for a good large number of Mr. Cook's work on "Insects Injurious to Fruit Trees, Vines, etc.," and Mr. Hatch approved this and added that fruit-growers should see to it that this work was in all school libraries, and the smaller work, of which a new edition is now being prepared, should be introduced in all public schools as a text-book. These remarks were regarded as suggestions to the committee, and upon motion of Mr. Lelong, a committee was appointed, with power to act, as follows: E. W. Hilgard, Gilbert Tompkins, W. G. Klee, B. M. Lelong and Leonard Coates.

Thanks to the Board of Horticulture.

Mr. Hatch introduced the following, which were unanimously adopted:

Resolved, That the members of the State Horticultural Society acknowledge with sincere thanks the courtesy extended to them by the officers of the State Board of Horticulture in the welcome to hold their monthly meetings in the elegant and accessible rooms of the board.

Resolved, That we express our sense of appreciation of the enterprise of the board in affording not only to our society, but to horticulturists generally, a headquarters in San Francisco befitting the importance of our great fruit interest, supplied with horticultural literature and museum specimens, and we can but express our belief that providing such facilities for gaining information will be of great and permanent value not only to our own citizens, but to the many desirable people from abroad who are now seeking homes in this State.

Table Grapes.

The President called up the regular subject for discussion, "Growing Table Grapes in California," by remarking the importance of the subject and the fact that the Grape-Growers and Wine-Makers' Association had so far found its time wholly occupied with other vine interests. He called upon W. W. Smith of Vacaville, who opened the discussion.

Mr. Smith grows table grapes only. His chief varieties are Flame Tokay and Muscats, though he has also Emperor, Chasselas Fontainebleau, White Sweetwater, Rose Peru and others. Out of 32 acres, 26 are given to Tokays and Muscats. The Chasselas Fontainebleau pays for shipment to the East, if shipped early; so does the White Sweetwater. The White St. Peters and Madelaine Blanche are earlier, but too tender for shipment. They are much alike, but the White St. Peters is a shy bearer. The Emperor is good and sells well late; so does the Cornichon.

In picking grapes for Eastern shipment, Mr. Smith picks 24 hours before packing, to let the stems wilt and to allow closer packing in the baskets. The grapes will then cling to the stems better. He packs in five-pound baskets, which go in single and double crates, the former holding four, the latter eight baskets. The double crate has cleats on the sides upon which the upper tier of baskets rests. The double crate is preferred at the East because nearer the size in which Eastern grapes are marketed, and

the grapes carry better because the crates are heavier and cannot be tossed about so much in handling.

The Tokay sells best at the East because it arrives better. The Emperor colors up better than the Tokay. In packing it is best to use scissors and clip out the greenest berries, as it gives the basket a better color. In the solid bunch of the Tokay it is also desirable to divide the bunch and remove from the interior the berries which are often crushed by the growth of the outer ones. It is also necessary to divide the large clusters to secure close packing. Second crop Tokays have looser clusters and are better colored than the first. Mr. Smith has a third crop of Tokays which he is now shipping, but it is not so well colored as the second crop.

The Emperor is pruned with long canes, say from three to three and one-half feet, and tied up to two stakes placed near together, say six to eight inches. They are tied up before the growth starts. After cultivation is over the vines are let down upon the ground, as the weight of the grapes would break the canes. The Tokay easily burns in the warmer parts of the State and should be planted on the richest ground so as to make plenty of foliage early in the season to cover the young grapes. They seldom burn except when fully exposed to the sun. This year the Tokays burned badly, being destroyed when the berries were large as peas. The Tokay colors even when covered with leaves. The presence of iron in the soil has much to do with coloring the fruit well, as Mr. Smith has found out by experience on his own place and by observation on Mr. Marshall's place near Napa, where are grown what Mr. Earl pronounced the finest colored Tokays he ever saw.

The profits on growing grapes for shipment are from less than nothing up to \$100 per ton. He shipped 50 crates of fine Tokays to St. Louis and all he received in return was a postal note for 85 cents for the shipment. Last week his double crates were selling at the East for \$3.75, which would net him \$2 per crate of 40 pounds of grapes, or \$100 per ton. His Tokays yielded this year about nine tons to the acre of first-class fruit for shipment. All the culls clipped from the branches in packing are dried and are worth something this year.

The Muscat has to be handled more carefully than the Tokay, does not travel East so well and does not sell so well. He prefers the close-bunched Muscatel (Blowers) to the loose and straggling clusters of the Muscat of Alexandria. He has also the Muscatel Gordo Blanco, which he believes was introduced by W. A. Sanders of Fresno. He does not value this grape so high as Blowers' Muscatel.

At least two-thirds of the first crop of Muscats of Alexandria and Muscatels we did not ship East, as they were too scattering on the bunch. We rubbed them off the bunch, ran them through a wheat fan to remove broken stems and packed them as loose Muscatels, whereas the Muscatels would be thick enough on the bunch to be good raisins. The Muscat grapes would be large and fine enough, but the bunches too scattering.

Pres. Hilgard inquired if it was *coulure* or whether it was the result of the hot weather on the vines, but Mr. Smith thought it was something in the habit of the vine itself. He is inclined to think that the Muscat of Alexandria wants another grape near it to make it set well. Another grape grown so sparsely in this State that it was seldom seen and one of the finest looking grapes in the State, is the Napoleon. If it could be got to set well, one could make a fortune out of it in a few years. It is very scattering on the bunch; almost impossible to get a full one. The Mission is not the grape to fertilize it with. Napoleon ripens with the Muscat of Alexandria. He had often tried planting other varieties near this Napoleon to get it to set well.

In answer to a question by the President as to distinctive characteristics that he recognized between the Muscats and Muscatels, Mr. Smith said the Muscat of Alexandria is rather oblong and of a greenish color; Muscatel is more round and more waxen in color. The Muscat of Alexandria is more oblong, tapers rather toward the end, while the Muscatel is roundish. The Muscat of Alexandria loosens easily from the stem, while the Muscatel is stronger. The Muscat has a bad fault, called "shanking;" one-quarter or one-third of the lower part or end of the cluster will die. Sometimes it does this when the grapes are two-thirds or half grown, and sometimes not until the grape is nearly ripe. All the grapes below where the stem dies have to be taken off and thrown away. That is a serious objection to the White Muscat of Alexandria. Do not know whether it is universal throughout the State, but it is in our valley.

The President remarked that it is often the case, and asked if there was any difference in the foliage.

Mr. Smith thought the difference so slight that it is hard to tell what it is away from the vine itself. In answer to difference of growth, said Muscat of Alexandria does not taper as much as the Muscatel, has longer joints. Muscatel has shorter joints and tapers like a black-snake whip, while the other is like a buggy whip.

The President inquired if he had had any experience with the Huasco. Dr. Manlove had reported favorably on it. The University had sent cuttings all over the State. Favorable reports had been received from Sacramento and unfavorable from Los Angeles.

Mr. Klee said they had been grown from

PACIFIC COAST WEATHER FOR THE WEEK. (Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.)												
DATE.	Portland.				Red Bluff.				Sacramento.			
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.
Oct 27-Nov 2.												
Thursday.....	.00	62	SE	Cy.	.00	74	NE	Cl.	.00	68	Nw	Cl.
Friday.....	.00	58	Nw	Cl.	.00	76	N	Cl.	.00	70	Nw	Cl.
Saturday.....	.00	68	E	Cl.	.00	80	N	Cl.	.00	70	N	Cl.
Sunday.....	.00	68	E	Cl.	.00	74	N	Cl.	.00	72	Nw	Cl.
Monday.....	.00	62	SE	Cl.	.00	74	N	Cl.	.00	72	Nw	Cl.
Tuesday.....	.00	58	S	Fr.	.00	66	Em	Fr.	.00	70	S	Cl.
Wednesday.....	.00	54	Nw	Cy.	.00	72	N	Cl.	.00	66	Nw	Cl.
Total.....	.00				.00				.00			

EXPLANATION.—Cl. for clear; Cy., cloudy; Fr., fair; Fy., foggy; — indicates too small to measure. Temperature. Wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

vines from the University by Mr. John R. Wolskill of Winters. The second year from the graft they bore a very large crop. He claims it is a better bearer; otherwise it is almost impossible to tell the difference. The same report seems to come from other sections. Mr. Cutter of Riverside has the same vines, and it is impossible to tell the difference. Presumably they are the White Muscat of Alexandria.

Mr. Smith remarked that being grafted on old vines, the growth might be stronger than from a cutting.

The President: The Huasco matures a little earlier than either of the other two, and objection is made that it has more seeds than the others.

Mr. Smith: If it is much earlier than the Muscat and Muscatel, it will be worth propagating.

The President: The Huasco grape was brought from Chili, and it was difficult to get it accustomed to the change of season. It first wanted to grow in the winter, but it gradually accommodated itself. It matures fruit in Berkeley, where the Muscat of Alexandria will not. Have you ever tried the Cannon Hall Muscat?

Mr. Smith: It does not succeed well in our part of the State. It is like the Muscat of Alexandria. I cannot succeed in getting anything like fine-bunched at all. The same experience is given by other growers. Mr. Cantelow, formerly one of the largest grape-growers in our section and in the State, could not get a bunch to set well; too much stem and no grapes. A few grapes would be large and fine, and all along the stem they would be as small as shot.

The President: Have you planted any Black Morocco in your neighborhood?

Mr. Smith: It does too well; bears too much. While the others do not bear enough, it will set a bunch at every joint as the vine grows. Now the first ones are beginning to get ripe, but cannot get enough to pack a box to ship East. The soil is very rich valley soil.

The President: They ripened long ago in the foothills. It does not require a rich soil.

Mr. Klee: It is subject to black knot. Vineyardists with rich soil have to graft them over again.

Mr. Smith: I have 10 or 15 vines and thought perhaps I could get a crate or two to ship East. The vines grow very much, and the grapes range all the way from large ones to smaller and smaller, but not a ripe one.

Mr. Buck wished to correct Mr. Smith. One would infer from his remarks that the Black Morocco is a late grape in Vacaville. We do not get the first crop, as it does not amount to anything. May not get a dozen boxes from the first crop; but afterward it can be found all the way from blossom to ripe fruit. Sometimes 25 vines will produce half-a-dozen boxes, but they will be all the way up from the stump to the end of the vine and all sizes from the blossom to ripe grapes.

The President: Possibly this might be remedied by longer pruning? Have you tried the Balkan, which is talked about so much in Fresno? It resembles Tokay, but has a longer, looser bunch. It is the one Mr. Montpellier has introduced. [Since the meeting Mr. Montpellier has shown us samples of this grape which have been in his desk in the city for six weeks and are still perfectly sound. Some berries have dried, something like raisins, but most are still fresh colored and excellent.—Eds. PRESS.]

Mr. Smith: I believe it is going to be a good grape; it is a fine-looking grape, large, loose bunch, and I think it will be a good shipper; if it is a good bearer it will be an acquisition.

The President: It must be a good shipper and is a good bearer. It has the advantage of not having densely packed bunches. We need more information in regard to it.

Mr. Buck being called upon, said that the Cornichon was a good bearer with him. Has 1400 vines, but they are not good bearers unless pruned long. The Purple Damascus bears as heavily with me as any other vines he had.

Mr. Smith thought the difference between his vines bearing and Mr. Buck's was simply in the pruning. He pruned long and I short, and that is the reason it is a light bearer with me.

Mr. Buck of Vacaville: As far as Muscat and Tokay are concerned, I think the Eastern market has changed materially in regard to the Muscat grape. Three or four years ago the Tokay grape was worth nearly twice what the Muscat was. This year there has been very little difference in the selling value in Chicago, while there has been a good deal of difference in the East. In the Northwest the people are educated to the fact that the Muscat is a better eating grape than the Tokay. Chicago is the best market for the Muscat grape we have. Others are better for the Tokay. Do not know anything about the Black Morello. There is one objection against dark grapes in shipping to the Eastern markets, as they prefer the light one. New Orleans is the best market for dark grapes. By dark grapes I mean those darker than Tokay, Emperor, Cornichon, etc. In regard to the Verdel, would let it alone.

The president inquired if it was too small in size.

Mr. Buck: No, it is a good size.

The president said the samples sent him had been small grapes.

Mr. Smith: The Verdel grown in San Jose is large; also in Santa Cruz mountains fair sized grapes as large as Emperor, etc., but not as large as a fine Muscat.

The president stated he was thinking of some Verdels exceedingly sweet but too small to ship to Eastern markets. It is a gray variety.

Mr. Klee said he had seen them very sweet in Southern California. The president said they belonged there.

Mr. Klee said they attained a fair size in the Santa Cruz mountains quite early, but are slow and late in ripening.

Mr. Tompkins said they were the largest and finest he ever saw there. They are not very solid; might not ship well any distance; seeds were so small you hardly noticed them in eating; skins were very thin. All that is against shipping them, but for eating qualities, where grown, it is a very fine grape. He ate them within a mile or so northwest of Glenwood.

The president thought it was a notable feature that so few of the grapes mentioned in this discussion have any taste to the palate; they all appeal to the eye. We will have to conform to the demand of the public for some years to come, but we must take into consideration also those who like to taste what they eat. The Muscat conforms more to the taste of those who are in the habit of eating their highly flavored Isabellas and Catawbas. We have a class of grapes not remarkable for their aspect.

The Verdel has a decided flavor. Chasselas and Cornichon have some flavor, but the Flame Tokay has as little flavor as it is possible for a grape to have. We have to please the eye, but the time is coming when we shall have to take into consideration the quality of the grape. One grape will not do to ship. It is the Malvoise. In the Santa Cruz mountains it is best of all.

Mr. Buck said one shipment had arrived in good condition, but it is so much like their domestic grape that it will not sell. Rose of Peru will bring a man in debt. You can load half a car with that, but will have to put in another kind of grape to bring you through without a loss on freight. The Malvoise ought to ship well, having a thick skin, probably not very juicy.

(Concluded next week.)

Ewer-McLennan.

Yesterday morning Mrs. Donald McLennan was married at the residence of her son, Mr. Frank McLennan, 1515 Clay street, to Mr. Warren B. Ewer, the well-known editor of the *Mining and Scientific Press* and the *Pacific Rural Press*. Rev. Horatio Stebbins was the officiating clergyman.

The wedding was strictly private and no cards were issued, for the reason that the bridal party left at once for the southern portion of the State. It is their purpose to make quite an extended trip to the most interesting localities south, as this is the first visit made there by the bride since the new growth and prosperity of all that region began.

The bride is the widow of the late Donald McLennan, who established one of the famous industries of the State, the Mission Woolen Mills, which marked a new and more prosperous era in the manufacturing interests of the coast. Through his long laborious years she was often to be seen riding through the business streets with her husband, watchful of his every interest. The groom is a pioneer who came across the plains in 1849.—*Daily Call*, Oct. 30th.

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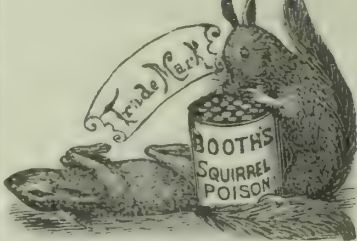
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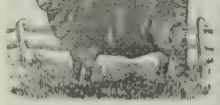
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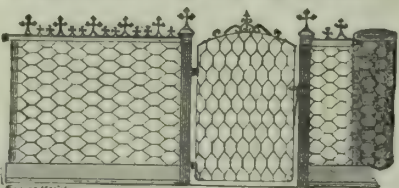
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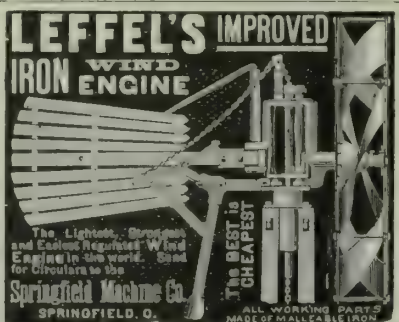
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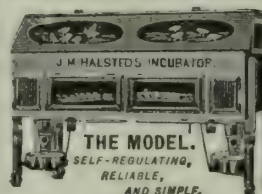
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FALL RIVER rises on the eastern slope of Mount Shasta and flows southeasterly into the Pitt river. That stream flows southwesterly from Goose lake through Modoc and Shasta counties into the Sacramento. There is heavy sugar-pine timber all about the Fall river's source, but near its junction with the Pitt there is a clear, wide, fertile section. Here the town of Fall River Mills is located, about 90 miles northeast of Redding and about 60 miles from Sisson's, on the California & Oregon line. At this town are the falls from which the stream takes its name. The water-power there is considered wonderful for its force and availability. A flour-mill and lumber-mill are already run by the water-power and there is plenty of room for more mills for other manufactures. About a mile below the rapids, nearly at the junction of the Fall and Pitt rivers, is the large fall. Here the river drops perpendicularly about 70 feet to the level of the Pitt river. It is here on the upper bank that the town of Fall River Mills is located. A raceway has been made across the peninsula by the town from above the falls to the Pitt river, and from this power for the flour-mill is secured. The town is located nearly at the point of a V, the rivers forming the sides. There is abundant opportunity for similar races or canals, either across the upper part of the peninsula above the town, or below it across the Fall river from above the fall, across the country down into the Pitt river below. There is believed to be here motive-power for over two miles of manufactories. The flow and fall, combined with the formation of the river-banks, present remarkable advantages for mill-sites. The power is said by those in a position to know to be fully equal—not by reason of the volume of water, but because of the way in which it may be utilized—to that of the falls of St. Anthony, which have been the making of the great manufacturing city of Minneapolis. Some idea of the capability of this fall and power may be gained when it is considered that the falls of the Merrimac at Lowell, Mass., have a descent of not more than 30 feet, and the falls at Lawrence are not greater than that. From various measurements taken, it was ascertained that the average flow of the river was 1619 cubic feet in a second. As Mr. Schuster put it: "One hour's flow would supply San Francisco for three days." The altitude of the falls is about 3000 feet.

A TRIBUTE TO THE BLACKSMITH.—J. Starkie Gardner, in a lecture before the Society of Arts, in England, pays the following tribute to the blacksmith: Those who have stood by the forge, and watched the sparks fly as the skillful smith deftly beats, and twists, and combines his iron, would think it the easiest of all crafts. But who standing by the side of a musician as he draws his bow across the chords of his violin, would consider the patient study and dexterity required before he is able to make it respond at will? As no practice or teaching can make a musician unless he have an ear for music, so can no one really excel in the manipulation of iron unless he possess special aptitude. His tools are as primitive as those of the sculptor, and with hammer and anvil, forge and bellows, a bench, a vise, and a few chisels, he has to produce out of the stubborn iron effects that may rival the work of the loom in delicacy, or form the massive entrance-gates to a palace or a park.

THE LONGEST TUNNEL IN THE WORLD, commenced in 1782 and finished in 1878, drains the Schemnitz mines in Hungary. It is 10.27 miles in length, or about a mile longer than St. Gothard, with a height of 9 feet 10 inches and a breadth of 5 feet 3 inches.

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Outfit for 2 cts. A. B. HINE, CADIZ, OHIO.

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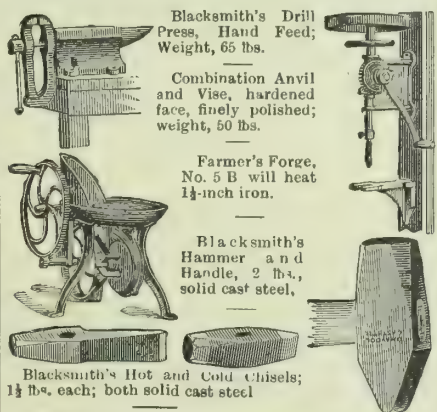


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Send for circulars and prices. Hose furnished to farmers at wholesale prices.

CAL. FIRE APPARATUS MFG CO.,
18 California St., S. F.



Shotguns, Revolvers, Rifles, Etc.

S. F. MARKET REPORT

NOTE.—Our quotations are for Wednesday, not Saturday, the date the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Nov. 2, 1887.

General trade in farm products was fairly active the past week, with few changes in prices. Continued dry weather not only creates uneasiness but causes farmers who have not sold to hold their barley, wheat and hay more strongly. The European markets, for wheat, continue to show a strong tone, notwithstanding bear reports and no outward speculative movement. To-day's cable is as follows:

LIVERPOOL, Nov. 2.—Flour dull; holders offer moderately at 9s 2d and dull. Corn—Holders offer moderately; spot, 4s 7d and steady. November, 4s 6½d and steady. December, 4s 6½d and steady. January, 4s 5½d and steady.

Foreign Review.

LONDON, Oct. 31.—The *Market Lane Express*, in its weekly review of the British grain trade, says: English wheat values are hardening. Prices are 6d better. The marked falling off in deliveries in London tends to raise the tone. The sales of English wheat during the past week were 6537 qrs. at 30s rd, against 48,908 qrs. at 30s 3d during the corresponding week of last year. Flour is steady. Barley is in good inquiry and 6d dearer. The values of foreign wheat are maintained. Liverpool is quoted at 1d higher. Corn is in small supply at stiffening prices. There were six arrivals of wheat cargoes—three were sold and one remains. At to-day's market wheat was steady. Flour was firm. Oats were 3½d dearer. The prices of beans and peas were against buyers.

Eastern Wheat Market.

S. S. Floyd & Co.'s telegraph from their Chicago house is as follows:

CHICAGO, Nov. 2.—Wheat, weak and lower, due to the big local operators selling freely. They seem to think the Anarchist trouble will create an unsettled feeling in the money market, which will naturally depress values, market closing at lowest point of the day. Corn market, dull and neglected again to-day. Receipts of wheat at 7 primary points to-day, 327,557 bu. Shipments, 267,464 bu. Wheat—Dec. opened, 73½; highest, 73½; lowest, 73; closed, 73. May opened, 79½; highest, 79½; lowest, 78½; closed, 78½. Corn—May opened, 45½; highest, 45½; lowest, 45; closed, 45.

Eastern Wool Markets.

NEW YORK, Oct. 30.—Offerings continue to be made in very much the former general manner, owners of really attractive first-class wools putting out their samples with a degree of caution and an apparent inclination to keep their stock as closely in hand as possible, yet never really willing to miss a desirable customer. Some appear to have been successful in booking a fair number of orders lately, but on the whole it is difficult to find much that is really encouraging, and the market has a tame look generally. Among sales were 10,000 pounds fine Territory at 19 cents and 15,000 pounds Eastern Oregon at 20 cents.

PHILADELPHIA, Oct. 31.—There were a few Eastern buyers in the market last week, but their operations have not been on a large scale, neither in Territory clips nor in fleeces. Two or three local manufacturers are reported as having bought over 500,000 pounds of one-half and three-eighths unwashed combing in the Chicago market this week, because supplies in equal volume were not obtainable in this market. Among sales were 35,000 pounds Territory fine medium at 34 cents, 25,000 pounds Montana low at 22 cents, 100,000 pounds Territory fine and medium at 14½¢, 20,000 pounds fine Territory at 18 cents.

BOSTON, Oct. 31.—The market has been fairly active and the tone is very strong for certain descriptions. Among sales were 450,000 pounds Territory at 22½¢, 187,000 pounds California spring and Oregon on private terms.

Dried Fruits.

NEW YORK, Oct. 31.—The market is good for most descriptions. California raisins are wanted upon the spot, but there are few or none available. Current prices, \$2.15 to \$2.55 for three-crown, \$2.30 to \$2.50 for London. Raisin-packers of Malaga have this season adopted the old standard weight of 22 pounds to the box. This change has been brought about by the fact that no small portion of the pack there is consumed in Great Britain and upon the continent, and dealers in those countries are strongly opposed to the new system that was introduced last year. The 20-pound weight of last season was forced on packers by the growing opposition of California goods, as they felt it was necessary upon their part to protect their trade in this country by the adoption of a box quantity similar to that put up by those engaged in the industry on the Pacific Coast. Importers of Malaga goods now draw attention to the fact that they offer greater quantity per box than is contained in California packages, and at very little difference in price, and on the other hand California agents dwell upon the superior quality and put their three-crown loose goods against the two-crown of Spanish that are sold at about the same price. This is certainly a strong point in favor of Malaga, but California goods gained an enviable reputation last year and it will prove rather difficult to dislodge the domestic goods from the strong position in which they then established themselves. The fight for supremacy will, without doubt, be stubbornly contested, as both sides are determined in their action and reluctant to give way from a field from which such great advantages are to be obtained.

NEW YORK, Oct. 31.—Inquiries have been received from London soliciting quotations for California raisins laid down at that market. The inquiries at first were for consignments thither, but these being declined, the prices of goods are now asked for.

A later telegram from New York reports as follows: The market for raisins is animated, Cali-

fornian is scarce and wanted. The delay in making shipments is regretted, but fine parcels can yet obtain a holiday place. Malagas now coming 22 lbs to the box is an inducement to some retailers, but the quality will keep prime Californian from being dislodged to any marked degree. It is also thought that the cholera in the Mediterranean regions may work against the use of Spanish fruit.

Thirty-seven carloads of Fresno raisins were telegraphed this week to one firm. It should be understood, however, that only standard brands, like Coleman Flag and Riverside, realize extreme prices. Country packers and irregular parcels must take the chance of price as before.

Honey.

NEW YORK, Nov. 1.—California honey is quoted at from 8½¢ to 9¢ to arrive; Eastern spot, 6¢ to 10¢; comb, 10¢ to 17¢. The stock is moderate.

Nuts.

NEW YORK, Oct. 31.—California almonds have sold to arrive at 18½¢ for paper shell and 17¢ for soft.

Hops.

NEW YORK, Oct. 31.—There has been no material change in the market.

Local Markets.

BARLEY.—The market is unfavorably affected by the large stock and continued free receipts. On Call, options have been more freely dealt in, but at prices showing few changes. To-day's Call sales are as follows:

Morning Session: Buyer season—100 tons, 95¢; 100, 95½¢; 100, 95½¢; 600, 95½¢; 400, 95¢; 400, 95½¢; 1300, 95½¢; 1000, 95½¢; 1000, 95½¢. Buyer 1887—100 tons, 86½¢; 200, 86½¢; 100, 86½¢; 100, 86½¢; 100, 86½¢; 100, 87¢ c. Afternoon Session: Buyer season—300 tons, 96½¢; 400, 96½¢; 100, 96½¢; 100, 96½¢. Buyer 1887—200 tons, 87½¢; 300, 87½¢; 100, 87½¢ c. c.

BUTTER.—The market is poorly supplied with choice pickled and solid. In fresh rolls, receipts continue fair, but the warm weather is against shipping to distant points, and as local dealers confine their purchases to actual trade wants, the market is against sellers and very hard to report correctly.

CHEESE.—The market is only fairly supplied, causing a strong tone to obtain even at the high quotations.

EGGS.—Strictly choice are scarce and in demand. The market for all kinds is doing better.

FLOUR.—Cutting in prices is still reported, although leading millers are firmer in their views.

WHEAT.—The engaged tonnage in port is increasing. The sample market is stronger. On Call, trading in options the past week was more active, but prices showed few changes, hardly enough to tempt outside speculators to take an active hand. To-day's sales are as follows:

Morning Session: Buyer season—200 tons, \$1.45; 200, \$1.45; 400, \$1.45 c. Afternoon Session: Buyer season—200 tons, \$1.45; 300, \$1.45; 300, \$1.45. Seller season—100 tons, \$1.30 c.

COMMUNICATED.

Market Information.

Cereals.

In a letter to Denison B. Smith, Esq., Secretary of the Toledo Produce Exchange, J. E. Beerbohm states that his estimate of consumption of wheat in the United Kingdom is as follows: May, June, July and August, 1,925,000 qrs. per month; March, April, September and October, 2,125,000 qrs. per month; November, December, January and February, 2,325,000 qrs. per month, or a total of 25,500,000 qrs., and equal to 204,000,000 bu.

It is now very generally conceded that to the United States Europe looks for the bulk of the wheat supplies required, and consequently all statistical information bearing on the position in this country is eagerly devoured. Starting with July 1, 1882, when the wheat reserves of the country were evidently at a minimum point, and taking into consideration the crops, seeding requirements, exports and consumption, the Cincinnati *Price Current* reaches the comparisons herewith shown in tabular form, indicating the yearly and quarterly comparisons of supplies, exports, consumption and surplus of wheat. In this statement the unavailable reserves are reckoned as 50,000,000 bu., which is likely less than the actual quantity thus represented, but however this may vary from the exact facts in this particular, the comparisons hold good. For the crop of 1886, the *Price Current* accepts 485,000,000 bu. as more nearly representing the actual production than the official returns (457,000,000 bu.), in view of the reported export movement for the year, and the evidence as to consumption and surplus, taken in conjunction with the official statements of stocks of wheat on hand on March 1, which are in harmony with this calculation for the 1886 crop.

These exhibits show the following comparisons of total stocks of wheat in the country quarterly from 1882 to 1887, exclusive of supplies to cover seeding requirements:

	Jan. 1.	April 1.	July 1.	Oct. 1.
	Bushels.	Bushels.	Bushels.	Bushels.
1887	295,000,000	188,000,000	73,000,000	351,000,000
1886	377,000,000	186,000,000	81,000,000	402,000,000
1885	344,000,000	244,000,000	172,000,000	387,000,000
1884	274,000,000	184,000,000	92,000,000	447,000,000
1883	270,000,000	183,000,000	98,000,000	370,000,000
1882	222,000,000	134,000,000	50,000,000	381,000,000

If these figures for October 1 be approximately correct, the quantity of wheat available on that date, deducting 50,000,000 bu. as unavailable, was 301,000,000 bu., against 352,000,000 a year ago. The comparisons as to visible and invisible available supplies for October 1 are as follows:

	Visible.	Invisible.	Total.
	Bushels.	Bushels.	Bushels.
1887	30,000,000	271,000,000	301,000,000
1886	51,000,000	301,000,000	352,000,000
1885	45,000,000	272,000,000	317,000,000
1884	26,000,000	321,000,000	397,000,000
1883	27,000,000	293,000,000	320,000,000
1882	13,000,000	318,000,000	331,000,000

This line of calculation leads to 301,000,000 bu. of wheat available for all purposes exclusive of seeding, on October 1, out of which quantity the requirements for consumption during the remainder of the year, 9 months, will be 220,000,000 bu., leaving 81,000,000 bu. surplus for export, by reducing the sup-

ply at the end of the year to a quantity corresponding with the low point in 1882, or 58,000,000 bu. to end the year in the same position at which it began. The exports the past three months have been 47,000,000 bu. This implies 128,000,000 bu. for the export movement for the entire year to reduce supplies to the 1882 point, or 105,000,000 bu. for the year to end in the same position as it began.

These calculations are based on 450,000,000 bu. as representing the 1887 crop.

The New York Produce Exchange Reporter says: Every week's experience only strengthens our position in regard to the wheat crop of the world; it is very plain that it is short of requirements, and its importance should prompt very urgent and careful investigation. The consumption of the world is not stationary, the increase in the consumption annually is not less than 1¼ per cent for food, and for manufacturing purposes there is a marked increase in its use. Now that it is the cheapest food now in use, it cannot fail to have a larger consumption than hitherto. It would be absurd to say that there is no increase in the consumption of wheat-bread from year to year, and when other cereals, root and pulse crops, here and in Europe, fail, other food must be used to supply the deficiencies. The question is constantly asked us, what are the reserves of the world? After careful investigation throughout the grain-producing countries of the world, we arrive at the conclusion that the quantity held in reserve on September 1 was about 40 per cent of that held at the corresponding date in 1886, viz.: 87,000,000 bu.; hence the situation at this writing is of far more interest than usual.

On this coast the Portland, Oregon, market is reported quite active at a slight advance for wheat. Holders of Valley wheat are rather indifferent sellers, except at \$1.20 to \$1.25, of which the major portion is held at an advance on the latter figure. Millers are the chief purchasers. For Eastern Oregon, exporters are the principal buyers. The tonnage in that port loading and to arrive under charter is in excess of last year at this date. In our market there is very little doing, owing to holders' views being above buyers', but as charters are weak and the Liverpool wheat market is gradually strengthening, it looks as if a higher range of values will rule soon. The stock of wheat on November 1st was over 8000 tons less than October 1st, which shows that farmers' deliveries are almost nil.

Barley is gradually working into stronger position, notwithstanding the largely increased stock on hand, being now about 43,000 tons. The bulk of the stock is held against Call Board sales. Within a week there have been shipments to New York by way of the Horn as well as Panama, and a ship was chartered yesterday that will take considerable Brewing and Chevalier barley as part of cargo. This will relieve the market somewhat, even if we do not create activity. As the crop at the West was light, and the quality inferior, it is very generally conceded that the East will have to draw on this coast for the more choice grades, which will be more marked later on in the season.

Oats are steady with light stocks here, and receipts also light. The demand continues good, but the low price of barley operates against the market.

Corn is barely steady. Any selling pressure is met by lower bids from buyers. The supply of choice is light. At the East the market shows more strength.

Rye and also buckwheat are fairly steady, with a slightly improved demand reported for the latter.

Feedstuff.

Continued free receipts of bran and middlings from Oregon are against the market, and to place large consignments a slight shading on present prices would be necessary. The consumption continues free. Ground barley is steadier.

Choice grades of hay are wanted, and as receipts are moderate, buyers, at times, are compelled to pay an advance on top quotations. The other grades are also firm, although alfalfa fluctuates some.

Vegetables.

The past week has been notable for the steadiness of the market for potatoes. The receipts have been free, and so has been the demand. The large supply to draw from and favorable delivering weather keep dealers from trying to corner the market or advance prices.

Choice, hard-keeping onions continue strong, but off qualities are placed only at shaded prices.

Cabbages are higher and strong at the advance. Owing to continued dry weather, farmers are slow in selling, and as the demand is good only, high bids tempt sellers.

In root vegetables there is nothing new to report. Cucumbers are steady, as are tomatoes and other summer vegetables.

Fruits.

Choice apples suitable for filling distant orders are in good request, but poor or defective are hard to sell, except at concessions. The consumption is increasing.

Pears are in good supply, with the better qualities readily placed at full figures. Quinces are slow.

California oranges are expected to put in an appearance next week, but no free receipts are looked for much, if any, under 30 days.

Both table and wine grapes have fluctuated considerably the past week, the market being governed from day to day by the receipts. Compared with last year at this time, prices are much better.

Dried Fruits.

In the local markets dried fruits continue dull, with a downward tendency for peeled and unpeeled sun-dried evaporated peaches. Apricots are also in the dumps, and while no great reduction can be looked for, yet goods will drag for some 90 days, when we expect to see the market advance again. Prunes continue active, with high prices. The late advance in New York has stimulated the market somewhat here.

A reduction is made by the Southern Pacific Railroad in freights to New York.

Raisins.

In the local market, raisins continue an anomaly. Spot prices are very high in New York. It is impossible, however, to sell futures at the spot price. This is because large shipments are expected from Spain. The output in California will be a great disappointment. It was thought at first that it would be considerably larger than last year; then, on a re-estimate, it was thought that it would be about as large as last year, but the outcome will

probably be considerably below that of last year. As an evidence of this, last year Orange colony produced 175,000 boxes, and this year they will have to work hard to pack 50,000. Riverside's pack will probably be 25,000 less than last year. Of course, this is largely made up by the large Fresno production, but that will not be sufficient to overcome the large loss South.

The Southern Pacific railroad has reduced the freight on raisins to New York so as to allow Californian to compete more successfully with the imported raisins.

Live-Stock.

Beef cattle do not show any improvement in consequence of the continued free offerings. Only well-conditioned handy-sized bullocks that cut up without wastage fetch top quotations. The same remarks apply to mutton sheep. In hogs there is a free demand, but with heavy receipts packers bid down only to be followed by an advance as soon as receipts fall off. Mast hogs are not coming in yet, but they are expected to begin to come to hand some time in this month. In horses there is a continued dull, heavy market for work animals and railroad teams, but carriage teams and driving horses are wanted at the last-quoted prices.

The following are the wholesale rates of slaughterers to butchers:

BEEF—Extra, 7¢ to 7½¢; first grade, grass fed, 6½¢ to 6¾¢ per lb.; second grade, 5½¢ to 6¢; third grade, 4½¢ to 5¼¢.

MUTTON—Ewes, 5½¢ to 6¢; wethers, 6¢ to 6½¢.

LAMB—Spring, 7¢ to 8¢.

VEAL—Large, 6¢ to 7¢; small, 6¢ to 8¢.

PORK—Live hogs, 4½¢ to 4¾¢ for heavy and medium; hard dressed, 6½¢ to 7¢ per lb.; light, 4½¢ to 4¾¢; dressed, 6½¢ to 7¢; soft hogs, live, 3½¢ to 4¢. On foot, one-third less for grain or stall fed, and one-half less for stock running out.

Miscellaneous.

The tonnage movement compares with last year at this date as follows:

	1887.	1886.
On the way.....	324,696	252,780
In port, disengaged.....	84,117	72,000
In port, engaged.....	21,206	96,018

Totals..... 430,019 420,798

To get the carrying capacity, add 60 per cent to the registered tonnage as given above.

Throughout the past week, poultry ruled remarkably steady, with only the more choice conditioned fetching top prices.

In hogs there is very little of interest to report. Buyers, as usual, talk the market down and the daily papers help them by quoting prices low. The heavy shipments to the East and to England have reduced the holdings very materially. Choice grades are wanted at full prices.

Wool moves along at steady prices, choice desirable clips are readily placed, but the wool must be clean, free from seeds, of medium grade, strength and length of fiber and also lively; dead wools and defective wools are hard to sell.

Hog products are very strong for the season, with a higher range of values looked for, for both ham and bacon.

Honey, and also beeswax, are in light supply, and consequently are high.

Domestic Produce

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Nov. 2, 1887.

	Beans and Peas	Paper shell	15¢	12¢
Bayo, etc.	1 30	2 25	11	12½
Butter	2 00	2 20	6	8
Peas	2 25	2 15	4	6
Pork	1 40	1 55	10	11
Pick	1 50	1 75	7	8
Large White	2 00	2 40	—	—
Small White	2 10	2 50	—	—
Lima	2 10	2 50	—	—
Wild Peas, blk eye	1 00	1 05	—	—
do green	1 00	1 12	—	—
do Niles	1 25	—	—	—

BROOM CORN

Southampton 50 75 00

Northampton 50 75 00

CHICORY

California 52 60

German 52 60

DAIRY PRODUCE, ETC.

Butter

Cal. fresh roll, 32½

do Fancy brands 40

Pickle roll 26½

Pickin, new 24

Eastern 24

CHEESE

Chesse, Cal., D., 13

Eastern style 14

SOOS

Cal. ranch, doz. 42½

do store 35

Ducks 35

Oregon 35

Eastern 25

FEED

Bran, ton 16

do 20

do 20

do 20

do 20

do 20

do 20

do 20

do 20

Seeds, Plants, Etc.

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FINE ASSORTMENT OF THE LEADING VARIETIES OF
FRUIT AND ORNAMENTAL TREES.The Hardy White Tuscany, Hardy Yellow
Tuscany, Clingstone Peaches.LARGEST PEACHES IN CALIFORNIA. Splendid
flavor; good shippers; excellent for canning.
Gum, Cypress, Pine and Pepper Trees in boxes. Flow-
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30,000 Golden State Almond Trees

BY THE

OAK SHADE FRUIT COMPANY,
Davisville, Cal.These Trees are spring budded and have grown this
season from one to three feet high. The tree from which
they were budded has borne seven full crops of Almonds
and no failure. This is a finer and better Almond than
the Languedoc, and ripens three weeks earlier.

WEBSTER TREAT, Manager.

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100,000 Muscatel Grape
Roots.

OAK SHADE FRUIT CO.,

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Clyman—Earliest and finest shipping Plum.

Flatiss—Earliest and finest shipping Peach.

California Advance—Earliest and best Cherry.

Purity—Most beautiful, white, canning Cherry.

Black Mastodon—Largest black Cherry known.

Centennial—The finest keeping and shipping, light-
colored Cherry. (This variety is now cultivated
throughout the State; to be safe, however, it is best to
procure it from headquarters.)

Commercial—The largest Almond.

Send for catalogue and price list. All stock uniri-
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Parry, Lida and Bomba Strawberries,
Marbore and Golden Queen Raspberries,
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Early Grapes, Lawson, Kieffer and Le-
Conte Pears, Wonderful and Globe Peaches,
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Orange, and have also some of last year's stock
in different nurseries in this State, in good
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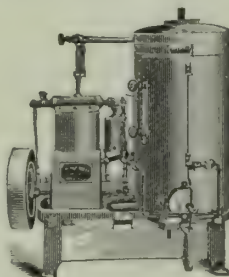
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No branch of the industries of this country has made such rapid strides in this progressive age as the art of Piano making, and none more deserves mention in this connection than the celebrated Piano manufacturers, Messrs. Wm. Knabe & Co., of Baltimore and New York. This firm commenced operations in Baltimore fifty years ago, and by their indomitable energy and striving always for the highest and best in their art, united with the greatest probity in their dealings, have worked up one of the largest business in the world in their line, and it is a well-known fact that no other firm in this country has done more to advance the American Piano manufacture to its present high state than the firm of Wm. Knabe & Co. Their factory is one of the largest in the world, and their business not only extends to all parts of this continent, including the Canadas, the South American States, West Indies, etc., but their Pianos enjoy a large demand in Europe, and the firm has active agencies at London and various points of the European continent. The Knabe Pianos have established their excellence wherever they have been introduced; the most eminent performers have given them the most unqualified approval, and they are as highly prized in the Parlor and school-room as in the concert hall.

THE SENSE OF TEMPERATURE.—Dr. Goldschneider lately presented and explained to the Berlin Physiological Society plates illustrating the topography of the sense of temperature. The sense of heat and cold was determined for the whole surface of the body, and arranged in a series corresponding to 12 degrees of intensity. As a general result, it was found that the sense of cold is more extended than that of heat; that both senses are more developed on the trunk than on the extremities; that the sense of temperature is less acute in the median line of the body; that the distribution of this sense over the surface of the body is quite different from that of the sense of touch; and that the points of exit of the nerves possess little or no sense of temperature.

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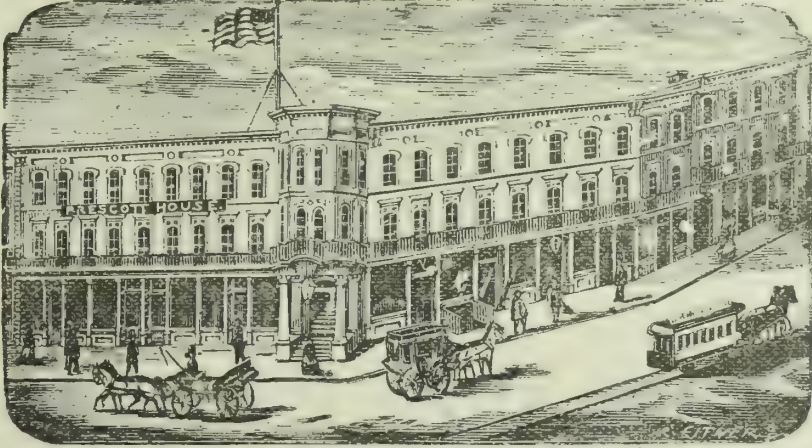
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Nitric Acid.....2.95 "
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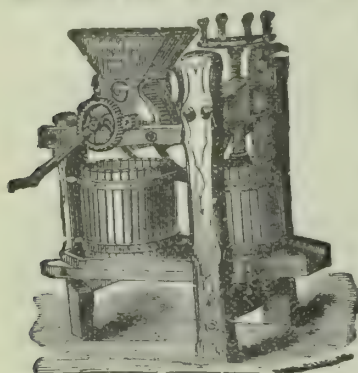
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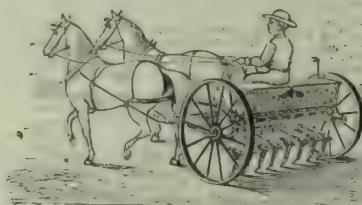
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TWENTY-PAGE EDITION.

Vol. XXXIV.—No. 20.

SAN FRANCISCO, SATURDAY, NOVEMBER 12, 1887.

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State University Buildings.

We give on this page a view of two of the prominent buildings of the State University at Berkeley, which have not appeared in the engravings we have presented of the University site. The large building in the foreground is the Bacon Library and Art Gallery, taking its name from H. D. Bacon of Oakland, who furnished half the funds for its erection, the balance being provided by State appropriation. Mr. Bacon also made valuable donations of books and art works which are duly installed in the building. The Library building is fire-proof, solidly built and beautifully decorated. The style is modern Gothic. The western half of the main floor is divided into three large reading-rooms, in which are kept a large collection of current publications, and the rooms are also used by students in the intervals between their recitations or lectures. The western side is the one shown in the engraving. The eastern side is a rotunda which is the library proper. Handsome walnut cases, tier above tier, circle around the hall, each pair forming a cozy alcove with a window—retired places well adapted for reading or study, highly appreciated by the students. The rotunda has two galleries furnished like the main floor, which are reached by spiral staircases. The main floor is well filled with books, the first gallery is in an advanced state of occupation, and the upper gallery is reserved for future growth of the library. At present there are nearly 40,000 books in the collection. The librarian is Joseph C. Rowell, a graduate of the University and a most excellent officer.

The Art gallery occupies the upper floor of the building shown in the engraving. It has several notable pieces of statuary and excellent paintings, and plenty of room for any art treasures which may hereafter be given to the institution.

The building upon the left of the engraving is the Mining and Mechanic Arts College, a fine solid structure of brick trimmed with granite. The building is divided laterally into two portions by the halls, the south half being occupied by the College of Mechanics, in charge of Prof. Hesse, and the north half by the College of Mines, in charge of Prof. Christy. As might be expected, the visitor who enters the lower floor finds on one side rooms with lathes, planers, forges and steam hammers; on the other, rock-crushers and the various paraphernalia of assaying. The motive power is furnished by an engine situated at the center in the rear. Students in these departments do actual work under the direction of instructors, and manifest much interest in it. The upper floors of the building furnish space for lecture-

room, rooms for mechanical drawing and the like and offices for the professors.

The low building at the rear is also divided between the two affiliated colleges, the southern half containing most beautiful machines for precise measurement for testing the strength of materials, etc., and the north has a full mining outfit with rock-crushers, concentrators, etc.

The departments of the University which we have thus hastily mentioned are well worth a visit from all who take an interest in the progress of general and technical education.

BOARDS OF TRADE.—Since the organization of the State Board of Trade there has been a

Lumber Consumption the Measure of California Growth.

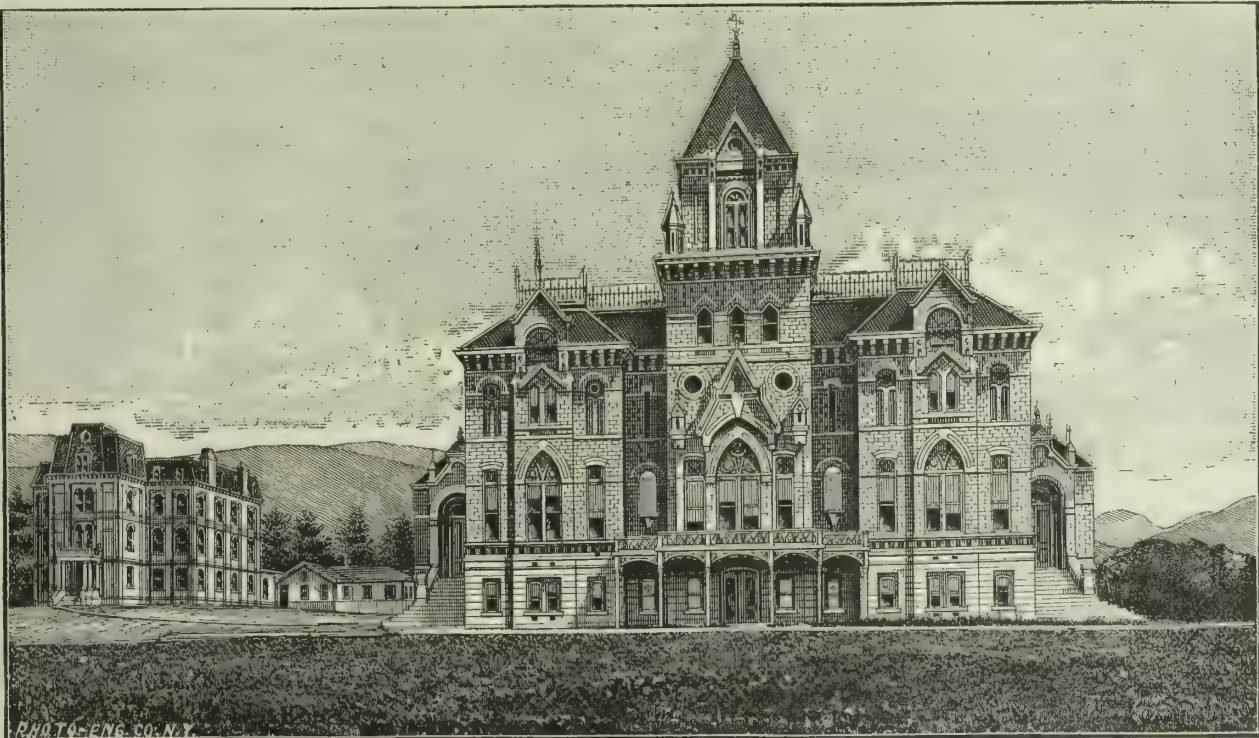
It has been remarked, and very truthfully, that the attainments of a people in civilization are denoted with much exactness by the amount of iron they consume, the force of this aphorism being increased by the fact that such consumption measures with almost equal exactness the present industrial condition of a people. While so generally sound, California seems to offer to this maxim some exception, for here it is the lumber rather than the iron we consume that affords the standard, if not of our civilization, at least of the progress being made in population

sprung up. The towns commenced to grow, the mud houses of the early settlers giving place to those of wood.

With this came a demand for more lumber, which demand has since kept even pace with the almost miraculous growth of that section. It was only after several years that this awakening in the south, first felt in San Bernardino and Los Angeles, reached San Diego. What it has since accomplished there may be gathered from the fact that the imports of lumber at that place, which amounted in 1885 to only a few million feet, were in 1886 increased to 39,000,000 feet, the importation having thus far the present year been swollen to 113,000,000 feet,

San Diego's growth in population and improvements, and the advance in the price of real estate both there and in the country adjacent, having been in about the same ratio as these increased importations of lumber.

As in the southern division of California this thing has happened, so in the central and northern parts of the State it is coming to pass. As there has never before occurred in this section such general appreciation of real estate values and such general industrial activity, so has there never before existed here such call for lumber, the consumption of which has for the past year been unprecedented in the history of California. Iron may best measure the progress of other peoples, but it is evidently wood with us!



LIBRARY, ART GALLERY AND MECHANIC ARTS COLLEGE OF THE UNIVERSITY OF CALIFORNIA.

general interest taken in its work in the interior cities. One gratifying feature of the local institutions which have been established is the interest taken by our leading business men. Salinas City recently organized a board of trade and elected Jesse D. Carr, ex-president of the State Agricultural Society, its president. From the Salinas Index, one of our valued exchanges, we find that the leading business men and capitalists of this section are giving this local board their united assistance.

PEANUTS IN THE "OLD DOMINION."—Of the 3,500,000 bushels of peanuts raised in 1886, worth about \$3,000,000, Virginia raised 2,500,000 bushels—five-sevenths—in half a dozen counties in the southeastern corner of the State. J. W. Johnson of Richmond claims that for fodder the vines are nearly equal to clover hay. Hogs will fatten on the nuts left in the ground. Peanuts are raised on land which will not grow corn, tobacco or wheat profitably.

THE new water-works at Templeton, San Luis Obispo county, are complete and the town is to be supplied with pure and excellent water.

POTATOES in Whatecom county, W. T., are yielding from 250 to 400 bushels per acre, which is considered good for a dry season.

and improvements. While we make as large a use of iron in proportion to our numbers as any other people, our consumption of lumber is comparatively greater, for our buildings are on this coast constructed almost wholly of wood. Not only so, but our wharves, bridges, fences, and, in some cases, even our street pavements consist largely of the same material, and this for the reason that in building we do not have to provide against extreme cold, while lumber is everywhere cheap and of excellent quality.

The truth of the foregoing remarks finds signal illustration in the recent history of Southern California, a section of the State, prior to the past few years, noted for its lack of enterprise, the cheapness of its lands and the paucity, not to say the poverty, of its population. There were no large towns, no railroads and but little business of any kind. If a cargo of lumber arrived at either Los Angeles or San Diego once a year, it sufficed for all the wants of those towns and the back country receiving its supplies from them. At last people from abroad, attracted by the fine climate and the rich soil, began to gather into that region. With their arrival land began to be inquired after, and a spirit of enterprise was awakened. Orchards and vineyards were planted, and other new industries

the San Jose Times, it is evident that Barbour & McMurtry of that city have been doing a good season's work with their *glace* fruits. During the height of the season they had 400 hands employed, but they were then chiefly occupied in drying fruit. At the present time they have 75 hands mostly at work on *glace* fruit. Mr. Barbour says the *glace* fruit is mostly shipped East, but the market in Australia is enlarging. Their largest market is New York, notwithstanding they there meet the competition of the French article in its full force. New York and Chicago are their distributing points for the East; and the consumption in Boston, which is supplied from New York, is increasing rapidly. Mr. Barbour thinks the Australian market may, within a year, be partially lost. Recently Mr. Robert Lester, who was for several years foreman of the canning shop in the San Jose cannery, left for Sydney, N. S. W., to start and superintend a cannery in that vicinity.

BEFORE THE SWINE-BREEDERS.—Prof. Law and Dr. Salmon of Washington and Dr. Frank S. Billings have been invited to make addresses at the Sixth Annual Meeting of the National Swine-Breeders' Association, to be held in Chicago on the 16th inst.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Carp, Catfish and Pout.

EDITORS PRESS:—I have been thinking for a long time of expressing my thanks to the person or persons who have directly or indirectly stocked our streams with the Missouri river catfish and the German carp. I have learned that the last-named fish got away, by accident, from a fish-pond in Napa valley. If so, the person who lost them has become a benefactor to the State wherever the Sacramento or San Joaquin rivers run. They must be very prolific, as the Sacramento appears to be alive with them, and there is no place that I have seen this summer but they are jumping out, and if any person understands catching them, he never need go home without fish. They are not as good eating as perch or trout, but their being so plentiful, makes them valuable as a food fish for the masses.

It is probably a fact that salmon are on the decrease in the Sacramento river, and to those engaged in fishing, the scarcity may work a hardship, but as none but fishermen caught them, the public is not so much interested in the salmon as they are in the fish that can be caught with hook and line. So while the fishermen are the losers, the public are gainers in the change of fish; for as the salmon appear to diminish, the catfish, carp and horned pout take their place.

The last-named fish is charged with eating the salmon eggs. How that is I am not able to say, but I do know the pout furnishes a good many tons of meat yearly in this part of the State; and good eating they are, too. I have often thought they were too plenty to suit the fishermen—it injured their trade, for not many will buy if they can catch enough themselves.

Of the catfish there appear to be two varieties, the blue and the black. The yellow is preferable to the black, at least we used to think so in Dakota Territory, below Yankton, where the writer has seen many a one caught. The objection to the black variety is the ponderance of head. The yellow, blue and white are long and slim, while the black is short and about half head, but the meat is good.

And now a few hints about catching and salting the fish might not be out of place. The catfish lives on the bottom and in the middle of the stream and in deep water, while the pout and carp seem to feed alongshore and are not so particular about the water being deep. Carp like plenty of brush along the bank and in the water. Carp will bite potato, beef, worms and fish, but appear to like pieces of small pike or scalefish. The catfish will bite beef or scalefish, but prefer the latter. Pout will always bite fish-worms. The best way to catch carp and catfish is to get a strong line and tie hooks on it two feet apart; fasten a weight to the end, throw it out into the stream and let it lie on the bottom. Pout is best caught with a line and pole.

Method of cleaning catfish and pout: Take them by the head and let their thorns pass between your fingers. Strip them down the back and then cut under the back fin toward the heart, and break the backbone. Then take hold of the bone with knife-blade and thumb and pull it out of its skin. If the fish is too large, strip it and pull off one side at a time, with a pair of nippers or a woolen cloth. After they are dressed, don't let a drop of water touch them. Salt them down dry and they will not spoil. I do not know how long they will keep, as I never saw any spoil, and I have seen them kept for six weeks; but if they are washed they will not keep two days in warm weather.

J. R. SPRINGER.

Woodland, Cal., Nov. 2, 1887.

The National Swine-Breeders' Meeting.

EDITORS PRESS:—The annual meeting of the National Swine-Breeders' Association, to be held in Chicago on the 16th inst., promises to be one of unusual interest. During the past year the membership has greatly increased, and breeders and feeders seem more than ever awake to the importance of united effort for the promotion of swine-breeding and pork-producing industries.

At the last meeting, swine-plague—the great hindrance to successful hog-raising in America—was one of the chief topics of discussion. No greater amount of value and practical information on the subject has ever appeared in so small a compass as in the published proceedings of that convention. The good resulting from the intelligent consideration of even one point of such vital importance to swine-breeders is of untold worth to the country. But the clouds of disaster from continual losses by swine diseases, which overhung that meeting, have broken into light rifts in the distant skies, or entirely passed away, and when the association meets again it will be to consider questions of a more pleasing and hope-inspiring nature.

Men may talk and write as they will of the cattle interest, the sheep and wool interest and the horse interest, but the fact remains that nothing on the farm can be reared at greater profit than good hogs. The remarkable change that is going on in the manner of feeding and the increasing demand everywhere for a better

quality of pork, will present fruitful topics for consideration at the coming meeting. The, as yet, unsettled question of how judging at the fairs shall be done, will also be discussed, besides many other points, which the large attendance promised will not fail to bring out.

It is needless to urge upon members, and those heretofore present, the personal advantages to be derived from attending these meetings. They know they cannot afford to be absent. To others engaged in swine-breeding, or in any way specially interested in the great meat-producing industries of the country, is hereby given a cordial invitation to be present at the coming meeting.

PHIL. M. SPRINGER,
Sec'y Nat'l Swine-Breeders' Association.
Springfield, Ill.

The Check or Bearing Rein.

EDITORS PRESS:—Much has already been written upon this subject in different parts of the world, and much more appears necessary, before owners of horses generally will conclude to abolish from their stables the use of the bearing rein.

Tight bearing-reins for horses cause the wearer much pain through cramping the animal's neck. This is where the bearing rein is carried from the saddle through a loop on the throat-latch, as generally used in England. In America, where it is taken straight up the crest of the neck and over the head to the bit, it is not injurious to the throat, but is equally severe and uncomfortable to the horse, inasmuch as it "gags" the corners of his mouth and causes him to be continually tossing his head to get relief.

This system is bad enough in carriage horses, but far worse as regards draft horses, for it is physically impossible for a horse to pull a heavy load (especially up-hill) unless he can get his head free, and so throw his full weight upon the collar.

Neither is it the "comfort" of the horse only which calls attention to this practice, but its health also, for tight-bearing reins are productive of many ills, among which may be mentioned poll evil.

In some parts no bearing rein is allowed. The animals walk with more freedom and do their work without pain. Let any humane person notice a carriage horse reined up while standing by the sidewalk. It is enough to make one grieve to witness the poor tortured brute endeavoring by various movements to get temporary relief.

A. B.

HORTICULTURE.

Meeting of the State Horticultural Society.

Last week we were obliged to give but part of the report of the meeting of the State Horticultural Society. The following takes up the discussion on table grapes at the point where it was dropped last week:

President Hilgard: There is another grape seldom seen in the northern part of the State, but which is raised largely in France—the Malaga. It is rather sweet and tasteless, but has been shipped from France to Chicago and arrived in good condition. Not a large amount will sell well, but to a certain extent it will.

Mr. Tompkins desired to know how long the Eastern grape season lasted. Mr. Buck said they have a way of keeping their grapes and storing them away so that they keep longer than ours do, into the winter even.

Mr. Tompkins desired to know when they marketed them.

Mr. Buck: Beginning at the south, they ripen by the 1st of September, and in the Lake Erie region and on the Hudson a little later. They have but little time in some localities between a ripe grape and a frost. More grapes are raised around Lake Erie than anywhere else.

The President thought we might adopt some of the ways they use East to keep grapes. They put them in paper bags partly to protect them and partly for the black rot. He used to keep them in that way in the East until Christmas.

Mr. Tompkins said, speaking of grapes ripening under foliage, they also colored well in paper bags.

President Hilgard spoke of the Cinsaut, a grape lately brought to this State, although the specimens were poor. It is a short-bunched grape and resembles the Malvoise in that it has a decided flavor, but not so decided as to make it like the Muscat. Every one who tries the grape is delighted with it. It is used as a shipping grape in France a good deal; if it cannot be shipped, it makes good wine. It should be tried more widely. It has been proved that it will not grow well on poor soils; it requires rich adobe soil. It gives 170 gallons of must to the ton. Mr. Wheeler, who planted the grape on gravelly soil, found it was not a good bearer, but it is a good bearer on rich adobe soil. Would recommend it for trial.

Mr. Cantelow of Vacaville was not acquainted with the grape. He thought the Verdel a large grape, and, if allowed to ripen, a very sweet one. White Tokay is not a marketable grape. It does not take in this market; never

tried it for Eastern markets. The Cornichon with him is a poor bearer when short-pruned. He never planted it very extensively, and never considered it a very good grape. No variety of grape is better than the Muscat. When asked which grape he preferred for general culture, replied the Muscat. His variety is a little different from those in his neighborhood. He bought cuttings from Mr. Delmas of San Jose. Few varieties better than this. He grafted all his grapes from that kind. He thinks it must be the Muscatel. The wood is thin and grape is a good bearer pruned either short or long. He has planted it extensively; it is liked both in this market and the Eastern markets.

A member spoke in regard to Tiensing grape. It is very sweet; it keeps for four or five months. He had them last for three months in a very dry place. They came packed to us from China.

President Hilgard stated that it was a grape that they had been unable to fruit at Berkeley, but the fruit is described as very long-bunched. He is told that this grape is allowed to run over trellises and trees in its own country. Our grapes have never set. It is an odd-looking vine. Leaves are full of prickles; no one would take it to be a grapevine. The stem is also full of hairs. It belongs to a different species and genus. We need further information on the subject.

We must pay a little more attention to the possibility of growing grapes that will answer for both wine and table like the Cinsaut. Plant so as to have choice between table-grape market and wine-grape market. Several varieties will serve thus and we should have few financial failures if we tried such varieties.

Mr. Buck spoke of grapes being in the Eastern market as late as the first of April in good condition. They were probably kept in cold storage of some kind before they were shipped there. They get them very late in the season. Our grapes have better keeping qualities than their grapes have. We could do the same with ours.

Mr. Coates desired to know what variety it is that comes from Spain and was kept so long in the Eastern market, especially New York and Boston and London. It is kept all through the winter. Was it the Malaga?

President Hilgard stated that it was understood to be the Muscat of Alexandria. It is packed in cork-dust, which takes away all the flavor and leaves its own.

Mr. Coates remarked that Dr. Strentzel of Martinez used carbonized bran. Tules have been used. Grapes have been kept for months at the East, and no reason why they should not be here.

President Hilgard: We do things in such a wholesale manner we have no time to devote to the little industries yet. Grapes must not be touched with the finger if they are to be preserved for any length of time. In Malaga they are picked by laborers who use shears that grasp the stem after picking it off or allows them to be held by the thumb and finger without touching the berries. We can use all that care, but it is a question as to whether it will pay, as labor is too dear. He had paid 75 cents a pound for Malaga grapes in the East about Christmas-time. In regard to carbonized bran, carbon is a very strong disinfectant and will take away all the flavor of the grape. Sugarine sawdust is the least objectionable, as it is almost entirely without flavor, but cork is considered the best. Found some years ago bark that could be used like cork from the Island of Jesso. Our cottonwood bark may answer for this purpose. This is one of the minute industries. We lose millions of limes and lemons every year because we do not make citric acid, and we have no manufactories for preserved lemons or extracts, etc.

Mr. Tompkins said bran caked around the stem of the berry and was objectionable.

Mr. Coates thought nothing had been said in regard to keeping the grapes alive, which was the most important thing of all. The acreage of bearing grapes is decreasing, particularly in this part of the State. Few vineyards are in as full bearing as formerly in the northern and central parts of the State, on account of the phylloxera. The demand will increase for all fruits if they can be shipped in good condition and we have low rates of freight. What stock can be renewed for table grapes, which make large, coarse wood and overgrow the stock? That is the principal objection to the *Riparia* family. The Tokay is often claimed to be resistant on account of its great vigor. He has seen vineyards of all varieties killed except the Tokay. Can find that almost anywhere. Some in Vaca valley have even used the Tokay as stock. The *Riparia* root is such a very small-growing stock that some trust to the *Vitis Californica*. The *Rum-tris* grows to a nice large stock in a few years, but is very objectionable on account of the suckers.

The President: Both in number and toughness.

Mr. Coates: Mr. Munson wrote me about a new Mexican grape.

Mr. Klee: It is called the Wooly *Riparia*. They think it is a distinct variety. The leaf is wooly. It is growing at the University.

Mr. Coates: It is a strong-growing variety, more so than the *Riparia*.

The President: The *Californica* has proved resistant in some parts of the State and non-resistant in others. They have had samples at the University put in holes from which the diseased vines were just extracted, and the vines are alive now and bear abundantly every year. They are on a very heavy, good soil. He is satisfied

that the *Californica* should be placed in rather a rich and heavy soil, and then it will resist. There is no reason to suppose that one grape is going to resist everywhere. You use different roots on different soils for orchard fruits; the same with grapes. To my sorrow, I have quite a quantity of *Rupestris*, and have a stand of about one-eighth of successful grafts. In *Riparia* about one-half, and *Californica* 98½ per cent. It is on rich and somewhat heavy soil; the same as I found *Californica* growing on the hills in Napa and Sonoma counties. I have no reason to change my opinion on this point. For the foothills, *Californica* would not be a success; other varieties should be used there. Had a conversation with Prof. Viala from Montpellier, France, in regard to resistant vines in France, where they have all kinds known. The *Californica* does not resist there. Upon inquiry, I found the soil was gravelly and rather poor. *Californica* will not resist in such soil. This subject of resistant stocks is a very important study which we have still to perfect.

Mr. Tompkins: On quite heavy land this *Californica* seems to resist well; is it so with other stocks? Do they resist on better soil?

Mr. Klee gave his observations on Mr. Thurbur's place in Pleasant valley. There are a few vines grafted on *Californica* root now living. All the rest were killed with phylloxera.

Mr. Klee thought there was so much difference in the adaptation of these different varieties. *Rupestris* grows large and vigorous in the Briggs vineyard.

The president thought *Rupestris* grows well only in light soils, but would not be successful in as many soils as *Riparia*; that the *Aestivalis* grows in any upland and lowland while the *Riparia* grows naturally on the lake bottoms and the *Rupestris* grows on the hill soils; no one vine will resist everywhere.

Mr. Coates desired to know about the parasites in vines.

President Hilgard thought a great many suggestions were needed yet to teach us what to do about resistant stocks.

Mr. Rixford said he had been told by Mr. Wheeler of Vaca valley that they have been grafting Tokay grapes on *Californica* to get better fruit.

Mr. Buck: In grafting on any of these strong-growing grapes you will find that the graft will root for itself unless you keep cutting off the roots.

The President: Graft on the surface; pull up the earth around it, and then afterward pull it away. *Rupestris* or *Riparia* especially. I do not believe in grafting underground.

Mr. Klee has about an acre of vines grafted on the *Californica*. They made a very strong growth, and gave no trouble whatever. In case of trouble they would have to be grafted above the ground. Nurserymen should take hold of this matter and have vines already grafted. If they had encouragement enough they might go into this business. They do that way in France. Graft them in the nurseries.

Mr. Cantelow had a large Mission vine on a trellis and wanted to change it. Put a number of buds into the canes of the previous year and every one grew. He puts away cuttings in a cool place, waits until the sap begins to come up in the vine, and then puts the buds in by common budding as with fruit trees. He put in quite a number and every one lived.

President Hilgard: Do you wait till the buds begin to swell on the vine?

Mr. Cantelow: I put in the buds just as soon as the bark will slip and before the sap runs too strong. You cannot do it in summer-time. I use no precautions and simply tie in the buds with string. I think a vineyard could be changed over in that way without any trouble at all. Never heard of it being tried before successfully. In lifting the bark at the right time you will find it will slip as easily as on a peach tree.

Seedling Fruits.

The President: The subject of next meeting will be "Seedling Fruits," as it is now too late to begin that subject. It is a very important subject and will probably occupy the whole of the time at the next meeting.

Mr. Allegretti addressed the society concerning the cold storage of fruits. He said each fruit seemed to have its "lifetime" in storage and after that it would lose color and flavor. Cling peaches last well for four or five weeks and then draw color from the pit and lose flavor; freestone peaches last longer. Plums keep for a long time and so do Bartlett pears—the last perhaps keeps best of all. He showed samples which had been wrapped in paper and some not wrapped. The fruit in paper was discolored on the outside, while the inside was good color; the uncovered fruit kept a good color.

Mr. Buck and Mr. Lelong called attention to the Convention of Fruit-Growers at Santa Rosa on Nov. 8th, and urged all to attend.

The society then adjourned.

Olive-Growing in California.

EDITORS PRESS:—California is a veritable land of wonders. Its gold deposits have yielded enormous wealth during the past 40 years, and now that they are approaching exhaustion its enterprising citizens are developing more permanent sources of material riches in the cultivation of their soil, which is wonderfully fertile, and which, thanks to the magnificent climate, the products of both the semi-tropical and the temperate zones can be reared. The culture of

the olive has become one of the regular industries of California, and it is reported that there are those who have as many as a hundred acres of olive trees, 80 of which are bearing, and that the crop this year in this particular spot will produce from 20,000 to 25,000 bottles of oil. Olive culture has hitherto been almost wholly confined to the countries of the Mediterranean basin, and the demand for the oil has always been in excess of the supply. It is well known that large quantities of cotton-seed oil have been sold and consumed in the United States as olive oil.

What the public requires is an assurance that the genuine article is to be had, when cotton-seed oil as a substitute must eventually go to the wall to the benefit of the producer and consumer alike.

A. B.

THE VINEYARD.

Decision on the Wine Stamp Law.

Henry Kohler was convicted in the Police Court of the city and county of San Francisco of the crime of misdemeanor, committed in violation of the provisions of an Act of the Legislature of the State of California, entitled, "An Act to prohibit the sophistication and adulteration of wine, and to prevent fraud in the manufacture and sale thereof," approved March 7, 1887. (Stats. 1887, p. 46.)

The salient provisions of the Act are as follows:

Section 1 defines pure wine for the purposes of the Act. Section 2 prohibits the using of deleterious substitutes in the fermentation, preservation and fortification of pure wines. Section 3 prohibits the use of materials injurious to consumers for the promotion of fermentation. Section 4 declares it to be unlawful to sell under the name of wine any substance other than pure wine, as defined by the Act. Section 5 makes an exception in the case of pure champagne and sparkling wine, so as to permit the use of sugar in sweetening the same. Section 7 provides for the printing and furnishing of labels by the Controller of the State, setting forth that the wine covered by such labels is pure California wine. Section 8 reads as follows:

"Sec. 8. It is desired and required that all and every grower, manufacturer, trader, handler or bottler of California wine, when selling or putting up for sale any California wine, or when shipping California wine to parties to whom sold, shall plainly stencil, brand or have printed where it will be easily seen, first, 'Pure California wine,' and secondly his name or the firm's name, as the case may be, both on label of bottle or package in which wine is sold and sent; or he may, in lieu thereof, if he so prefers and elects, affix the label which has been provided for in Section 7. It shall be unlawful to affix any such stamp or label as above provided to any vessel containing any substance other than pure wine, as herein defined, or to prepare or use on any vessel containing any liquid, any imitation or counterfeit of such stamp or any paper in the similitude or resemblance thereof, or any paper of such form and appearance as to be calculated to mislead or deceive any unwary person, or cause him to suppose the contents of such vessel to be pure wine. It shall be unlawful for any person or persons other than the ones for whom such stamps were procured to in any way use such stamps or to have possession of the same. A violation of any of the provisions of this section shall be a misdemeanor and punishable by a fine of not less than \$50, etc."

The complaint charged "that said Henry Kohler, being a dealer and bottler of California wines, did sell to the prosecuting witness, one Jasper, a bottle of California wine, which bottle when so sold did not have plainly or at all stamped thereon the words 'Pure California wine,' nor did it have in lieu thereof the stamp as furnished by the Controller of State."

Several questions are presented involving the construction of the Act referred to and its constitutionality. It is claimed by petitioner that the Act is not mandatory in requiring a pure-wine stamp to be placed upon pure California wine. The complaint did not charge petitioner with the sale of sophisticated or adulterated wine; it accused him merely of selling a bottle of California wine without having thereon the pure-wine stamp. It is claimed by counsel for the people that, under the Act referred to, dealers in wine are prohibited from selling pure wine without the stamp designated by the Act. Petitioner contends that, while the pure-wine stamp may be used, there is no penalty prescribed for a failure to use it. The Act is not objectionable upon the ground claimed by the petitioner that it embraces more than one subject, contrary to the requirements of Article IV, Section 24 of the Constitution, which provides that: "Every Act shall embrace but one subject, which subject shall be expressed in its title." However numerous the provisions of an Act may be, if they can be fairly considered as falling within the subject-matter of legislation, or as proper methods for the attainment of the end sought by the Act, there is no conflict with the constitutional provision above quoted. In any event, it is only where there is a clear violation of the Constitution that the court is justified in declaring it unconstitutional. The great object to be attained by the "Act to prohibit the sophistication and adulteration of wine, and to prevent fraud in the manufacture and sale thereof," must have been to secure the manufacture and sale of none but pure California wine. The first section defines pure wine; the second section prohibits the use of deleterious substitutes; the fourth section prohibits the sale of any but pure wine, and every penalty affixed is for the purpose of protecting those who make and sell pure wine, and for punishing those who make and sell im-

pure wine. Manifestly the provisions of the Act all fall within the subject named in its title, and are necessary and logical methods for the attainment of the end desired by the Legislature. The Act, therefore, is not repugnant to Article IV, Section 24, *supra*.

Now, is the Act unconstitutional because so unreasonable in its restriction upon the sale of wines as to deprive the petitioner of his property and liberty without due process of law? The power of the Legislature to impose such regulations for the conservation of the health of its citizens has been so often discussed and affirmed here that it is useless to reopen the question. The manufacture and sale of liquors of all kinds, the sale of pure milk, the inspection and sale of meats, and the control of laundries and slaughter-houses are all subject to regulation. Whatever construction may be placed upon the Act, it is difficult to see how a compliance with the law would injure an honest dealer in California wine.

A more difficult question is that which refers to the proper construction of Section 8. Is it mandatory in requiring a pure-wine stamp to be placed upon pure California wine? Is a failure to place such stamp upon pure California wine "a violation of any of the provisions of this section?"

All legislation directed against the adulteration and simulation of articles of food and drink is aimed at a common object—the preservation of the public health. The Court will take judicial notice of the evils preceding such legislation, and the mischiefs intended to be prevented thereby, the character and importance of the interests of the State which may be affected thereby and the usual course of business. A knowledge of these matters is often necessary to a full and fair understanding of the force and effect of the law, and is a valuable help in ascertaining its true intent and meaning. The growth of the wine-growing interests of this State is a matter of world-wide publicity. It is a well-known fact that California is the only State in the Union where the grape suitable for wine-making is cultivated in vineyards, and that her wines are rapidly growing in favor and rivaling in quality the table wines of foreign countries. With the progress and success of this industry there has grown up and increased the manufacture and sale of spurious wines, which are not only injurious to health, but detrimental to the wine industry. Several attempts have been made in Congress to prevent the trade in this cheap and unwholesome stuff, but without material effect. Finally, in 1886-87, when the evil had attained so great a magnitude as to attract public attention, the Grape-growers' and Wine-makers' Association of California presented a bill to the Legislature of this State, which, after being amended, was passed, containing the provisions above stated. The primary objects of the Act were doubtless to prevent the sale of spurious wine under the designation of "California wine," and to promote the public health. But there were other objects to be obtained incidentally. The wine-grower who produced good wine would not have to suffer the effect of a blending by the trade of his article of superior merit with an inferior one. It was evidently through the efforts of wine-growers, who aimed at a high degree of excellence in wine-making, that the first clause of Section 8 was inserted. Some expression on the part of the Legislature of the State was desired as authority for affixing a badge to their productions, by which the consumer could feel sure of the purity of the wine and the identity of the producer. That the words "desired and required" were intended to express rather a legislative wish and permission than a mandate is indicated, too, in the discordancy of the natural meanings of the words themselves. As words of legislative command they are singularly inappropriate and inconsistent. It is difficult to understand how it can be made a penal offense to violate simply a legislative desire. The word "desired" cannot be ignored in the construction of the Act any more than the word "required," and the former is at least as forcible in its expression of a request as the latter is in its expression of a command. The Act in all other provisions containing mandates and prohibitions is positive and forcible in its language. Thus it is noticeable that the same section further along provides: "It shall be unlawful to affix any such stamp," etc.; and again, "it shall be unlawful for any person or persons other than the ones for whom such stamps were procured to use," etc. Other sections of the Act use the same language—words which are ordinarily employed in expressing the mandates and prohibitions of penal statutes. We do not think it was intended that the sale of wines, admitted to be pure, should be circumscribed, limited or restricted. Such legislation is unusual. We know of no similar statute where anything more has been attempted than, first, to prohibit the adulteration and sophistication of food and drink, and second, if permitted, to compel the appropriate stamping and designation of such food and drink. The New York Pure-Wine law, approved in June, 1887, defines pure wines, half-wines and made wines; prohibits the sale of adulterated wines, and requires the stamping of half-wines and made wines; but it does not in any manner attempt to regulate the sale of pure wines. If the Legislature had intended to compel the use of stamps and labels on pure wine, it could easily have stated that the failure, neglect or refusal to use them was unlawful, and there would have been no ambiguity in its language. The fact that it is carefully stated in the

Act what shall be unlawful in other respects is strong evidence that the first clause of Section 8 was not intended to be obligatory. It is always to be presumed that the Legislature will express its intention in clear and explicit terms in prescribing the obligations for a violation of which a penalty is affixed. In cases of this kind, the limitations and restrictions should be plain and free from doubt. (Hill vs. Decatur, 22 Georgia, 203.) It is a general rule that statutes affixing penalties should be strictly construed and all doubts resolved in favor of the accused. (People vs. Tisdale, 57 Cal., 107.) When measured by the mischief contemplated by the Legislature, an additional reason is presented for giving to Section 8 a permissive scope, rather than a mandatory one, so far as the stamping of pure wines is concerned. The Act defines pure wine, prohibits adulteration and deterioration, prohibits the sale of impure wine; the Controller is authorized to furnish labels, and penalties are provided for the use thereof on other than pure wines. This seems to be the natural scope of the Act, and all that is necessarily indicated in its title. There can be no fraud in the sale of pure wine. The title is a part of the Act, and must declare its object; and in all cases where the legislative intent is ambiguous, judicial reference may be had to the title of the Act to assist in determining its meaning. (Weed vs. Maynard, 52 Cal., 439; Barnes vs. Jones, 51 Cal., 303.) We think, therefore, that the affixing of labels on pure wine is not obligatory, and that the proper construction of Section 8, wherein it declares that a violation of any of its provisions is a misdemeanor, is to impose a penalty for a violation of only those provisions which are therein specifically declared to be unlawful. It results that the complaint states no offense, and the petitioner must be discharged.

So ordered.

PATERSON, J.

We concur:

TEMPLE, J.,
SHARPESTEIN, J.,
MCKINSTRY, J.,
MCFARLAND, J.

Vine Pruning.

EDITORS PRESS:—I have the care of a young vineyard of two acres. Last winter being the first time it needed to be pruned, and not being posted on the matter of pruning, I waited until my neighbors began to prune; then I took my shears and sallied forth to prune mine. That was in the latter part of January. I found the vines bled considerably. I stopped operations for a few days and waited for cooler weather, which came in February. I pruned then, but still many of the vines bled; some kinds very much; the Sweetwater bled most. We are in a warm location where we seldom have ice, only white frost now and then. Last winter the vine leaves were not frost-killed until in February. Now, it appears to me, it is not cold enough here to chill the flow of the sap. One point in particular on which I want to be informed is this: I find just now after picking the grapes that the vines do not bleed when I cut off a cane. I have tried it in different parts of the vineyard, and at different intervals for the last week. The question with me is, would it be doing the right thing to prune them now while they are as dry as a bone? Another point: Is it a good plan to paint over the wounds or cut ends made in pruning? I would be pleased to hear from any one who knows the things I seek after.

Redwood City.

VINE-GROWER.

[The subject is open for discussion. Let us hear from you, friends.—EDS. PRESS.]

THE DAIRY.

Lucerne.

EDITORS PRESS:—The Lucerne Vale of Tulare county, known in former years as the Mussel Slough country, seems destined in the near future to establish a reputation for fruit-growing and raising fine stock not to be excelled by any section either east or west of the Rocky mountains.

A kind of oasis in the center of the great unwatered plain that almost surrounds it, and 17 miles off the main line of the S. P. R. R., the superior richness of its soil and the adaptability of its climate to the production of every kind of fruit grown upon the Pacific Slope, has but recently been demonstrated by practical experiments, though it has for years been known as one of the best stock-raising and wheat-producing sections of the State.

It was given its former name by stockmen in early days, because of the large quantities of mussels found in the bed of one of the usually dry sloughs that wound their way through this valley. But after the irrigation ditches had been constructed and the natural resources of the country became somewhat developed, the old name was thought to be a misnomer, and the much more appropriate one of Lucerne valley or vale was generally adopted, though some of the early settlers cherish an affection for the old title and are unwilling to give it up.

This little valley contains an area of about 200 square miles or 130,000 acres. It bounds

the lake of Tulare on the north, and was probably within the last century all a part of the bed of that lake. In fact, one-third of it has become uncovered within the last two decades, the waters of this mysterious lake having reached five miles on each side, or rather five miles all the way round it in that time.

I call it mysterious because it has no outlet, although there are several large rivers flowing into it, and where the water goes no one can tell, unless, as some believe, there is an outlet through to the ocean.

The soil of Lucerne seems to be mostly a decomposed sediment, bearing strong evidences all over the valley of its once having been a lake-bottom. It is of a porous nature such as I have never seen elsewhere, though I have traveled and experimented considerably in my lifetime.

This condition of the soil permits a seepage from the many irrigation ditches flowing through the valley, the water often forcing its way in this manner for a distance of half a mile. Flooding is not necessary in a single instance, and is never permitted by farmers and horticulturists who understand the nature of the soil, which is too heavy, in most cases, to bear irrigation by that method, and if it is indulged in the ground seldom fails to bake; but by the seepage method, running ditches of water 100 or 200 yards apart, this never occurs, and sufficient moisture can easily be acquired.

The towns of Lucerne are four in number, and named in the order of their size. They are: Hanford, Lemoore, Grangeville and Armona, the first-named containing a population of about 1200 people. On the 12th of July last the main business part of this place was completely destroyed by fire, the value of the property burned being estimated at \$200,000. It has since been rebuilt, and though the buildings destroyed were mostly superb brick structures, the new ones are in every case a marked improvement on the old. Several fine brick buildings have been added this season, notable among which are the Hanford Bank and post-office buildings, both of which would do credit to any city in the State.

Last August Grangeville suffered serious loss by fire, but the enterprising citizens of that beautiful village were not behind their neighbors at Hanford, and have already erected new buildings, larger and more substantial than the old ones, to supply the places of those burned.

The products of Lucerne in fruit, grain and stock have been quite satisfactory this season, and a large acreage of trees and vines will be added to her orchards and vineyards next spring.

Hanford, Cal., Nov. 1, 1887.

A. F. J.

Oleomargarine.

The meeting of the National Butter and Egg Convention at Manchester, Iowa, last week, was largely attended. One session was largely devoted to the consideration of oleomargarine. Resolutions were adopted calling the attention of the Secretary of the Treasury to the necessity of a proper enforcement of the oleomargarine law by the revenue officers, also asking Congress for an appropriation to insure its enforcement. Another resolution adopted was one urging the States which have not already passed laws prohibiting the manufacture of oleomargarine, to do so at the earliest possible time.

The Iowa associations presented resolutions reciting that Revenue Commissioner Miller pronounces the oleomargarine law inoperative, and will recommend its repeal, and resolving that if the law is inoperative it is because of Mr. Miller's lukewarmness and refusal to enforce it; that no one will receive their votes for any Executive, Congressional or other office who is not squarely opposed to fraud against dairy interests; that there should be a sufficient tax on the sale of oleomargarine to create a fund to enforce the law against the fraud; that funds derived from the tax and from fines should be used in enforcing the law; that it is deemed necessary that Congress should pass a law providing for this use of the money. The resolutions were referred to a committee.

Warty Growths on a Cow.

EDITORS PRESS:—In the San Luis Obispo Tribune there is an account of a cow at Shepherd's which is interesting and amusing. It says: "The animal is affected with barnacles such as are seen on wharf piles and the bottoms of ships. All over her head, neck and fore legs there are thousands of these moving excrescences which rattle as she walks or shakes her head. They hang in masses over her eyes and under her jaws, and this extra weight must reach at least 50 pounds. . . . Barnacles on ships are common, but when they begin to form on decent, respectable cows, it is time to ask Nature what she means by it." Judging from the description and the location of these peculiar formations, I should be inclined to think that they are due to a disease of the skin producing papillary or "warty" growths. Cattle are frequently the subjects of warts. I have often removed immense masses by means of the actual cautery. This warty condition or tendency is peculiar to certain oxen. It is noticeable also in some human beings.

ROBERT J. DAWSON, V. S.

Gilroy, Nov. 2, 1887.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

The National Grange Exhibit.

It is very gratifying to Worthy Master Overhiser and others interested in the enterprise that on so short a notice so much has been secured for a worthy representation of California at the National Grange exhibition of agricultural products.

The Farmers' Union, Brothers Keesling, Cyrus Jones and others of San Jose performed their duties with alertness, and we have no doubt effectively, and Santa Clara county will be grandly represented.

Brother Huffman of Lodi, Brothers Overhiser and Gratton and others of Stockton have not only obtained a large exhibit from San Joaquin county, but have secured generous contributions to pay the expenses of Brother Huffman to and from the National Grange.

Mr. Alsip of the State Board of Trade, Sacramento, who opened his store for the reception of articles prior to shipping on the car, has done exceedingly well in seeing that the car was properly loaded and started on Sunday morning. Brother Flint, the Grangers' Business Store and others at Sacramento, have acted promptly and sent forward an exhibit that will no doubt reflect credit upon the Capital City and county of our State. They have also done well in raising funds.

Brother Williams of Marysville, Sutter and Yuba Grangers have acted well their part, and those two counties will be duly heard from at Lansing. The *Patron* and *RURAL PRESS* offices have sent hundreds of copies of Grange and farming papers and agricultural pamphlets, with other printed matter for free distribution.

Napa, Contra Costa, Placer, Solano and Sonoma counties have contributed samples.

The managers of the different railroad companies who have given free and rapid transit for the car transporting the exhibit, Mr. Hatch, President, Mr. Brown, Manager, and Mr. Davies, Secretary of the State Board of Trade, and many of the members who favored the enterprise, are deserving of commendation for their active interest in this matter.

Bro. Huffman left on the afternoon train on Tuesday to follow up the car and see that the exhibit arrives and is properly arranged and carefully and impartially attended to for the benefit of all exhibitors.

Granges and Patrons should remember that articles can be sent by mail or express yet to reach Lansing in about six days, and that the National Grange session opens on Wednesday, the 16th of November, and is expected to continue about 10 days.

It is now contemplated that the exhibit at the National Grange will be forwarded for permanent exhibition at Chicago soon after the session of the National Grange. We hope to be able to give more particulars concerning the exhibit in our next.

Grange-Day Anniversary.

We hear from several quarters that this anniversary will be duly observed on Saturday, December 3d.

We hope to be able to announce in our next that Eden and Temescal Granges have completed arrangements that will insure a large meeting of Patrons of Alameda, Contra Costa, Santa Clara and other counties, and that many of the officers of the State Grange, Past Masters and other Grange speakers will come together for a general council and exchange of opinions regarding the year's Grange work before us.

In a note from Brother Overhiser on the eve of his departure for the National Grange, he mentions his belief that our efforts for the National Grange exhibit will prove a success and inspire further activity in our fieldwork; that he heartily joins with us and all Patrons for a steady and strong movement along the whole line.

The Worthy Master simply voices the sincere feelings of every good Patron throughout the jurisdiction, and we trust that it only needs the "know how," "to best work and do" for the Grange to make the work of the coming years more telling than any in the past.

While we are anxious for a general conference of Patrons at this time, we do not anticipate that such a meeting need prevent the holding of individual Grange anniversary meetings, or of county or district gatherings. There are many localities where the great body of Patrons cannot attend from a distance, yet no Grange or Patron ought to lose the pleasure and benefit of a good anniversary meeting, even if the meeting must be held a little earlier or a little later than the general meeting, should such be held in Alameda county.

Temescal Grange.

Temescal Grange conferred the degrees of Maid and Shepherdess last Saturday evening. The next meeting will be held at 1 o'clock November 19th, for work in the third and fourth degrees, and it is hoped there will be a full attendance of members and visitors. The Committee on Grange Birthday meeting with Eden Grange was fully empowered to act with Eden Grange, which meets on the 12th inst., and to announce final arrangements.

W. L. Overhiser.

We herewith present our readers with a photo-simile engraving of W. L. Overhiser, Worthy Master of the State Grange of California. Bro. Overhiser is one of the early and pioneer farmers of San Joaquin county, and has resided for many years on his large and well-tilled farm some nine miles northeasterly of Stockton. He has long been known as a progressive tiller of the soil and always ready to investigate and encourage the introduction of new and improved farm machinery.

He is a charter member of Stockton Grange, organized in 1873, and was its first Overseer and the second Master elected. He has never faltered in his devotion to the Grange cause, and during the past few years, it is safe to say, has volunteered more time and labor, gratuitously, in the work of the Grange of this State than any other Patron.

His labors in the Subordinate Grange, as well as in the State Grange, have been well supported by his faithful and devoted wife.

In the organization of the Grangers' Bank of California, in April, 1874, and the Grangers' Business Association soon after, Brother Overhiser took an active and leading part. He has

confidence and esteem of the fellow-citizens of his county and State.

Our representatives go to the National Grange well freighted with the friendship, good-will, and the full hope of their constituents that their mission as representatives to the National Grange will be fraught with pleasure and crowned with success.

State Lecturer's Bulletin.

Open Letter No. 2.

EDITORS PRESS:—On Saturday morning, Oct. 22d, Mrs. F. and myself started for South Sutter Grange, located at Pleasant Grove, about 18 miles from Sacramento.

After leaving the city limits and going about one mile across the American river, we pass four saloons.

I use the word *pass* advisedly and in somewhat a subdued tone, as I feel a little apprehension in regard to reaching our destination in safety. For be it known there is only one saloon between here and our point of debarkation. It is well known when an engineer is in a road where the water-tanks are far apart, he will see that the boiler is well filled before he starts. Now I had a sort of fellow-feeling come

good many of them, it seems as though I should be a competent judge.

The tables being cleared, I was put in a corner, and I poised and braced myself for an effort worthy the occasion. I had hardly time to state my text, when Bro. Overhiser, W. M. S. G., and Bro. Hull, Gatekeeper S. G., made their appearance.

Now, I said to myself, my wife must help me out of this dilemma. I paused and threw in a large period, until the two Brothers reached their seats by the Worthy Master. Then I stated with somewhat of a flourish that I always respected my superiors in office and power, and I was happy to introduce to South Sutter Grange our new W. M. of the State Grange, and he being fresh and full from the State Grange, would, no doubt, be willing to disgorge and prepare storage room for the new light that he will get at National Grange.

I tried to flatter the Gatekeeper, Bro. Hull, in the same way, but this was not a good day for flattery. After a few remarks from them I had to poise and brace myself again.

We had several nice speeches from members present, and this ended one of those happy reunions where whole families can come together on an equality, and work for mutual good.

One pleasing and hopeful feature of the Grange is that they bring their children along with their parents, and have a regular frolic.

Located in a district like this, with a little effort this hall should be packed at every meeting. You farmers that stay away from an organization like this know not what you lose. Bro. Hull returned to Sacramento, while Bro. Overhiser, Mrs. F. and myself spent the night with Brother and Sister Chandler. I had longed to visit this Granger's home, for I was satisfied his home would be as substantial as himself.

I do not envy Bro. Chandler's possessions or surroundings. I believe the brother and sister deserve all they possess. They have an extensive farm, large house, and a commodious, modern built barn. The walls of their rooms are hung with fine pictures; their tables are full of maps, charts, albums, etc.; their library is full of useful and instructive books; their daughters can play the organ or piano, and sing like the larks in the meadow. In fact, the whole surroundings partake of good sense, thought and culture.

May Brother and Sister Chandler live long to enjoy their well-earned home.

DANIEL FLINT, L. S. G.

Sacramento, Oct. 30, 1887.

[When Bro. Flint attends a Harvest Feast he is not only sure to carry out the declaration of purposes on such occasions, but, as "Out of the heart the mouth speaketh," he always proves the most able war correspondent in writing up the latest battle. The above condensed description of a good Grange home is no stereotype edition. It is always safe to stamp "original contributions" over the Worthy Lecturer's correspondence.—EDS.]

Yuba City Harvest Feast.

A New Pomona Grange.

EDITORS PRESS:—On Saturday, Nov. 5th, Yuba City Grange conferred the fourth degree with an old-fashioned Harvest Feast. Visitors from West Butte, South Sutter, Wheatland and North Butte were present with us and helped to make the day more pleasant. More than 100 brothers and sisters enjoyed the good things provided. Yuba City Grange is never wanting on such occasions.

An excellent literary program was given at the close of the Feast, and all seemed to enjoy it. The exercises were about as follows:

Music, Sister Fannie Hull; recitation, Sister Frisbee; music, the choir; recitation, Annie Stewart; recitation, Maude Woodworth; music, Sisters Dela and Mattie Walton; reading, Sister Lena Newkom; music, Brothers Louis and W. D. Woodworth and Brother Barr.

At the close of the literary program the subject of the organization of a Pomona Grange was brought up by the Master of Yuba City Grange. It was discussed by Brothers Partidge and Noyes of West Butte and Bro. Mahon of South Sutter and many other members. The opinion expressed was unanimously in favor of the organization proposed, and a petition for organization was circulated and signed by 45 Grangers present. This number will be increased to nearly 100 before the organization, which will take place on Saturday, November 19th. The meeting for organization will be held in the Grange hall in Yuba City at 1 p. m., and the members interested in this organization wish to take this opportunity to urgently invite all members of the Order in Sutter and Yuba counties to be present with us at that time, and to unite with them in making this undertaking a grand success. A Pomona Grange can be made a vast benefit to the Order and to the counties as well. It should be the center of Grange interest and Grange work, and we believe it will radiate a good effect upon all Patrons of Husbandry of our section of the State. O. E. WILLIAMS.

Yuba City, Nov. 7, 1887.

GRANGERS' PARTY.—The Santa Rosa Republican of Nov. 3d notices the giving of a social party the Saturday evening previous by a number of the Granger friends of Mrs. Saxton at her residence on Fifth street. Grangers, old and young, had gathered together, and an evening of social enjoyment was the necessary consequence.

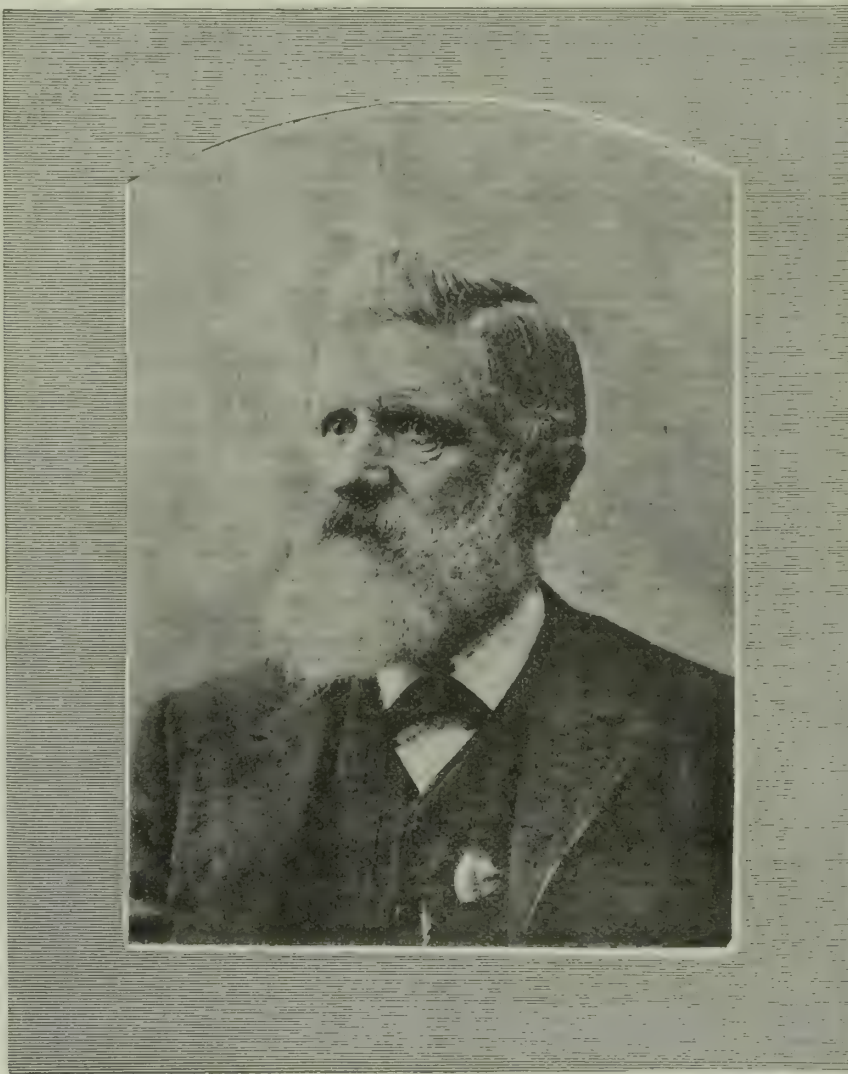


Photo by Titler.

WM. L. OVERHISER, 'WORTHY MASTER' OF CALIFORNIA STATE GRANGE

since served on the Board of Directors of each of these leading Grange business organizations both honestly and faithfully.

He has also served as Gatekeeper, Lecturer and Overseer of the State Grange, and after long service and faithful trial was elected Worthy Master at the late session of the State Grange by a large majority on the first ballot, and will undoubtedly receive the undivided support of the Order in his arduous duties.

Bro. Overhiser left his home in Stockton on Tuesday direct for Lansing, Mich., where he anticipates arriving two or three days prior to the opening of the session on the 16th of November, his desire being to see that the California agricultural exhibit at the National Grange is properly arranged and in good order before the session opens.

While not so ready a debater as some of his predecessors in the National Grange, Brother Overhiser will win his way well into the affections of that body by his zealous, conscientious and dutiful labors in behalf of the welfare of our noble Order.

Sister Overhiser has presented to the State Grange, at different times, well-written sentiments of important interest to the Order. When called upon, she has always well responded to the duties placed upon her.

Their home is in the largest and one of the richest agricultural valleys in the world. It has some very delightful seasons and produces a great variety of agricultural and horticultural products.

Brother Overhiser is a Veteran Odd Fellow, a member of the San Joaquin Valley Pioneer Association, and has long enjoyed the con-

over me. It was a long, dry road, and we had nothing on board to keep down the dust or put out a fire. For one mile in my life I looked as innocent and straight ahead as I could. I did not dare to recognize these kind fellows that wanted to water my horses. This part of the country has become noted for turkey raising, and when I saw these sleek-sided red-headed fellows doing all within their power to fit themselves for a fine display in our markets this fall, my mouth watered so I forgot my thirst, and my eyes sparkled, and I wanted to go off in a dream of the goodies of Thanksgiving, Christmas and New Year.

We arrived about 11 a. m., and found a number present. Soon the W. M. called together, and after disposing of routine business, instructed a class of three sisters in the third and fourth degrees.

The officers went through their parts remarkably well, especially the Assistant Steward and Lady Assistant Steward.

There was a fair attendance, and I noted members present from several sister Granges.

Bro. Dewey, the next Harvest Feast you attend, I want you to go with your head very clear and your stomach very empty, and write a description of the table while you can smile and see the edibles; but before tasting them, I want it printed on a slip of paper, so that I can insert it in my letter, and save me the trouble of writing every time, for one Harvest Feast is an almost counterpart of another.

As you have not had time to print it, I will say that this display of the sisters' handiwork was not second to any previous effort. As I have had the gratifying pleasure of passing in a

sequence. Jumbo, cards and other amusements were furnished, and an excellent spread was made about 11 o'clock. Those present were: Mr. and Mrs. E. W. Davis and family, G. W. Davis, Mr. and Mrs. Newman, Mr. and Mrs. S. I. Allen, Mr. and Mrs. Strady, Mr. and Mrs. E. A. Rodgers, Misses Lumsden, Moore, Fannie L. Gamble, Messrs. Charles Bonner, W. Lumsden, W. and G. Rodgers and C. E. Gamble.

[From California Patron Nov. 2d.]

Semi-Weekly Market Reports.

The market reports heretofore given in the PATRON have been transferred in type from the columns of other San Francisco journals. The RURAL PRESS has been the only publication in San Francisco that has taken great pains in furnishing market reports specially prepared to meet the wants of farmers. From this time on we shall furnish special reports twice a week, made for the Patron up to Monday evening and for the RURAL PRESS up to Wednesday afternoon. These reports will be found a very valuable and important feature to our subscribers. They will be made as correct and accurate as information can be secured concerning the markets. The task of obtaining anything like full reports, and at the same time accurate, is a very difficult one. As full information as is possible to be obtained, and that can be relied upon, we shall give our readers.

We would be pleased to have suggestions from those interested in our market reports. If there is any suggestions that can be made whereby this department of our paper can be made more effective we shall be pleased to receive them.

By reference to this week's market report it will be seen that there has been a reduction made in the rates of freight eastward for raisins, nuts, etc.

Woman's Immigration Bureau of California.

This association was organized October 8, 1887, under the auspices of the State Grange of California. It is managed by a central committee of women of the Grange. Mrs. C. E. Kinney is President, and Mrs. Nellie G. Babcock Secretary. The Bureau receives respectable and intelligent girls arriving on this coast, provides suitable boarding homes and any desired business information. The pressing want of this State, in both city and country, is skilled domestic help. This Bureau receives for this department properly indorsed girls, or those giving satisfactory evidence of character, from the age of 12 to women of 35. All are examined as to their qualifications, and if necessary, their domestic or manual training supplemented through our auxiliary relations to the San Francisco Girls' Union. Respectable homes and suitable business guarantees are required of all members of this Bureau, to whom are sent its beneficiaries.

Strangers desiring the above advantages and protection are kindly requested to call at the office of the Bureau, No. 10 California street, on arriving in San Francisco.

[From California Patron, Nov. 9.]

To Issue Hereafter on Tuesday.

Readers will notice our paper is now dated Wednesday—three days earlier than formerly. Our latest forms will close on Monday night and be printed and mailed Tuesdays.

This will supply a Grange and farm paper in the middle of the week, making, with the Rural Press issued at the end of the week, the equivalent of a semi-weekly issue to those who take both papers. Try it.

SONOMA POMONA GRANGE has elected officers as follows: G. N. Whittaker, M.; W. W. Chapman, O.; E. W. Davis, L.; L. F. Chinn, S.; J. P. Whittaker, A. S.; S. M. Martin, C.; W. P. Crane, Sec'y; A. J. Mills, Tr.; M. Litchfield, G. K.; Mrs. J. M. Talbot, P.; Mrs. E. W. Davis, F.; Mrs. Nelson Carr, Ceres; Miss Emma Mills, L. A. S.

THE AMERICAN HUMANE SOCIETY met in annual session at Rochester, N. Y., Oct. 19th, with 50 delegates present. The several branch societies investigated during the year 121,653 cases of alleged cruelty to animals, and were able to relieve animals in 109,000 instances. Over 10,000 persons were arrested for cruelty to animals. The organization aided 31,000 children in investigating 32,000 cases of alleged cruelty to the young.

SONORA ORANGES are coming into market in Guaymas, and fruit-dealers from San Francisco and Chicago are buying the crops of entire orchards. Guaymas and Hermosillo are well pleased with the quality of the fruit, and prices range from \$8 to \$10 per thousand.

The State Board of Fish Commissioners have had issued from the State Printing Office the fish and game laws of California in pamphlet form.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

A CLIMATIC CURIO.—Oroville Register: It is a little curious that mountain butter, perhaps the richest in the world, will not keep so long in this climate as that made in the warmer parts of the State. It is the same with regard to vegetables, and the finest Plumas or Lassen county potatoes will not keep so long here as the second crop of Early Rose potatoes grown down on Feather river bottom-lands.

Contra Costa.

FIGURING ON FIGS.—Concord Sun, Oct. 29: On the Langenkamp place in Ygnacio valley, about two miles from Concord, stand 52 fig trees, covering barely $\frac{1}{2}$ of an acre. The trees are 19 years old, and for several years past have yielded from \$600 to \$900 yearly; but this year they have outdone their previous efforts, Geo. W. Langenkamp showing us his receipt-book which figures a total of over \$1000 from the 52 trees since their first crop in July. He says they are bearing all the time, and another crop coming on, and if nothing happens between now and Christmas, expects the total will foot up close on to \$1300. Three of the trees produce figs many of which average three to a pound. This ranch is not for sale.

Fresno.

SUGAR BEETS.—Fresno Expositor: Maj. M. Denicke, who has interested himself considerably in sugar-beet culture in this county, having last season furnished seed to a number of persons for testing, has arranged with Claus Spreckels for a lot of seed of an improved quality for testing the capabilities of our soil and climate. The seed will arrive here about the last of December, and will be distributed gratis—the only requirement being that parties will furnish sample beets for analysis from time to time. Mr. Spreckels, who has given the subject much study, says that ashy and sandy soils are well adapted to growing beets.

SWEET POTATOES.—J. H. La Rue, residing near Malaga, has left a large bunch of sweet potatoes, all grown upon one vine, at the office of Shafer & Bane. The bunch weighs 29½ pounds, and is very compact.

MOUNTAIN APPLES.—There are on exhibition at the Grand Central hotel some apples as fine as we ever laid eyes on, and in size they are giants. They were grown on the mountain ranch of Jonathan Lewis, near Fresno Flats. The mountains of Fresno county are well adapted to the growth of the apple.

GRAIN HAY is scarce in the county this year, and the price very stiff. There was probably more hay made this year than ever before, but there have been so many new horses brought into the county for the new settlers that the hay crop is not large enough to supply the demand.

Humboldt.

EEL RIVER APPLES.—Standard: Meyer Jacobson has placed on our desk some of the finest Newtown pippins, Spitzenburg and Golden Russet apples we ever saw. They were actually too pretty to eat—very large, lovely in color and of delicious flavor. We do not believe finer samples can be shown from any locality. They were grown on the steep hillside lands of south fork of Eel river, where Mr. Jacobson's ranch is located.

Kern.

MOUNTAIN APPLES.—Bakersfield Echo, Nov. 3: Mark Wyatt laid on our table this week some apples raised at his place near Kernville; also some from the neighboring orchard of "Jimmy" Morrison. They are of the same kind as those sent to the Mechanics' Fair this year. He could not give the names of the varieties further than that he called them the Moss apple because a Mr. Moss planted the trees from which these were grafted. There are three kinds, all large, smooth and rosy, admirably adapted to the winter trade. They are now very firm and Mr. Wyatt says they remain so for some months yet. One kind, he assured us, would keep until late in the spring. He has grown this fruit for a number of years near Kernville, but has never lost a crop by frost or other causes, although his orchard is several thousand feet above this valley. He is selling his fruit at the orchard at four cents per pound, and we are paying five cents for poorer apples from Oregon. We have never known good winter apples to sell for less than three cents per pound, and because of the scarcity at that figure, nine-tenths of the cellars in town have never known the odor that emanates from a barrel of this staple fruit.

Lake.

OLIVES.—Lakeport Democrat: Mr. A. H. Poe of Lakeview Farm has placed on our desk a small bottle of picked olives, which, so far as we know, are the first olives grown and pickled in Lake county. They are of the Mission variety and small but nice flavored. The tree on which they grew is six years old, over 12 feet high and four inches in diameter at the base. It had a few olives last year, and this year he pickled over 300.

Los Angeles.

ANTELOPE VALLEY.—Maynard Cor. Los Angeles Express, Oct. 22: We have had a fine rain, and everything around begins to put on a beautiful garb of green. Wheat and barley are coming up, and some stands as high as four

inches from the ground. Volunteer crops bid fair to equal, if not excel, the sowed grain. Plowing is the general work, and every one is busy. Messrs. Dingman & Maynard are shipping rabbits to Los Angeles three or four times a week, and the way they are thinning them out it looks as though the jack-rabbit question was settled—at least they settle thousands of jack-rabbits. Many people are coming into the west end of the valley to settle on the odd sections of indemnity lands lately reverted to the public domain, and a sprinkling of new settlers have arrived here and gone to work in good earnest.

Monterey.

A LONG-LIVED HEN.—A subscriber of the Democrat writes from Jamesburg concerning an old hen that for more than 17 years cackled and laid eggs on the ranch of John James of the Cachagua country, and died a few days ago. Until five or six years ago she was a good layer and was famous for raising many broods of chickens; but of late years she has only laid an egg occasionally and would not sit, thinking, no doubt, that she was old enough to retire from active business.

Placer.

RASPBERRIES.—Auburn Republican, Nov. 2: Nothing could better illustrate the mildness of our climate than the fact that one can now go into the garden of A. S. Whittemore at New-castle and pick red raspberries—not three or four scattered here and there, but plenty of them. Mr. Whittemore is gathering one and two cases of raspberries a day, which are being shipped by the Dryer, and they are as fine berries as ever went out of the Newcastle market.

San Bernardino.

GROWING FRUIT TO SOME PURPOSE.—Courier: Mr. Aplin has a fruit-ranch out in the north-eastern end of the San Bernardino valley. His comments upon his experience are very terse, but very illustrative of what can be done in this valley by the industrious and intelligent fruit culturist. "I have been six years," said Mr. Aplin, "in San Bernardino engaged in fruit culture. The first three I had not even a horse. This year, the sixth, I sold the produce of my little fruit-fields to Mr. Brooke for \$5350, of which something more than \$4350 was clear profit." Yet the farm is not a large one, and was, when first occupied by Mr. Aplin, both rough and rocky. Indeed, it is rocky yet. Now, actual achievements like this are what guarantee the permanency of what we call the San Bernardino boom.

San Diego.

TIA JUANA'S FERTILITY.—Cor. National City Record: We visited one vineyard where we were shown clusters of grapes weighing 6 pounds, and were assured that such were not at all rare. In one apple orchard we found 150 apples on a tree, measuring only 1½ inches in diameter near the ground; and another small tree, not as large as a broom-handle, had 10 fair-sized apples hanging on its branches. One hill of sweet potatoes, grown from a single plant, yielded 38 lbs. 8 oz., the largest weighing 23 lbs. and one other measuring three feet seven inches in length. Blood beets were found weighing from 30 to 60 pounds each, grown without either fertilizer or irrigation. On that portion of the ground not yet cleared we find a dense growth of weeds and brush, averaging about five feet in height, thus showing that the soil in its natural state is capable of producing a luxuriant vegetation.

San Joaquin.

OLIVES FOR THE NATIONAL GRANGE.—Stockton Independent, Nov. 2: Yesterday E. C. Clowes, the nurseryman, brought to this office two branches taken from five-year-old olive trees. One was literally covered with olives of the Mission variety, nearly ripe. The fruit on the second branch was of the Picholine variety, and was further advanced in ripeness. The Mission olives were grown in Antonio Lucca & Co.'s orchard, near French Camp; the other variety on H. S. Sargent's premises in this city. The branches will be forwarded to Lansing, Mich.

Santa Clara.

RAIN WANTED.—San Jose Times, Nov. 2: Grass is getting very short in the hills, and many of the cattle are beginning to show the effects. Nearly all are already getting thin and scrawny. The acorns seem to purge them, and this soon adds to their lankiness. The cattle-men want it to rain, and if it does not soon it will cost money to preserve their stock.

Sonoma.

HEALDSBURG HORTICULTURE.—Enterprise: H. W. Peck of the Laurel Dale nurseries, in addition to the fine persimmons left at Moulton & Mulgrew's office, has contributed some Spanish pomegranates that are the perfection of growth and much admired. With pomegranates, persimmons, olives, figs, Italian chestnuts, walnuts, pecans, almonds, oranges, etc., all flourishing to perfection in and around Healdsburg, we would like to know what locality is more entitled to a front seat.

Tulare.

DECREASE OF BIRDS.—Delta: The settlement of the country seems to have caused the emigration of many birds which were once numerous here. One of the most common was the crow, and during this season of the year and until nesting time in the spring they flew in flocks evenings to Tulare lake, where they roosted among the tules. Magpies, too, in thousands and fully a dozen species of hawk could be seen a few years ago. The

crow is becoming a rarity now, and it is only once in awhile that the chatter of the magpie is heard. The increase of the number of people in the valley seems to have lessened the number of these and several species of aquatic birds more than any other kinds.

Ventura.

EDITORS PRESS:—The Bee-Keepers' Association has not met in a long time, although it is still in existence. Having no crop of honey last season, there is nothing of interest to report. If we have a crop this year the bee-keeper will probably get a better price than in the last few years. There has not been much margin for the honey-raiser for a number of years, and this season's failure will help to clean up the surplus and leave the markets in better shape for the future. S. P. surveyors are now locating a railroad to this Ojai valley; so we hope ere long to hear the whistle of the locomotive, and then invalids can reach this haven for consumptives without the fatigue of a 15-mile stage ride.—S. C. GRIDLEY, Nordhoff, Nov. 6, 1887.

WALNUT SHIPMENTS.—Republican, Nov. 5: Mr. A. Levy of Hueneme purchased and shipped seven-eighths of the walnut crop of the county, amounting to about \$22,000. Yesterday he loaded the schooner American Boy with walnuts and beans, and the past week freighted the schooners Gualala, Reporter and Eliza Miller with like products.

Yolo.

TOKAYS FOR NEW YORK.—Woodland Democrat, Nov. 3: To-day Dr. L. B. Holmes, who owns 20 acres of vineyard near town, partially loaded a car with 350 boxes of grapes of the Flaming Tokay variety. The car will be filled at Sacramento, then go across the continent to N. Y. These grapes are of the second crop, but present a very good appearance. The vines are five years old and are said to be in a thrifty condition. The doctor thinks that considerably more grapes might have been grown had proper attention been applied. In conversation this morning we learned that a clear profit of over \$3000, or more than \$150 per acre, would be realized clear of all expense.

ALMONDS AT DAVISVILLE.—The present season Mr. Treat gathered as much as 150 pounds of almonds from many of his trees. Those on the Oak Shade are 20 feet apart, or something over 100 trees to the acre. With almonds at 15 cents, the price at present, there is a decent competence in one acre of our Putah Creek soil.

Yuba.

GLANDERS.—Appeal: There have lately been several cases of glanders among the horses in Marysville township, which has necessitated killing the animals afflicted. The disease has by no means become general, and as it spreads, being contagious, would be disastrous. Stock-owners are warned, so that they may be on the alert.

FROM GRAIN TO FRUIT.—Marysville Appeal: C. E. Williams, Sec'y of the Immigration Bureau, lately told a reporter: The past three years have been very good ones for grape-growers, and I think that \$40 per year per acre profit for all the raisin grapes grown in Sutter county and western Yuba is a small estimate. On my place I have work in the vineyard for two men the year round. For three months in the year, when the yield is good, I employ about 15 men. You thus see that 60 acres of vineyard will employ as many men for a longer time, as are necessary to operate a thrasher that handles the yield of thousands of acres. I know half a dozen farmers who will convert some of their fields into vineyards this coming season. There is no question but the farmers are recognizing the fact that fruit brings them in a return ten-fold that of wheat, and they are now preparing to set out orchards, either on a large or small scale. The Abbott & Phillips orchard, which had a yield from 210 acres this year, easily netted the owners \$100 per acre after the cost of growing, picking, packing and shipping had been deducted. That is twice as much as their land was worth a few years ago, but not one-tenth what will be asked for it five years hence.

IDAHO.

NOTES OF PROGRESS.—Bellevue Herald: The past summer has been one of hard work, but the future for the Alturas ranchers never was so bright. Trials have developed faster in fruit-raising, vegetable-raising, grain-raising and the product of the soil sufficient to console the hard-worked rancher who before had serious doubts of its fertility for so many purposes. Treemen now in the county have large orders from the country people, and from a list of 170 orders given an Eastern firm, now being delivered, 123 were for the country in sums between \$7 and \$210. Fruit trees and bushes are the favorites, and for the Herald to predict that Camas prairie and the valleys below Bellevue will in a few years give Wood River's larger fruit supply would not be out of the way.

NEVADA.

STORING WATER.—Reno Gazette, Oct. 21: Hon. J. B. Gallagher of Mason valley says he has a dozen men at work raising a dam at the Twin lakes, in Mono county, Cal., that will store sufficient water to irrigate all the arable land of Mason valley next year, and that ranchers there need feel no further anxiety on that subject until the acreage of the valley is much increased.



A California Year.

How do we know the spring has come,
In this pleasant land by the western sea?
Why the rainy days grow farther apart,
And the clouds before the north wind flee.
The gardens are blue with forget-me-nots,
The pepper trees scatter their berries red,
The hills with poppies are all aflame,
And linnets and meadow larks sing overhead.

How do we know when summer is here?
The sky is one vast, deep vault of blue,
Whence the sun pours down his golden flood,
Unchecked by a cloud the long day through.
Green fields are waving and orchards bend low,
Roses and jessamines hold riotous sway;
While tents are unfolding on mountain and shore,
And the life of the camper is blithe and gay.

What is the sign of the autumn-time?
Oh, then the vineyards their splendors show—
Muscat and Hamburgs and Flaming Tokay—
Never were clusters like these, I trow!
But the roadside trees with dust are gray;
Yellow and sere lie the hill and plain,
The water-courses are parched and dry,
All patiently wait for the beautiful rain.

But the winter? Ah, that is the strangest of all!
Instead of the north, the south wind blows,
The sweet south wind that brings the rain,
The pattering rain, not wintry snows.
And then the rivulets sing once more,
And the hills turn green, and the d-ar wild flowers
Awake from their sleep, while the furrowed earth
Grows young again 'neath the welcome showers.
—M. H. Field in *Youth's Companion*.

Polly Frost Argues Against Female Suffrage.

EDITORS PRESS:—How many things are happening these days! To be sure things are always happening, but of late years, since I began to realize I am growing old, an unusual number of things seem going on in the world. Solid rock is being tunneled through. Railroads are built through the hearts of mountains. Pedestrians have no longer to climb wearily up the steep hills of our cities, but only to seat themselves in the street-cars of the cable roads, and before they are through admiring the marvel of mechanism which has brought about such a municipal convenience, they find themselves at their destination. Whole cities are wonderfully lit up with electric lights. And the scheme of uniting ocean with ocean by canal has seemed so plausible that millions of money has been spent thereon. But among the strange things which have been happening in these last years, while my hairs have been whitening, and the lines writing themselves on my face, is the voices of many women crying out for the right of suffrage, demanding a redress of a whole catalogue of wrongs; the first of which, "taxation without representation," was (when our forefathers had a similar experience a little more than a century ago) so sore a matter as to cause a general uprising of all the men of the country. These women asking so earnestly for the ballot make so plain a showing of the case as to carry conviction to the minds of the unthinking. But men from their greater store of wisdom give such substantial reasons against female suffrage that women would not be supposed to gainsay them, were it not that the human heart and mind are stubborn things. Therefore, in a repetition of all this reasoning, lies my only hope, for "continual dropping will wear even a stone away."

One of the best reasons why women should have no voice in making the nation's laws, is that they cannot be soldiers. This seems to me to be a plain case. I am sure I claim to be as brave as other women, but when I was first married I got Tom to take the revolver to the barn, which resulted in its being stolen, but better that than that I should have been kept uncomfortable by it occupying a place on the closet shelf. That men are eminently fitted to be soldiers is proven conclusively by the common use made in these days of deadly weapons. No matter the state of one's morals, they may carry them at pleasure. Only last year a couple of spirited youths shot down a Chinaman on the San Joaquin river, who was quietly going about his own affairs. Many people were just at that time taking up the sand-lot cry, "the Chinese must go," and these young men were so filled with the patriotic spirit and so possessed with the soldierly quality of bravery as to shoot down an unoffending fellow-creature without hesitation. There does indeed seem to be much unnecessary loss of life caused by such indiscriminate carrying of firearms. Even little boys, who in my day would have been considered of too tender an age to be far removed from the maternal eye, are now allowed to hasten their advent into man's estate by their free use.

Women, it is true, have a fine record in our late war, in the hospital work, and other valua-

ble services they rendered. But no one would object to women doing such slight work as giving efficient assistance in the setting of broken bones, the dressing fractured skulls, staunching bleeding arteries, or caring for unsightly wounds, or, indeed, any of these small offices woman is by nature so eminently fitted to perform. But because woman takes no part in the firing off guns and cannons proves conclusively that she is not capable of helping make good, just laws. Of course the world admires the pluck of a Florence Nightingale, who, when failing to secure bandages for the wounded soldiers at the Crimea, sent for an ax and commanded the storehouse doors to be broken open, and took the bandages and other necessary supplies. And Lady Strangford, who collected the requisite funds, went to Cairo, and unaided, opened and managed a hospital with wonderful success. And Sister Dora, whose achievements have made her name a household word in many homes. But all this is not commanding armies. To be sure, there was, about 450 years ago, a woman who did command an army right royally, but that proves nothing, for all women are not Joans of Arc.

Another reason against woman suffrage is men, who are the natural protectors of woman, do not deem the polls a proper place for her, for though liquor-selling may be prohibited on election day, yet it is not unusual to see drunken men at the polls. Drinking saloons are licensed by law, and men are allowed to take in so much liquor as to drive all the manhood out of them, and in such a state to go home to their wives and children. Sometimes men get into drunken brawls in a barroom, and finding their movements restricted, rush headlong into the street, that they may have larger space to continue their fray, and though women are obliged to pass along these streets, our lawmakers look on with seeming unconcern. But at the polls alone men do not think it right we should be thus exposed. Well, I for one am thankful there is one place where men wish women to be protected from that prince of evils, the use of intoxicating drinks. Some years ago two men were engaged in a fight on a street in San Francisco; another man came toward them with a woman on either arm. As the party drew near, the assailants separated and gave them space to pass between them. The late Col. E. D. Baker, who was present, said, reverently, "God's true policemen." But that was only one man's opinion. Another reason why women should not be given the ballot is, men do not wish to impose so heavy a task upon them. Men were made to bear the heavier burdens of life and women to be cherished and protected. Of course, so far as I can see, men receive their full share of cherishing. Now take the "Briggs" family for example. Hannah is a dreadfully hard-working woman, but she does seem to have a great number of sick spells, but when she faints away her husband Josiah could not so much as find the camphor bottle, though I have no doubt it has stood in the same identical spot for a dozen years (for Hannah is a very methodical housekeeper). Josiah is fond enough of his wife and would like to cherish her, I have no doubt; but, being a man, he don't know just how. But when he is threatened with pneumonia the way Hannah contrives to care for that man is altogether in keeping with her character. Such hot teas and mustard drafts, and bags of hops and womanly kindnesses generally! I tell you that man is cherished in sickness and in health; and, take all the men and women so far as I can see, the women seem to do their full share of burden-bearing, walking shoulder to shoulder with their husbands, and the men seem to receive their full share of being cherished. But then I must remember that I know but few people. And other women whose observation has been similar to my own, must take into account that their horizons are not very extended. At any rate, women should be thankful that whether they have a less heavy share of burdens than man, or not, men at least seem to think should be the case, even if they do not see to making it so.

Men do not seem to feel greatly the burden of franchise, but then no matter if the burden is slight, we should appreciate their kindness of man not wishing to impose even so small a weight upon us. Of course many a man remains in a state of the most perfect unconcern while his wife is wearing her life away with the too heavy burdens of housewife and house-mother. But then these things are essentially woman's work.

One of the strongest reasons against female suffrage, and one which should carry conviction with it, is, women are not sufficiently educated to be capable of voting intelligently. This I know is the case, and the fact that great numbers of foreigners are continually arriving in this country in a state of extreme ignorance, who need but a short residence here to enable them to become citizens, does not alter the case. They are men, and that, of course, makes all the difference in the world. One might hope that this large number of voters might soon be able to study up our Government matters so as to cast an intelligent vote. But in too many cases the emigrants arriving here soon have their brains too much benumbed by the use of whisky, wine and beer, to be very apt students in the science of government. That our home-born and bred youths make so slight a study of the political affairs of our nation is a matter of constant surprise to me. Take the class whom Tom hires to

work on his ranch. After a hard day's work they are too weary to read; and when Sunday comes, and I find myself hurrying through the cooking and dishwashing (which are the inevitable in the life of the farmer's wife), that I may have time to glance over the papers, I notice these men seem sorely perplexed as to what disposition to make of their 160 or 170 pounds a voidrupois, as the case may be, although Tom never fails to say to them: "Well, now, if you wish to read, there are plenty of late papers in the sitting-room," for Tom is so wedded to his newspapers he cannot understand any one else not having a similar fondness for them. Though I marvel at the apparent unconcern of these men who help to elect our lawmakers as to what these same lawmakers are doing, yet I should not be hasty in my judgments, for I have no means of knowing how many wakeful hours they have spent the preceding night revolving the affairs of State in their minds. Some years ago, when the wise men of our State were assembled in our Capitol drafting a new Constitution, I happened to speak to a neighbor in regard to the forthcoming election. The man replied with that assumption of superior wisdom which men so often assume toward women, that there was to be no election on the Constitution, that our Government did not do things in that way. I accepted this piece of information with becoming meekness, telling him I must have misunderstood Tom. A few weeks after this, when the election really did take place, I saw this man on his way to the village where he was going to cast his vote, with such a self-satisfied smile of urbanity on his face, I knew he felt well qualified to cast an intelligent vote, and I wondered who had informed him of the merits and demerits of that Constitution, for I knew he could not possibly have made any investigations on that important subject himself, as his time was much too closely occupied inventing ways and means by which he could so twist and turn "Uncle Sam's" laws, or so evade them entirely, as to add to his vast domains yet another quarter-section of land, or else his meditations were given to devising ways by which he could fence his last acquisition in that line with the least possible expense to himself, and with a disregard of roads, however old and well established, which would be amusing were it not accompanied with considerable inconvenience to others. I must say in my own mind I cannot quite believe that a man of this kind would vote with an eye single to the prosperity of the nation, but I do not state this and similar cases as showing the least need men have of being educated up to a higher standard, so as to enable them to elect wise and just law-makers, but only to show that there are exceptions to all rules, even to men's fitness to vote intelligently. But because it is right for men whose minds are engaged with other matters than the general good of their country, to help elect law-makers, is no reason why women (whom we all know are not intelligent in political matters) should vote.

There is another reason against the ballot being given to woman which strikes me as being very reasonable. That is because women are not inventors. To be sure, it is said that woman did invent the needle and the spindle, and numerous other things, but even if she did invent the needle she blunderingly got the eye in the wrong end of it, and never found it out for ever so many hundred years till men set it right with the wonderful invention of the sewing machine. These last years a woman has made an invention for the elevated railway, but that does not make women as a sex inventors. True, all men are not inventors. Take those Tom hires, for instance, why, they have not respect enough for the inventions of others to treat them with the least care! Owing to the fact that Tom cannot be omnipresent, the axles of wagons frequently become dry and burnt from too rare an acquaintance with oil. And the mowing machine Tom found, but this last summer with the little boxes (made to hold bits of cotton saturated with oil) so entirely covered with dirt as to show that the man who used the machine had not even been cognizant of these little boxes for oiling, though he claimed to have had a dozen years' experience in running mowers. But then, men have had a Stephenson, a Watt and an Edison among them, and indeed so many other inventors that it shows the ability of all men to vote well and wisely; and because women are not as a sex inventors, proves conclusively they have no right to vote.

I, for one, am thoroughly convinced of this, and am satisfied to take the best care possible of my cook-stove and sewing machine and the few inventions I have, and not ask for the ballot. That this plain repetition of the objections to female suffrage ought to convince the most obturate, is the opinion of

POLLY FROST.

SHE SHOT STRAIGHT.—The Chico *Enterprise* tells how, early one October morning, Mrs. James Crowder of Rock Creek Canyon heard their dog making a terrible racket. Her husband had gone up into the hills, so she went out herself to see what was the matter. A short distance from the house stands an oak tree, at the foot of which the dog was keeping guard. He could not be induced to leave but kept barking, and wagging his tail for his mistress to come and see what he had got in the tree. Mrs. Crowder approached, saw four coons perched among the limbs, and soon made up her mind that she would try the gun which Mr. Crowder keeps always loaded. She was no practiced hunter,

but she had determination and nerve to try, especially as the shot was tempting. Seeking out the best position, she took deliberate aim, and one coon came to the ground. The following shots were equally successful, four coons were counted for Mrs. Crowder's morning sport, and the faithful dog was happy.

James G. Clark on California.

We copy from the Milwaukee *Sentinel* of Oct. 16th the following extract from his letter to that journal, containing not a few original ideas of California and its "representative people of all creeds and classes." Our readers may remember that this widely known vocalist and poet paid a brief visit last spring to several places in the State. This article indicates Mr. Clark's disposition to trace a deep law and divine purpose in the conditions of individual and national life; he never forgets to look ahead. We understand that he proposes to spend the coming winter in San Francisco, and we presume he will give a series of public concerts. As he corresponds with several leading Eastern and Northwestern papers, judging from the following article, we may depend upon a valuable and more than ordinary advocate of the interests of the whole Pacific Coast. He says:

I have found on the Pacific Coast more broad-minded and mellow, many-sided characters among representative people of all creeds and classes, than I have ever found elsewhere. And I believe the long-dreamed-of Golden Age will first shine upon the land of the "Golden Gate." My reason are briefly these: First, the Pacific Coast, all the way from Mexico to our northern boundary line, is favored over every other locality on earth with scenery, climate and soil for the development of the brightest human character. Second, its present population is largely composed of a class whose characters have been molded and modified by a moral, mental and spiritual atmosphere free from old-time forms and despotism, which have cramped and deformed humanity in all the older countries. All things, not excepting different forms of oppression, when properly regulated and limited, have their uses as elementary aids in the production of human character.

The African, up to a certain period, was benefited through the harsh, cruel discipline of slavery to a superior race. But when he had reached that point where slavery began to distort and injure his character, as a whole, his chains were broken by the hand of the Infinite, who knows best when a great, licensed wrong has outlived its uses and become ripe for its doom.

In the first measures taken for the construction of a grand temple, rough, uncultured and unskilled men, with drill and blasting powder, are employed. Then come the trained stone-cutters with their chisels to perfect the blocks of granite and marble, after which the builders fit all the material into a perfect whole. So it is in the construction and perfection of human character—that great end to which all other means and ends are tending. New England with its hardships and cold winters applied to Pilgrim blood and brain, produced certain essential characteristics peculiar to itself, and at the expense of other and no less desirable qualities, which can only grow and flourish in more genial and inviting environments precisely such as the Pacific Coast affords. What is true of New England is no less true in different degrees of nearly all the States east of the Rocky mountains. In the dead levels of some of our prairie States the poetic instinct dies out, or declines for the lack of varied scenery to feed and stimulate it. And without this quality no high state of excellence is possible. Imagination is the advance agent of every new attainment in art, science and literature, the soul of human progress. And like everything else which is subject to the laws of growth, it must have its appropriate food.

The rare scenery and climate combined in California, Oregon and Washington Territory invite and develop the poetic tendency to a degree unsurpassed if not unequaled elsewhere on the face of the globe. We have middle-aged and elderly men of means throughout the States east of the Rocky mountains who need the saving and finishing grace of Pacific Coast climate and scenery.

There are men in New England who have so long been watching the "main chance" that their noses have become as long, cold and sharp as the steel plow points that pierce the subsoil of their native hills; men in our Northern tier of States who have been carrying on a defensive warfare against the annual invasion of merciless and despot winters until the golden rule has been buried out of sight in the snow, and even dear old Mother Nature herself has assumed the attitude of a cold-blooded and plotting enemy; men in the South who have been born and reared under the shadow of an institution that narrowed and deformed the oppressor more than it wronged the oppressed; men in our Middle and river States who have so long been plodding, acquiring and hoarding on the rich bottom-lands that they have no higher aims in life than to raise cattle and "haws" for Phil. Armour to slaughter, and no loftier aspiration or sentiment than that which roams content along the desert sands of our modern "realistic" school of fiction; men in our great commercial centers who have exchanged small souls for vast wealth and who

have "cornered" the cotton and wheat markets, and stolen telegraph companies and woolen-mills, and nearly everything else except a march on Satan.

All these need change of scenery, climate and occupation, such as may be found in San Diego by the sea, or in that peerless "vale of valleys" where Escondido proved that the saloon is not necessarily the elixir of commercial any more than of moral life; or in National City, where the enterprising Kimball Brothers have converted a wild seaside ranch into orange, lemon and olive groves and gardens of roses; or on Royal Coronado beach, where the white surf of a clear, green sea invites you to its soft caress in mid-winter as well as summer; or in Los Angeles, Pasadena, San Bernardino, Santa Barbara, Santa Rosa, San Jose, Santa Clara and scores of other "saints"—not forgetting San Francisco, the best and at the same time wickedest saint of all—in a land of a thousand beautiful and wonderful valleys, with mountains to match all the way from Mexico to Puget Sound, the most enchanting body of mingled isles and waters on the continent. This mighty Western empire flowing with milk and honey, and blest with all manner of grains, vegetables, fruits and flowers, and with a climate unequalled elsewhere on earth, is inviting us to seek the "Golden Gate." And, to the classes I have named in this letter, I would add, "go West," old man; it may "restore your souls" and save you the experience of Dives.

JAMES G. CLARK.

Home and Mother.

The influence of home is like a mighty river that moves on with silent but untiring and resistless sway. Whatever makes us what we are, is but the reflection of constant association. The manners, customs, and habits of the child's early associates are reflected upon his heart, and there assume a definite form. Whether his character in after life springs from seeds of good or evil, depends upon the influence that surrounded his home.

The influence of good example in the home is powerful. The child imitates the selfishness or unselfishness as it is presented to him in his home surroundings.

Home prepares him to choose the path he is to take in life, and whether it is the path to perdition or to godliness, depends upon the influence that molded his character.

It is in the Christian home, where the links of love, charity, and the regards for the right are united, that we see the destiny of the nation. The outgrowth of such a home will be a government of justice, freedom, and liberty.

In the words of Milton, "Childhood shows the man as morning shows the day." The true manliness which characterizes the lives of all our great and worthy men originated in the homes of their childhood. The children of today are to make up the nation of to-morrow. And the prosperity of the nation is dependent upon the home.

As a slender vine, when the support is taken from it, twines itself around the first object presented, so with the child if he has not the moral force imbibed in him is always ready to be taken up by the weak. In the Christian home the "Fountain of Morality" gushes forth. The connecting link between heaven and earth seems to be the little child at his mother's knee learning to worship God and walk the path that leads to heaven.

"Mother." What music in that word! The chords of every heart vibrate to its sound. What head does not bow down with reverence at the thought of a mother's love? Even the hard-hearted criminal, in his dismal cell, although he may care naught for man or God, bows his head with shame, and tears of guilt fill his eyes, and blushes of remorse cover his face at the mention of his mother's name. The thoughts of the past come vividly before his mind. He thinks of her who sacrificed so much and toiled so hard for his sake. His hardened nature is softened, and with tears of repentance he cries aloud, "Mother, forgive me." The dying soldier on the battle-field, amid strife and the roar of the cannon, utters a deep sigh at the sound of "Mother," mentioned by the parched lips of a comrade.

What sacrifices are those like a mother makes for her children. Brothers, sisters, and friends may forsake the erring one, but the mother finds some redeeming trait in her child and strives to correct his waywardness, to which all nature is inclined, and like a star, guides him back to the paths of truth and morality.

The influence of the mother may be felt upon the whole world. Well may she be called the "Evangel of Goodness."

The memories of youth may fade from our minds, as the flowers in the garden wither and die; age, with its infirmities, may creep upon us to take the place of youth's pleasure; but the recollection of a mother's love still remains a precious jewel to brighten the darkness of declining years.

An ideal home is where love, joy, and peace harmonize, where dear relations mingle to unite their sympathies. Home without these sympathies is but a name. Unkind words and frowning glances are home's bitterest enemies.

A true character cannot be developed without the sunshine of love. How comforting to the weary one when his daily toil is over to return to his bright and peaceful fireside at evening.

"Home is not merely four square walls,
Home is where affection calls,
Home is where love can bloom."

YOUNG FOLKS' COLUMN.

The Two New Dresses.

The one before me is a dainty thing, of golden-brown cashmere, finished with "kiltings" and soft silk sash; lustrous buttons, and interlacing cord and tassels make a marvelous affair of the tiny basque. The dressmaker, a stately old lady, turns the nine-year-old maiden round and round, pats her blushing cheek, saying to her mother, "There, Mrs. Burr, that is just lovely—fit for the Queen!"

Annie thought so, too; but wondered why mother's eyes had such an "awful cryey" look in them, as she counted out the \$7 and laid them in the smiling woman's hand.

Dancing along at her mother's side, through the drifts of red and golden leaves, Annie's mind was soon filled again with the pretty dress and to-morrow's birthday party, when mother, reaching for her hand, said, "Shall I tell you a story about another new dress?"

"Oh, do, do!" In an instant the dancing feet were creeping along quietly with her mother's, who began:

"Many, many years ago—"

"Oh, just how many, mamma?"

"Well, more than thirty, I guess, little one. Mother was just as old as you are to-night; her hair fell over her eyes in brown curls like yours; her heart was as light and her feet as full of dance. But her papa was a poor man and her mamma was often ill. Her home was a small yellow cottage with a red front door, and it stood in a little green garden on the top of a hill, looking down on the beautiful river. Here I played with sister Martha and brother Tommy, and when our mother's headaches came on I turned housekeeper, put the potatoes into the hot ashes to roast, or stirred the 'hasty pudding' for supper. When it was ready father poured milk into three blue bowls, dropped in the golden pudding, and we three sat down before the bright fire to eat it, wondering if the fairies had anything nicer! For we had never so much as heard of Parker-house rolls, jelly cake or ice-cream."

"Dear me! poor mamma! I wish you had heard about ice-cream—it makes me lonesome for you!"

"No need, dearie, for we were jolly hearts, who did not even know the word lonesome."

"Well, at the foot of our hill, in the great white house, with a shining brass knocker on the front door, lived good Dr. Stanhope. His daughter Kitty, who was going away to boarding-school, had invited all the big and little boys and girls to a good-by party, on her birthday. Now, our mother was as proud of her little girls as any rich mother ever was; and more loving than any one I ever knew. It was hard for her to say 'No' to the gilt-edge billet, which read:

"OCTOBER 21, 1835.

"Kitty Stanhope's compliments, and she would be happy to have your company to tea, at five o'clock, Tuesday next."

"No shoes, no gowns," thought our mother. "If I can only finish these garments for Kitty, they might have shoes; but the gowns!" After thinking over her sewing a long time, she suddenly slipped away to the garret; opening a chest she took out and slowly unfolded the funniest dress you ever saw. It had been her mother's 'best gown'—a silk that looked black holding it one way, and crimson the other. Beneath this lay another quite as old and curious, of brown taffeta, with raised diamonds of bright yellow sprinkled over it. Well worn, of course they were, and not the properest thing in the world for such wee maidens. Nevertheless, she folded both, and tucking them into a basket, took her two girls by the hand, and walked through the leaves, as we are walking now, to a neighbor who made dresses and bonnets to earn bread for her children. The kind woman smiled all over when she saw the quaint gowns, but said, with a little pat on my cheek, 'We'll make them do beautifully.' Whereupon she began to pin to my waist the end of what looked to me 'most a mile' of white cloth, poking me under the chin, pinching up little seams here and there, and frightening me dreadfully with her big shears. As fast as she removed the pins she put them into her rather wide mouth, until I was actually afraid she would be choked to death, for she kept on smiling and chatting just the same. By-and-by she tried on the sleeve; how you would laugh to see it now—gathered full at the top, and, after swelling out like brother's balloon, suddenly growing small, till at the wrist my little chubby fist could just push through. Three plain breadths of silk made the skirt, which, sewed on to a very short waist, fell straight and close about my ankles. But the glory that shone out of the red and black folds of that little gown has not faded away yet.

"The long hours of day and night that our mother bent over her work for her girls! I knew little about then; through many of them I slept sweetly, or dreamed of the enchanting party so near."

"But to-day when the very same dressmaker, only grown rich and famous, patted my little daughter's cheek and praised her dress, another sight came back to me; two sober frocks laid out on mother's high bed, two pairs of shining shoes standing close together on the hearth, my mother's smiling eyes as she smoothed my hair,

giving us careful directions as to our behavior on this our first appearance in the great world.

"Oh, that wonderful, wonderful party, in that great parlor all alight with tall candles, and the laughing fire on the hearth; the big birthday-cake piled with snowy frosting and sugar-plums; the dear, welcoming face at home when it was all over, and best of all, I do believe, the telling it all to our happy mother, while she tucked us into our white bed! I remember now my secret wonder, how anybody could look so happy and shining who had not seen it all. But she kept the same shining face and patient voice through years of care and poverty, till her work was all done, and we folded her tired hands and laid her softly down to rest. And, dear, I have been asking our Father to let me leave to my little girl a legacy better than ever so much gold, the memory of a good mother."—Mrs. Keene.

GOOD HEALTH.

Diphtheria.

EDITORS PRESS:—In the year 1876 or 1877 I saw an article in the *Stockton Mail* on a new treatment for diphtheria. This treatment was a German importation, I believe. I have heard nothing about it since. If you have any knowledge of this kind of cure, you would confer a great favor by publishing it, at least you may be able to tell us where to get information. We have become so disgusted with the drug system that we wish to find a way to get well without them.—CONSTANT READER, San Jose.

[The inquiry is submitted to our readers, who may have experience to relate.—EDS. PRESS.]

POISONING BY LOCUST-TREE BARK.—The inner bark of the fragrant-flowered locust (*Robinia pseudacacia*), commonly cultivated as an ornamental tree, and for its invaluable timber, has long been known to have a sweetish taste, resembling that of licorice, and to have emetic and cathartic properties. In the *New York Medical Journal* of January 22d, Dr. Z. T. Emery reports a case of poisoning of 32 boys at the Brooklyn Orphan asylum, from chewing some of this bark which they had obtained from the yard, where fence-posts had been stripped. In the mildest cases, vomiting of ropy mucus was observed, together with flushed face, dryness of throat and dilated pupils. In the severest cases, large quantities of ropy mucus, mixed with blood, were vomited. The other symptoms were retching, pain in the epigastrium, debility, stupor, cold and pulseless extremities, a feeble and intermittent action of the heart, dilated pupils and face of a dusky color. The patients were given subcarbonate of bismuth and brandy by the mouth, and morphine hypodermically; sinapisms were applied over the stomach, and bottles of hot water along the extremities. The patients were discharged from the hospital in two days.

IVY POISONING.—A correspondent of *Pop. Sci. News* writes: "I have always been extremely susceptible to the poison of poison ivy and oak so as to give me great annoyance, unless it is immediately checked on its first appearance. This common washing soda accomplishes for me, if properly applied. I make the application by saturating a slice of loaf-bread with water, then cover one surface with soda, and apply to the eruption, the soda next the flesh. When the bread is dried by the animal heat, I drop water on the outer side so as to keep it thoroughly moistened, and dissolve the soda crystals in contact with the skin. This, you will perceive, is merely a bread poultice, the bread being a vehicle through whose moisture the soda reaches the humor. I find that washing or bathing with soda-water, even continuously, will not suffice with me. My skin requires the heat and moisture of the bread in order for the soda to act on and neutralize the poison. I rarely have need to retain this soda poultice for more than 30 minutes on my affected part. No pain ensues. Formerly I suffered for weeks, as the poison would spread all over my body. Now 30 minutes measure the duration of its exhibition."

IMPURITIES IN CITY AIR.—Prof. Tyndall has developed the fact, in his microscopic studies, that the air of large towns and cities is filled with infinitesimal fragments of every imaginable kind of material. The horse-cars and heavier teams grind the dust in the streets so fine that it is easily suspended in the air; there are also found floating with it dust and gases contributed by every industry, atoms of food, fine particles of refuse, manure, etc., together with the germs which abound wherever there is decomposing animal and vegetable matter. From the clothing of the inhabitants there is thrown off dust of cotton, linen, velvet, fur, wool, etc. All these and countless other products float in the atmosphere of all large cities. Surely, it is not difficult to understand why a residence in the country promises better health and a longer lease of life.

THE CRAVING FOR LIQUOR.—Half an ounce of ground quassia steeped in a pint of vinegar is said to eradicate the craving for liquor. A teaspoonful of the solution in a little water is to be drunk whenever the liquor thirst comes violently, but finally the craving ceases entirely.

DOMESTIC ECONOMY.

Thanksgiving Turkey.

French works on cooking tell us that poultry and game should never be washed. This may do for French markets and appetites, but where poultry is sent to market undrawn, the inside is sometimes sour, and apt to give an unpleasant taste to the stuffing and the flesh as well. If the fowl has been drawn as soon as killed, and the gall has not been broken, it will not need washing; but if there is the least suspicion of taint, wash it well in cold water, to which a teaspoonful of soda, and two of salt, have been added. There is an infinite variety of recipes for stuffing a turkey. A plain dressing, which is the basis of all, is made with bread-crumbs mixed with butter, pepper, salt and thyme or sweet marjoram. The bread should be soaked in cold water and squeezed dry in a towel. The excellence of the seasoning will depend upon the skill of the cook. Add all seasonings a little at a time and taste to see when you have it right. If you have not served an oyster soup previously, an oyster or celery stuffing is most excellent. Use as much of the oyster liquor as may be necessary to moisten the bread, diluting it with half the quantity of water or milk, and about two dozen small oysters to a ten-pound turkey. In this case, an oyster sauce must be served with it. For this, bring to a boil the juice of half a pint of oysters, and one half-pint of milk, also boiling, thickened with two teaspoonfuls of flour wet with cold water, add the oysters, give one boil and serve. For a celery stuffing, the celery must be stewed and mixed with the bread crumbs, which should have been moistened with hot milk. A sauce is made by heating a half-pint of milk, thickening it as above, and adding celery that has been cut in half inch pieces and stewed until tender; season with butter, pepper and salt, and the least trifle of grated nutmeg. You may also change your dressing by the addition of cold minced veal or sausage meat.

Now, having decided upon the style in which your turkey is to be dressed, and having washed it preparatory to the process, fill the body and craw as full as may be, and sew the aperture with cotton twine; draw the legs closely to the body, and tie or skewer them in place, or the bird will come out of the oven in anything but a shapely condition, with its limbs pointing to the four points of the compass. Bend the wings back under the body, place it in the baking-pan, season it all over with salt and pepper, and let it stand several hours before it goes into the oven, that the seasoning in the dressing may permeate and flavor the meat. Pour a little water into the pan, and put it into a moderate oven for the first hour, so that it may heat through slowly. Baste frequently, and increase the heat after the first hour. A ten-pound bird should be baked from two and a half to three hours. Half an hour before it is done, dredge it with flour, and baste every ten minutes until the cooking is finished. If it is not very fat, skewer thin slices of fat larding pork over the breast before baking. Serve brown sauce as well, made from the gravy in the pan, even if you have celery or oyster sauce. Make the brown gravy by adding a little hot water to the gravy in the pan, from which you have skimmed the fat. Thicken it with flour wet with cold water; and the stewed giblets chopped fine, and put a dash of lemon-juice to the seasoning. Serve currant or cranberry-jelly, or spiced plums, with the turkey.—*American Agriculturist*.

JULIET CARSON'S PLAIN DINNER.—Those who have the smallest provision in the way of variety in food and utensils call for our immediate attention, and to them our first consideration must be given. Begin with the supposition that one room serves as kitchen and dining-room, and that the heartiest meal consists of one hot dish, with potatoes and one other vegetable, and bread and some simple beverage. We will suppose that there is on hand flour, baking powder, salt and pepper, vinegar, a little butter or drippings (and much care should be taken to augment the reserve of the latter), a small supply of meat, with a good provision of potatoes and bread. A hot fire is to be cooked without making too large a fire, which would make the room uncomfortable for eating. The most savory, nutritious and abundant meal which can be made from these materials is composed of a stew, with dumplings, boiled or baked potatoes and hot biscuits. By combining the meat with dumplings, in the form of a stew, two advantages are secured. A smaller quantity of meat so cooked will satisfy the appetite as well as double the quantity cooked by baking, broiling, frying, or boiling without gravy or sauce, and it will be in the condition best suited for immediately satisfying the sense of hunger and assisting digestion. The savory sauce imparts to the dumplings the flavor and some of the nutritious properties of the meat. The potatoes must be cooked in the stew, if there were no facilities for baking them; but then our subject of providing variety would be thwarted. For this end the biscuit are suggested. The cost is but a trifle, and they replace the bread that would be eaten in their absence. With the addition of a little cheese, fresh fruit in season, or inexpensive canned fruit or preserves, or better still, applesauce from dried or evaporated apples, and the meal would be complete.



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W. B. EWER.

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The Week.

Affairs of political and national import have caused many eyes to look anxiously eastward the present week. Elections have taken place in a dozen States beyond the mountains, and returns are eagerly scanned by both Democrats and Republicans, gains and losses noted, and efforts made to interpret the signs of the times. But especial and painful interest has centered upon the capital of Illinois, where the fate of the seven anarchists sentenced to hang in Chicago on Friday are in the balance, which the contending claims of stern justice and pity for the misled, of clemency for individuals and of public policy, must turn for death or life ere this reaches our readers.

In our own State, there have been some preliminary sprinklings of rain in the northern districts, but the initial downpour of the season is yet to come and longingly looked for. But the expectant rancher may take comfort from the weather-wise, who declare that signs are decidedly in favor of a winter rainfall heavier than the average. So mote it be.

Fruit-Growers' Convention.

The Opening Day at Santa Rosa.

[Editorial Correspondence.]

The convention of fruit-growers, under the auspices of the State Board of Horticulture, opened in the Athenæum at Santa Rosa at 11 A. M. on November 8th. Elwood Cooper, President of the State Board, presided; P. W. Butler of Penryn and Mark L. McDonald of Santa Rosa were chosen vice-presidents. B. M. Lelong, secretary, and A. K. Whittin, official stenographer, discharged their respective duties.

In opening the convention President Cooper delivered an interesting address. He alluded to the important services rendered by gatherings of fruit-growers of which the present is the eighth, or the fourth under the auspices of the Board. The last report of the State Board of Horticulture was mentioned as a credit to the State, and calculated to be of great benefit to fruit-growers. He also commended the last report of the College of Agriculture, instancing especially Prof. Hilgard's statement of the need of a State Entomologist. This fact had also been emphasized by a previous fruit-growers' convention, and he hoped the agitation would be continued until such an officer was secured to give instruction at the university and general information to the public. Mr. Cooper especially commended the report of the State Board and of the university to those seeking information about the olive.

Mr. Cooper spoke very wisely on the labor problem, the need of trustworthy and honorable laborers, the necessity of putting down all anarchical tendencies, of a better understanding of the mutual relations of labor and capital and of Government protection for industry and enterprise in all matters of need. Mr. Cooper also emphasized the need of good treatment of hired help, of convincing the laborer that you take an interest in him and desire his good as well as your own. If all these things are done there will be a grand future for the industries of the country. It is stated that during the last generation 50 per cent of the hand labor has been displaced by machinery, and yet wages are higher than ever before. There is no reason to anticipate trouble or any reduction of prosperity, if all parties do their duty to one another and to the State.

President Cooper spoke very encouragingly of the horticultural outlook in this State. Production is increasing and yet a good market is found and profitable disposition made of the produce. He acknowledged indebtedness to the Fruit Unions and all other agencies which have been effective in reducing freight rates and securing better disposition of the fruit. The coming year promises to be one of great activity in fruit-planting as in the other interests of the State. In conclusion Mr. Cooper mentioned a large number of subjects which should engage the convention during its progress.

The address was heard with much interest. Afterward a committee on Order of Business was appointed as follows: S. J. Stabler, Yuba City; A. T. Hatch, Suisun; Gilbert Tompkins, San Leandro; E. W. Woolsey, Fulton; Shepherd of Sonoma. A recess was then taken until the afternoon session.

An Excursion.

As all things were not ready for a session in the afternoon, the convention adjourned until evening. The writer and P. W. Butler of Placer county had the good fortune to receive an invitation from Luther Burbank to ride with him about the town and over the hills. After viewing the improvements in the way of beautiful residences and grounds, imposing business blocks and miles of well-graveled streets, many of which have been secured since the writer last visited Santa Rosa, a ride was taken eastward, passing the delightful group of residences surrounding the picturesque home of Mark L. McDonald, and thence over the hills into Rincon valley. This pretty little valley we skirted on the west, along a road overlooking it from point to point, until we came to the entrance of the property of Capt. Guy E. Grosse. Thence the course turned westward or toward Santa Rosa, but pursued such a winding way around and among the hills that one could not ask for a drive more varied or picturesque. Capt. Grosse has done a wonderful and important work in reclaiming these rocky and brush-clad hills. He has planted groves of chestnuts, avenues and

orchards of olives, and acres upon acres of vines, where a short time ago was a waste of rock and rubbish. The chestnuts so far as we saw were still very small but thrifty. The olives had made a splendid growth and the vines made an excellent show. Here and there is left a strip of land covered with the most beautiful Douglas spruce, again a clump of Manzanita, and again a bunch of gnarly old scrub oaks. These breaks of wild nature here and there among the planted growths give a most beautiful variety to the landscape. But the crowning beauty of Capt. Grosse's enterprise does not appear until one comes to the descent upon the west side of the hills, the first sharp rise above the floor of the Santa Rosa valley. The hillside is so steep that the roadway has to turn sharply upon itself again and again to secure a grade upon which vehicles can safely travel. This coursing to and fro upon the face of the hill gives an ever-changing view of the valley, first, perhaps, far southward to the Petaluma district, then directly westward to the Sebastopol country and then northward in the direction of Healdsburg. We never realized before the extent and beauty of Santa Rosa valley proper as clearly as it appeared from the point mentioned; then beyond this were glimpses of the tributary valleys; then one began to search out different features of the landscape; Santa Rosa, with its straight streets, imposing buildings and bowers embowered in green; then the varying hues of orchard and cornfield and vineyard recurring in endless variety as one passes rapidly from one point of view to another. We cannot adequately describe the beauty of the scenes. We do not know whether Capt. Grosse has a name for this hill or not, but we would name it Panorama Hill, for we can think of no other word which will convey any idea of the extent and variety of its outlook, and this is altogether inadequate, as the highest achievement of the artist is but a far approach to nature's work.

After descending from the hill, we again crossed the turn and visited Mr. Burbank's Santa Rosa nurseries, a couple of blocks south of the courthouse. Mr. Burbank has now nearly 40 acres in nursery, and such trees as we had time to examine were surely thrifty and excellent. He is propagating olives extensively, but the demand this year has already caught up with his available stock. We saw the trees of the red-flesh Japan plum which we described recently in the RURAL. The tree is a much stockier grower than the Kelsey and ripens its wood earlier. Mr. Burbank has a wonderful walnut, evidently a hybrid between the black walnut and the English walnut, a beautiful tree with a characteristic foliage and an apple scent to the leaves which is remarkable. The tree has not fruited yet; but whatever its fruit, it seems destined to be of note as an ornamental tree.

Evening Session.

At the evening session there was a good audience present, and President Cooper introduced Dr. A. S. White of Santa Rosa, who delivered an address of welcome to the visiting horticulturists on the part of the Fruit-Growers' Association and the Board of Trade of Santa Rosa. After a warm welcome, the speaker entered upon an interesting description of the area, resources and industries of Sonoma county. The address was eloquent, and abounding in statistical data, from which most interesting conclusions were drawn. The speaker was heard with marked attention throughout and heartily applauded. He gave the aggregate value of the products of the county at \$6,000,000 annually, and rapidly increasing. Sonoma ranks fifth in wealth of the 52 counties of the State, the assessed valuation of property being \$28,000,000, and the rate of taxation will not exceed \$1.75 per \$100, including State, county and city taxes. At present the industries, productive and manufacturing, are being rapidly developed, routes of transportation are multiplying, population is increasing, and all present statistics of the county's growth will soon be far exceeded.

Mark L. McDonald of Santa Rosa being called upon, made an excellent speech emphasizing the points made by Dr. White, and called Sonoma county an empire in itself, outstripping in resources and productions some of the States of the Union. He thought the credit for laying out the lines of Sonoma county so as to make it grand and rich should be publicly placed where it belongs, to Gen. Vallejo, who was

deputized by the Mexican Government to this work and was best prepared to do it.

Gen. Vallejo coming upon the platform, was warmly applauded and made a pleasing address full of local hits and historical reminiscences which were greatly enjoyed. The convention then adjourned for the day.

The Experiment Stations.

There was a convention in Washington last week of directors of Agricultural Experiment Stations to consider the situation in which such institutions are placed by the passage of an Establishing Act without any appropriation to carry it into effect. An appeal was made to the officials of the Treasury to see if the Act itself could not be held to make the appropriation, but such a decision could not be secured. The support of the stations must therefore be provided by the coming Congress, and all who believe in the usefulness of the stations should unite in urging Congress to make the appropriation. This action was taken by the State Grange at the recent meeting in Santa Rosa, in the adoption of a set of resolutions setting forth the leading facts in the case and continuing as follows:

WHEREAS, We receive with gratification assurance from the Regents of the State University of California, and from E. W. Hilgard, Professor of Agriculture in the College of Agriculture of said University, that the provisions of the law shall be put into practical operation in this State just as soon as appropriations by the General Government for that purpose shall become available. Therefore be it

Resolved, That the State Grange of California, in annual meeting assembled, most earnestly prays that the Congress of the United States shall provide the funds for the execution of the law for the establishment of agricultural experiment stations in the several States, in order that this most important work may be begun at the earliest possible moment.

Of course such action by the State Grange or by other agricultural organizations is based upon the belief that the money when appropriated will be used faithfully and distinctively for the purposes set forth in the law, and not for other purposes. It is well enough to have assurance beforehand that such is also the determination of the men who will have charge and direction of the work in the different States. At the convention to which we have above alluded, a committee was appointed to report upon a system for the organization and management of agricultural experiment stations. They submitted a report, which was adopted. The committee, after stating that their attention was directed solely to experiment stations connected with colleges and under the same general governing board, advise as follows:

1. That all appropriations received under what is known as the Hatch bill should be applied in good faith to agricultural research and experiment, and the dissemination of the results thereof among the people, and that any diversion of funds to the general use of the colleges would be a direct violation of the plain spirit and intent of the law and a disappointment of just public expectation.

2. That the experiment stations especially referred to should be so far separate and distinct from the colleges that it shall be possible at any moment to show to any authorized inspector or investigator that all the funds derived from the United States under the Hatch bill have been expended solely for the purpose of agricultural experimentation according to the intent of the law.

3. That every department to be known and designated as an agricultural station should be distinctly organized with its duties and control clearly defined, and with a recognized official head, whose time shall be chiefly devoted to this department, who should be on an equal footing with the other heads of departments or professors of the college, and whose compensation should recognize the fact that the duties of the position occupy every month of the year.

4. That the publications of the stations should be entirely separate from those of the college. The quarterly or more frequent bulletins should give their readers the result of experiments as fast as completed, and only as completed, or as distinct chapters are completed. These bulletins should enlarge on practical points, such as the improvement or restoration of soils, the development of plants and the breeding of stock, when suggested by work done, even to the extent of repeating well-known principles and facts, when these need to be taught.

The declaration of intention adopted as above favors the belief which is undoubtedly well founded that there will be no "overshadowing" of the agricultural work to the extent of diverting its funds, and that the people will receive the worth of their money in agricultural investigation and not otherwise. We believe this assurance will increase the interest of agriculturists in the movement and will lead them to use their full influence with the next Congress to secure the needed appropriation.

TACOMA is enjoying an extensive boom in commerce and in local improvements.

Causes of Rain.

[An address prepared by Lieut. J. E. Maxfield, U. S. Signal Service, for the meeting of the State Grange at Santa Rosa and published by authority of the Grange.]

Of course all rain comes from the moisture which is at all times present in the air. To understand the process by which this invisible moisture becomes rain, a knowledge of its nature is necessary.

If there be a little water introduced into a glass vessel from which the air has been exhausted, it will seem to disappear almost instantly. Its presence, however, can be detected by the pressure it exerts upon the sides of the vessel. It has simply changed from the liquid state to that of a gas; from visible moisture to invisible. If other small quantities of water be introduced, they, for a time, will seem to disappear like the first, but after a time the water introduced remains as water and does not assume the gaseous state. If the vessel now be heated, the water remaining will gradually evaporate and disappear as the temperature rises. Thus it is learned that a given space will hold only a certain amount of moisture in an invisible state, and that this amount is larger, the higher the temperature. If the vessel now be cooled, the water begins to appear again and, the more it is cooled, the greater the amount of water. If these experiments had been made with a vessel containing perfectly dry air, the results would have been the same as in the case of the exhausted vessel, except that the water introduced would not have evaporated instantly, the process then requiring considerable time. Now, in nature, this process of evaporation is constantly going on; water from the oceans, rivers, lakes and the earth itself is passing into the air as an invisible vapor, and that this vapor may be turned into the form of clouds and rain, it is only necessary to cool it sufficiently, as in the case of the vapor in the glass vessel.

There are a number of ways in which this cooling may be brought about. Air is cooled by mixture with colder air, by contact with the cooler earth, or by simple radiation; but these causes act so gradually that they probably never bring about more than thin clouds, fogs and dew. To give rain, a large mass of the air must be suddenly cooled, and it is believed that this is done only when air is forced or drawn up from near the earth's surface to some distance above it. In this case the air as it rises is brought under diminished pressure, expands, and consequently is cooled. That the expansion of air cools it may be seen from the fact, that when a vessel containing moist air is rapidly exhausted by means of an air-pump, a mist is seen to gather, showing that the invisible vapor has been cooled and is being turned to water. Thus, whenever we find a strong ascending current of moist air, there we find rain, and such a current is believed to exist near the center of all storms, and to be the immediate cause of the formation and maintenance of them.

Whenever the air over a part of the earth's surface becomes warmer and more moist than the surrounding air, it, from these very causes, becomes lighter and rises. In rising it is cooled, as we have seen, and, if the air be moist enough, rain falls. Now it can be shown that this formation of rain in the ascending current tends to keep the air in it warmer than the surrounding air at the same level. Consequently the upward movement is thereby strengthened. To supply the place of the ascending air, other air is drawn in from all sides toward the ascending current. This does not move inward in straight lines, but, owing to the rotation of the earth on its axis, is constantly deflected to the right in the Northern hemisphere. The air consequently circulates around the ascending current with a spiral movement before it reaches the center and ascends. Now, just as a bullet attached to a string exerts a pull on the string when it is whirled, so the air moving

around a center has a tendency to move outward. Thus the barometer near the ascending current falls on account of this outward tendency, and we have a fully-developed storm, its characteristics being a low barometer near the center with an increasing pressure in all directions, an upward movement of the air, with rain and winds blowing spirally around the center. Thus, a storm is simply a great eddy in the air.

A storm thus formed does not remain stationary, but is swept onward by the movement of the air in which it is, just as an eddy in a stream moves onward with the current. As the atmosphere in the middle latitudes has a general movement to the east, storms generally move from west to east. The direction of their

of warm, moist air. This is notably so in the case of the Gulf stream in the Atlantic ocean.

A storm thus formed continues as long as the air drawn in is sufficiently moist to give rain, when it is cooled by ascending. When the air drawn in becomes dry, however, the cooling it experiences is not sufficient to cause rain, and there is then nothing to keep up the ascending current. It ceases, the air is no longer drawn in from all sides, and the storm has disappeared.

We are now in a position to take up the occurrence of storms and rain on the Pacific Coast. Storms come in from the west here as they do in other parts of the country. We have already seen that storms tend to move toward the side on which the air is most moist.

the northern boundary of the United States we have a great many storms come in at this point. Secondly, it has already been stated that whenever over a considerable space the air is warmer and more moist than the surrounding air, the conditions are favorable for the birth of a storm. Now, in winter we get just this needful contrast of temperature, the air over the ocean being warm and that over the land cool, and as this contrast is greater as we go north, more storms will originate on the northern coast than on the southern. Again, for reasons which there is not time to explain, it is found that all over the globe the frequency of storms increases as we go north from the equator into middle latitudes. As a result of these causes, it is found, as already stated, that nearly all of our storms come in or originate on the coast north of Cape Mendocino.

Let us glance at what takes place in California when a storm appears off the northern coast as described. The air is drawn toward the storm, giving a south wind, and as the storm moves a little to the east this becomes a southwest wind. Great masses of air are thus drawn in from the ocean over the land, and as they meet the mountains of the Coast Range and later of the Sierras, they are forced upward and cooled, giving clouds and rain over the State. Thus, the effect of the storm travels southward until it often extends beyond the southern boundary of the State. At other times when the air is less moist or other conditions are less favorable, it will extend only a short distance into California, giving rain only in the northern part of the State.

There are given herewith two charts showing the appearance and extension of a storm down the coast as described.

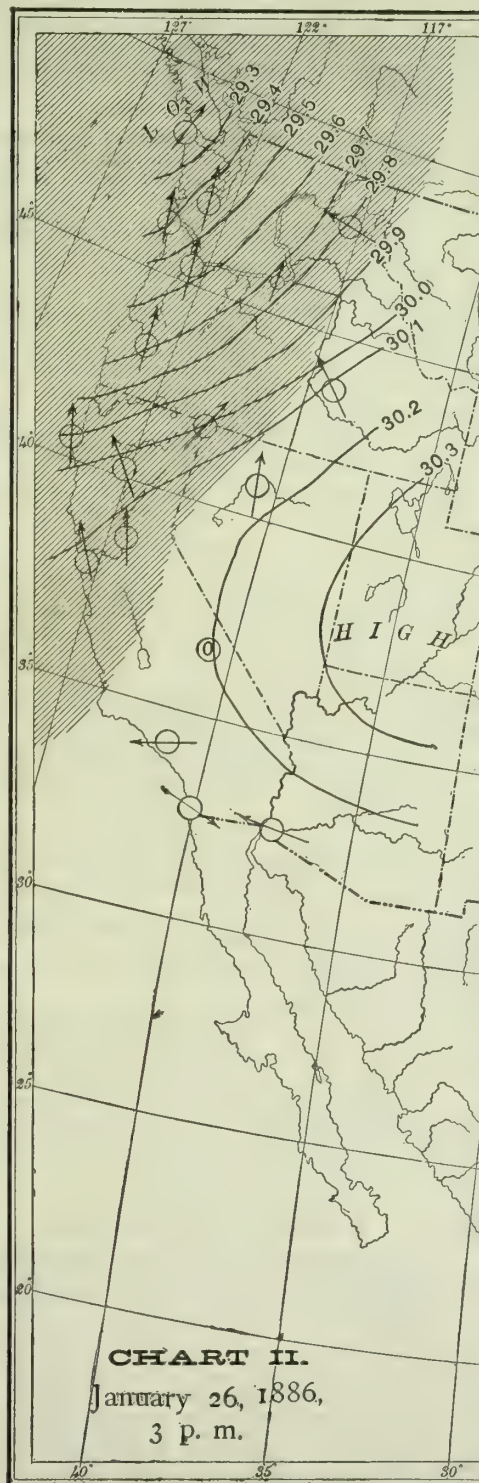
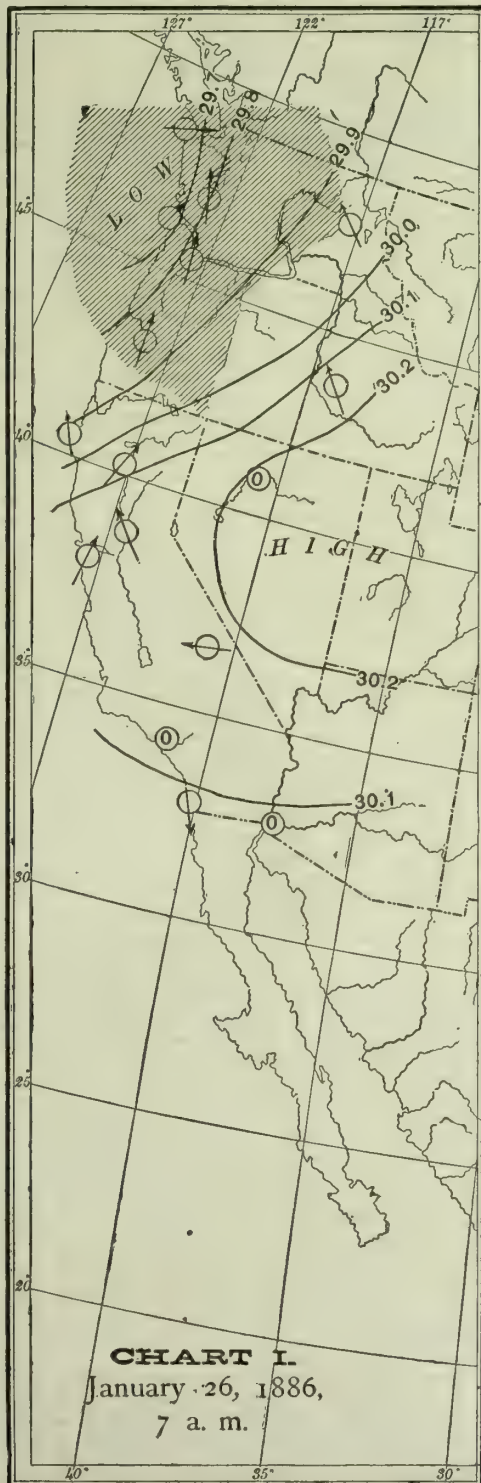
The curved lines are isobars or lines drawn through points where the barometer stands at the same height. Thus, the line numbered 29.7 on chart I means that at all points on that line the barometer stood at a height of 29.7 inches. Similar lines are drawn for 29.8 inches, 29.9, and so on. The shaded portion of the chart indicates where rain is falling or has fallen within eight hours of the time for which the chart was made. Chart I represents the conditions at 7 A. M. on January 26, 1886. Here we see a storm just appearing near Cape Flattery and marked by the characteristic low barometer with increasing pressure in all directions. Rain had already fallen as far south as Southern Oregon.

Chart II represents the conditions eight hours later at 3 P. M. Here the storm center had moved a little to the northeast, and the storm had extended some distance south of San Francisco, as will be seen by reference to the shaded portion of the map. Later charts show that this storm finally moved eastward, and was followed by the clear weather with northwest winds which are found on the west side of a storm.

During the winter season storms similar to the one shown follow each other on the northern coast of the United States in rapid succession. Some pass east or dissipate without extending down the coast. Others, as has been stated, extend beyond the southern boundary of California, and often hang on the coast for a week or more before passing away. These conditions give, as we know, almost continuous rains along the coasts of Oregon and Washington Territory, while in California there are intervals of clear weather.

STAGHOUNDS AND WOLVES.—A pack of staghounds was lately brought into Montana, to kill wolves upon the sheep and cattle ranges. They prove strong, fleet and plucky, beating the wild marauders in every instance, even when outnumbered two to one. Their sole diet is cornbread and buttermilk. Is there not a hint in this for our coyote-plagued sheepmen in California?

THE peanut harvest of Virginia is estimated at 1,000,000 bushels.



APPROACH AND PROGRESS OF A STORM ON THE PACIFIC COAST.

movement, however, is greatly modified by other things, most notably by the topography of the land over which they pass, and by the distribution of moisture around them. For example, a storm is drawn toward a mountain range; since the air on the side of the storm on which the mountain range is is forced to ascend over the range as it is drawn into the center of the storm. Being thus forced up, it is cooled, and the rain thus formed tends to make the ascensional movement greatest at that place, or, in other words, to bring the center of the storm to that point. For a somewhat similar reason storms tend to move toward the side on which the air is most moist. In this case the heaviest rain occurring on that side, the upward movement becomes strongest there, or the center of the storm moves in that direction. For this reason it is found that storms over the ocean tend to follow the course of the great warm ocean currents, because there they find an ample supply

Now, in the summer the air over the Pacific Slope is rendered very dry by the heat of the sun, and storms coming from the west are drawn away by the moister air to the north and do not reach the coast, and in cases where the cooler air from the ocean is drawn in over the land and forced to ascend, the heating it receives from passing over the heated earth more than counteracts the cooling it receives in ascending, consequently there are no general storms and little rain on the Pacific Coast in summer.

In winter, however, these conditions do not exist, and storms come in upon the coast unimpeded. Some, without doubt, originate immediately upon the coast. More than nine-tenths of these storms have their center north of Cape Mendocino. Three reasons may be given for this. First, we have seen that storms tend to follow the great warm ocean currents, and as the Japan current strikes the coast near

The Fairs.

San Jose—5th District.

The fair held in Horticultural hall, San Jose, the second week in October, under the auspices of the San Mateo and Santa Clara Association, proved highly satisfactory. The directors worked hard enough to make it a success, and well earned the gratitude of the Fifth District. There were, of course, many articles of merit among the mercantile displays, and the specimens of ladies' handiwork with needle and pencil; but to dwell on these is not within our province.

The exhibit of fruit—green, sun-dried, evaporated, canned and crystallized—taken as a whole, was remarkable for its variety and excellence. Huge squashes and pumpkins, which so impress the new-come Easterner with their marvelous proportions, were there, raised without irrigation, and a local scribe suggested that if Michael Angelo got his idea of the ribbed dome of St. Peter's from a pumpkin, it must have been a remote ancestor of the Santa Clara stock. As companion pieces to the great cucurbits, Thos. Ashbourne showed a trio of non-irrigated beets, of only three months' growth, which weighed respectively 45, 57 and 67 pounds. I. C. Mills' superb display of fresh and canned tomatoes was entered too late to carry away the first premium of its class.

The beautiful array of jellies in glass, made by Mrs. E. O. Smith, Mrs. Newhall and Mrs. Watkins, which had won three silver medals at the Mechanics' Fair in San Francisco, was here again on view and much admired.

E. Bourguignon's floral display, occupying three large tables in the center of the hall, embraced a profusion of cut flowers and a vast collection of plants, both outdoor and conservatory. His perfect and gorgeous chrysanthemums, blooming tuberoses, cactus dahlias and fine orchids and a floral sofa of exquisite design, were peculiarly pleasing.

A baby-show, with a dozen contestants and prizes for the fattest and the prettiest of both sexes, and for the prettiest twins, was the special attraction Thursday evening, and on other nights Prof. Sherman's illusions and prismatic fountain furnished entertainment.

The fair, taken for all in all, was commonly admitted to be at least the equal of any that had gone before it, and its patrons crowded the building, making it also a financial success.

Awards.

The following are the awards most likely to interest the RURAL's reader. They are arranged by the names of the recipients:

Fruits.

O. J. Alber—2d collection pears, six varieties pears, 20 lbs silver prunes, paper-shell almonds, sun-dried pears, sun-dried prunes, flowers and plants by amateur, collection apples, six varieties apples.

E. Bourguignon—Greenhouse, ornamental and flowering plants, hanging baskets, cut flowers, bouquets, etc.

A. Damonte—Glaze fruit.

G. A. Fleming—Evaporated fruits; evaporated apricots, plums, prunes, pears, apples, cherries. Sun-dried apricots and cherries.

J. H. Flickinger—Domestic fruits in glass, jellies and canned goods, sun-dried peaches.

Mrs. C. D. Horne—Single variety pears, collection figs, 2d six varieties table grapes, display grapes, bunch of grapes weighing 9 lbs, collection tomatoes.

C. C. Morse—Garden seeds, California product.

G. B. Polhemus—50 lbs butter.

John Rock—2d, six varieties apples, collection pears, 2d, six varieties pears, collection plums, collection peaches, three varieties prunes, blackberries, soft-shell almonds, hard-shell almonds, English walnuts.

C. T. Settle—Three varieties pears.

Orvis Stevens—Three varieties apples, single variety apples, 2d, collection apples, sun-dried fruit, sun-dried prunes.

G. F. Wakefield—Exhibit squashes, best and largest pumpkin.

Mrs. L. J. Watkins—Collection quinces, home-made jelly, black walnuts.

Mrs. T. Zingg—Six varieties grapes, 2d, display grapes collection California ornithological specimens.

Los Angeles—6th District.

The eighth annual fair for the Sixth District—embracing San Bernardino, Los Angeles and Ventura counties—was held at Los Angeles, Oct. 10th to 15th. The opening took place under showery skies; but by the second night the display in Hazard's pavilion was claimed to be the best collection of the products of Southern California ever gathered together under a single roof. "It seemed," said a local reporter, "as if every one had determined to make the exhibition striking for its excellence."

The San Bernardino exhibit, in charge of G. W. Beatty, T. J. Fording, A. M. Apin and E. J. Perdue, was an admirably arranged collection of the various fruits, both citrus and deciduous, which grow in that famous valley. The peaches, the bananas grown on the Highlands, the pomegranates, and the superior quality of the samples of silver prunes, dried pears, nectarines and apricots, were mentioned particularly.

Westminster made an excellent showing of fruits and vegetables, under the supervision of Messrs. Bentley and McFadden. Her apples were remarkably fine, several of the contributors having from 9 to 14 varieties each, and the pumpkins, cabbages, potatoes, sorghum, corn, butter, and peanuts drew special notice.

Downey's exhibit also contained apples and grapes in considerable variety, and sweet potatoes and pumpkins of uncommon size, besides

pears and quinces, melons, walnuts, oranges, lemons, etc. Compton was represented by pears and apples and gigantic beets and squashes.

Pomona's invoice, intended to surpass all her previous efforts, was unfortunately delayed upon the road. An exhibit of California ferns in the art gallery was very attractive, and so was the baby-show Friday afternoon.

Mrs. Garey bore away the palm for plants and flowers, and C. N. Wilson's display of honey and apiarian goods received an award.

The attendance, though not so large as had been hoped for, went on greening as the week grew old, and made a good average.

Among the races at the park, a 30-mile ride, by Carl Pugh of San Bernardino, and M. Pryor of San Juan Capistrano, proved very exciting. Each had six horses to select from at the end of each mile. The race was closely contested from first to last, the mountings and dismountings of each rider being an important feature. The first half of the race was favorable to Pryor, but he was soon passed by Pugh, who maintained the lead to the end of the long ride, and came in about a quarter of a mile ahead in 6½ minutes.

Awards at the Park.

Among the awards for cattle and horses were the following, the reports, through some oversight, having failed to give the owner's names:

Cattle.

DURHAM—Best bull, 3 yrs old and over, Juan; 1-yr-old, Bernardino Wiley. Cows, best 3-yr-old and over, Airdrie's Cherry; 2 yrs old, Bernardino Admiral.

JERSEYS AND GUERNSEYS—Bull, 3 yrs old, Ashantee Sultan. Cows, 3 yrs old, Youcoupe.

DEVONS, AYRSHIRES, HOLSTEINS AND HOLDEBURN—Best 3-yr-old and over bull, McKenzie.

HERDS—Best herd of thoroughbred cattle, Bernardino Wiley, Airdrie's Cherry, Lady Mary ad, Lady Grant 6th, Bernardino Admiral; ad do, Ashantee Sultan, Barrett's Mariposa, Youcoupe, Young Butter Fingers, Rosy Lee.

SWEETSTAKES—Best bull, any age or breed, Ashantee Sultan. Best cow, any age or breed, Airdrie's Cherry.

Horses.

THOROUGHBRED—Stallion, 4 yrs old and over, Grover Cleveland; 3 yrs old, Ed. McGinnis; colt, 1 year or under, Crawford; mare, 2 yrs old and over, Rosedale; colt, 1 year or under, Senovia; dam, other than thoroughbred, with not less than 2 of her colts, Nellie, with colts, Comoar and Snowball, by Del Sur.

GRADED—Stallion, 4 yrs old and over, Falcon; colt, 1-yr-old or under, Harry Gage; mare, 4 yrs old and over, Jennie Lind; 3 yrs old and over, Georgia.

DRAFT HORSES—Stallion, 3 yrs old and over, Duke; mare, 3 yrs old and over, with colt, Rhet; colt, Leon.

ROADSTERS—Stallion, 4 yrs old and over, Oscar Steinway; 3-yr-old, Jack Hill; gelding, 3 yrs old and over, John Delaney; mare, 4 yrs old and over, Carrie B.; 3-yr-old mare, Georgia; double team, Lucky and Rowland.

CARRIAGE HORSES—Matched span of carriage horses, Prince and King.

GENERAL PURPOSES—Stallion, 4 yrs and over, Chief of Echoes.

COLTS—Yearling horse colt, Lightfoot, by Hardwood, dam Nellie; sucking colt, Leon, by Patterson's Leon, dam Rhet; yearling colt, Tono, by Salisbury, dam by Whipple's Hambletonian; sucking mare colt, Ruth P., by Lexington, dam Jenny Lind.

SWEETSTAKES—Best stallion, any age or breed, Bachelor; 2d do, Grover Cleveland; best mare, Jennie Lind, by Dashwood, dam by Belmont; 2d do, Narcola.

JACKS—Best jack, Maltese Jack.

Susanville—11th District.

The fair grounds of the Eleventh District Association lie on a plain about half a mile east of Susanville. The track and the accommodations for live-stock are praised by visitors, who were there in goodly number at the fair opening, October 3d. E. V. Spencer delivered the address at the Methodist church, which was crowded with attentive listeners. The display of horses, cattle and swine was quite large, and much interest was shown in the stock parades.

No pavilion exists there as yet, and a large warehouse in town was hastily fitted up to serve for exhibition purposes. The show of ladies' handiwork, both useful and ornamental, was extensive. Big vegetables were there in variety and abundance; but the output of fruit was scanty, owing to the destructive frosts last spring.

It is understood that the financial results were very gratifying; and one who was present, remarking upon the gentlemanly and lady-like deportment of visitors generally, said that during his many years' residence in California and Nevada, he had never seen an assemblage so numerous as that at Susanville fair week, in which there was so little drunkenness and disorder; not a fight nor a single arrest was reported.

Fair at Fresno.

Under an Act approved March 9, 1887, the counties of Merced, Mariposa, and Fresno constitute Agricultural District No. 21; but there was such delay about getting directors appointed and completing an organization that anything like a representative district fair or agricultural show proper this season was deemed out of the question. There was quite a gathering of horsemen, however, at the Fresno fair grounds during the first week in October, and the Committee of Award, although they found

no competition, recommended the following animals worthy of premiums:

THOROUGHBREDS.—Three-year-old mare, Stella Clark; two-year-old stallion, Boy Bolton; yearling stallion, Joaquin; three-year-old mare, Leap Year. ROADSTERS.—Four-year-old stallion, D. J. McConnell; three-year-old stallion, Geo. H. Bernhard; yearling colt, Owens Bros.; sucking colt, M. A. Cotton; sucking filly, J. G. Dawes.

HORSES FOR ALL PURPOSES.—Three-year-old stallion, George Collins; yearling stallion, Josh Cravens; three-year-old mare, D. J. McConnell; two-year-old mare, Dick Myer.

BUGGY ANIMAL.—C. C. Bradley.

DRAFT HORSES.—Three-year-old stallion, P. B. Donahoo; two-year-old stallion, J. O. Davis; best draft mare, sucking colt and draft team, T. C. White.

Awards were also made to Dr. Prather for a pen of fine China Poland hogs that attracted much attention.

The directors hope to be able, at the next meeting, to offer better premiums and pay more attention to the exhibition of fine stock other than fast horses.

Visalia—15th District.

The Tulare Valley Agricultural Fair occurred at Visalia, Oct. 10th to 15th. The concourse of people during the week is said to have outnumbered that on any other such occasion, and the daily receipts, it was thought, would average \$400. Kern county, however, was hardly represented in any way, and calling to mind her admirable contribution to the Mechanics' Fair in this city, the Delta takes the directors gently to task for advertising largely in Fresno county, which is not in the 15th District, and little, if at all, in Kern, which is in the district.

At the park, 40 new stalls and 200 feet of sheds had been added, but all the space available was called for. Among the live-stock, horses predominated. Beside the racers there was a very noticeable span of high-grade Normans, roans two and three years old, exhibited by Mr. Rey, of Butler & Rey, and a fine imported Norman stallion, six years old, belonging to Treacott & Eaton of Tulare City. The latter firm also had on exhibition a family of five colts sired by the above-named stallion, all of which bid fair to become model ranch-horses.

The cattle on exhibition were choice, if not numerous. Thos. Rockford showed three pure-blooded and two young graded Holsteins; Geo. A. Parker, four graded Holstein calves. A. I. Weston had two graded Durham cows and one calf. Jasper Harrell exhibited pure Hereford bull and cow. H. C. Moore had on the grounds 13 shorthorn bulls, recently purchased in the East, which were advertised to be sold at auction. Elias Gallup of Jonesa had on exhibition 10 heifers, from 8 to 14 months old, sired by a thoroughbred Holstein bull bred by Smiths, Powell & Lamb. They were fine specimens of stock from graded Durham dams.

There were also a few swine—as may be seen by referring to the list of awards below.

The pavilion was formally opened Wednesday evening, and was brilliant with gas jets and electric lights. A large and varied output of farm and orchard products, gathered chiefly by Miller & Creighton, and arranged by W. H. Millard, was very prominent. This embraced, among other things, samples of wheat, oats, barley and alfalfa; Indian and Egyptian corn, tomatoes, pears, quinces, apples, and a squash weighing 103 pounds from A. I. Weston; corn 16 feet high, grown by J. H. Thomas on land from which a crop of hay had been already cut this season; also from the same, splendid fruit in cans and glass jars, and glass covered boxes of dried fruit; oranges and lemons, R. P. Putnam; pomegranates, Thos. Creighton; J. W. Martin sent oranges; J. S. Johnson, a large pumpkin; Wiley Watson, honey-locust pods, an olive branch showing the berry, and samples of hops; J. S. Spier & Son, pawpaws, almonds, grapes and other fruits; O. Osborne of Pleasant valley, pears and apples; and Jos. Potter contributed quinces and pomegranates.

In a fine display of fruits from the neighborhood of Porterville, collected and sent in by E. F. Hockett, there were lemons, limes, oranges, pomegranates, English walnuts, soft-shelled almonds and grapes, donated by Dr. P. F. Chapman, H. R. Henry, B. S. Ward and J. D. Tyler.

It is thought by some that the premium list should be revised, more encouragement being given to the pumpkin, spud and fruit-growers of the valley and less lavished on the "speed program;" but the cold reception which the gamblers met with was noteworthy and gratifying to those who desire to see the genuine agricultural fair interest maintained and furthered.

We append those parts of the

List of Awards

Which most concern the farmer and the horticulturist:

Horses.

THOROUGHBRED—G. A. Parker's stallion Rosewood; Owen Bros.' mare Gold Cup.

STANDARD BREED—W. H. Hammond's Pasha, 6 yrs old; H. Hellman's Strathway, 2 yrs; W. H. Fox's W. H. Wilkes, 1 yr, 1st prem.; H. Perkins' Iris, 1 yr, 2d.

ROADSTERS—J. Heinlein's Algona H., 1st; R. O. Newman's Thos. H. Benton, 2d; Geo. Dodge's mare Galatea, 3 yrs.

FAMILY—Geo. Dodge's family of Legal Tender colts.

DOUBLE TEAM—G. R. Anderson's matched iron greys.

ALL PURPOSES—G. Collins' stallion, 1st prem.;

T. D. A. Collins' stallion Stonewall, 4 yrs old, 2d; J. Fowler's Tony, 1 yr old, 1st; F. Gordon's 2-yr-old, 2d; O. A. Erwin's 3-yr-old stallion Lore Roxby.

DRAFT HORSES—Treacott & Eaton's Mazett; W. I. Burnett's Cleveland, 2-yr-old; Butler & Rey's 2 and 3-yr-old mares; San Joaquin Lumber Co.'s team of greys; Treacott & Eaton's draft suckling.

JACKS AND MULES—R. O. Newman's jack Domingo, and his suckling mules; A. Mitchell's 2-yr-old mule.

Cattle.

GRADED DURHAM—A. I. Weston.

HOLSTEIN—T. Rockford, cows; G. A. Parker, 1-yr old bull, Grade Holstein, E. Gallup, heifer calf; G. A. Parker, bull calf.

HEREFORD—J. Harrell, cow and bull.

GRADE DEVON—J. A. Patterson.

Swine.

POLAND CHINA—Elias Gallup.

BERKSHIRE—Butler & Rey.

Pavilion Exhibits.

Miller & Creighton, best display agricultural products; Visalia Cannery, canned fruit; Pioneer Land Co., Porterville, display of citrus fruits, almonds, persimmons and pomegranates; O. Osborn, orange branch with fruit on; O. P. Byrd, fleece of wool; Geo. Thyarks, raisins; J. W. Briggs, dried fruit; Mrs. Bargeman, cotton; Wen Esteven, Italian chestnuts; Josiah Gregg, honey; A. I. Weston, pears and tomatoes; Seth Smith, castor beans; H. B. Van Tassel, largest pumpkin; Mrs. I. H. Thomas, jellies in glass; L. V. Nanscaven and I. H. Thomas, fruit in glass; Mrs. H. Perkins, natural flowers.

Claus Spreckels on Beet Sugar.

In another place we give a note from one of our Watsonville readers concerning the sugar meeting held in that place on November 5th, and a statement from one of the directors of the new company as to what is required in the establishment of a factory. The following is given by a correspondent of the *Evening Bulletin* as Mr. Spreckels' address at Watsonville, and it will be found very interesting:

"My friends, I have just returned from Austria, Germany and France, where I inspected thoroughly the cultivation and manufacture of beets into sugar. My visit has convinced me that it is advisable to locate sugar-beet factories in California and all over the United States. I have made up my mind that there is no country like California. Here we can raise a million tons of sugar. We have the soil and the climate, and only need to put the machinery into motion. I am not exactly a farmer, but I know something of the methods in this business. You can succeed if you have good machinery with the latest improvements. It was tried here 18 years ago and failed, even when sugar was 12 cents a pound. I can succeed now, and it shall not be a failure. I am only one of 65,000,000, and cannot do everything alone. But I must have the support of the farmers.

"Compare the situation of the farmers here and in Germany. We must have industries to uphold the families who live here. German farm lands have been cultivated for a thousand years in beets and grain, and I felt sorry that many farmers here were not as well fixed as they are in Germany. Some of you have not had the opportunity to become independent and wealthy, but valleys like this one are not to be found all over the State.

"You must remember that you must not take away from the soil all the time, but you must put something back. If you have a tank full of water and only take one glass of water away from it each day, it will in time become empty. In the same way land recedes in productiveness if you fail to put something back in it. Every three years you should grow a crop of beets. The first year, beets; the second year, grain; the third year, manure the land and again grow grain, and then cultivate beets again. Thus, if you have a farm of a hundred acres, you can each year have 33 acres in beets, and you will find that those 33 acres will give you a better return than the whole of the other 66 acres. Farmers should net from \$50 to \$75 an acre for their beets, while for wheat you only clear about 80 cents a bushel, with 15 or 20 bushels to the acre.

"I propose to erect factories that will consume 350 tons of beets in 24 hours. This will require seven tons of lime, which is a good fertilizer, and can be returned to the soil again. Sometimes you find feed is scarce, you can cut your straw and take the pulp from the beets to feed your cattle, when you will have sleek cattle all the year round and be able to put plenty of manure back to the soil.

"In Germany the farmers say that they cannot raise wheat to compete with California, but they do better than us in sugar. Germany exports 600,000 tons of sugar and produces 1,024,000 tons. We will do the same here.

"I am now in my 60th year, and it would kill me to fail in what I undertake to do. It is not money that is an object to me, but I want the people of California to be able to show that Claus Spreckels has done something for this State when his bones are at rest.

"In Austria there are 233 beet-sugar factories; in Switzerland, 254; in Belgium, 183; in Holland, 44; in Germany, 402; in Denmark, 9; in Sweden, 9; in Spain, 10; in Italy 7, but the last two are not a success. There are 900 factories in Europe. France produces from 500,000 to 600,000 tons of sugar, and it has one central factory. Ten miles away there are small plantations where the beets are out by

machinery and diffused. From these all the liquor is pumped to the central factory, but I would prefer to bring the beets by teams or rail to the factory. I have not yet selected a place, but am ready to put up ten factories if you will help me and show where you will raise the beets.

"The first factory I will erect myself if you guarantee to cultivate a certain number of acres with beets every year. If one factory is not large enough, then I will erect another, or you can do so if you want to, and I will give \$100,000 toward it.

"In Germany two-thirds of the factories are owned by the farmers themselves, and with this interest and 100 acres of land, they have become rich by the beet-sugar industry.

"It is for you to consider whether Pajaro valley is willing to raise beets or not. My idea is, that there will be no trouble about it. For the factory there must be certain facilities—water, fuel and limestone. You have the land, and I think you can have the fuel and the limestone. If you want to own a factory yourselves, I will assist you and guarantee that it will pan out well. If my life is spared, I want to see all the sugar that is used in the United States grown here, and I want to see this country export it."

Value and Cultivation of Beets.

In reply to numerous questions put to Mr. Spreckels from among the large audience, he said that he had not made any definite arrangements, although he had visited several localities. He decided first to meet the farmers of this valley, where beets had been formerly raised. Beets would be worth from \$4 to \$5 a ton, according to their saccharine contents. He had seen a sample from Santa Maria valley that was richer than sugar-cane. It contained 91 per cent of sugar, while the sugar-cane grown there contained only 88 per cent. The fairest way to determine the value of beets would be to take a few beets from each load and analyze them, averaging the whole load on the basis of the samples taken. Thus, if the beets contained a higher percentage of sugar, the farmer would get a better price, in the same way as a farmer growing a good, plump wheat would get more than one who had an inferior quality. The lowest price paid for the beets would be \$4 per ton and more, according to the nicer saccharine contents.

Meeting of State Board of Horticulture.

The State Board of Horticulture met Monday morning in their rooms at 220 Sutter street, Elwood Cooper presiding and B. M. Lelong, secretary. The following members of the board were also present: Boggs, Vallejo, Chapman, Peck, Block and Kimball.

Mr. Cooper stated that since his elevation as president of the board his term had expired, and although he had been reappointed, he considered that he was no longer president. The board then proceeded to elect a president, and Mr. Cooper was unanimously re-elected. Mr. Kimball was elected auditor, and Messrs. Boggs, Block and Kimball were chosen as an Advisory Committee. A. K. Whitton was elected stenographer.

Mr. Lelong, secretary, made a report detailing the business of his office and stating that the duties had so increased that he needed the assistance of a clerk. After discussion as to the financial ability of the board to meet the additional expense, it was decided to provide a clerk, the amount of compensation to be fixed from month to month, in accordance with the state of the finances, by the Executive Committee.

A communication was received from Senator Hearst calling attention to the near assembling of Congress and asking for information that would enable him to frame a bill in the interest of the fruit-growers of the State. The communication was received and ordered referred to the Fruit-Growers' Convention to be held at Santa Rosa.

A communication was received from the Board of Education of Colusa county, asking that the report of the Board for the year 1881 be revised and a number of the same be issued in order that it might be used as a text-book in the public schools. The communication took the same order as the one preceding it.

A request was received from Santa Barbara asking that the meeting of April, 1888, be held in that city. Action on the communication was laid over until the next meeting of the Board. The report of W. G. Klee, State Inspector of Fruit Pests, was also laid aside until the Santa Rosa convention.

The board then adjourned to meet at Santa Rosa.

AFRAID OF SULPHUR.—Importers of fruit in New York are anxious about the fumigation of ships from Italian ports, and are making inquiries as to the intention of the authorities. One merchant said: "The process of fumigation is most destructive to fruits. I have lost several large cargoes that way. I expect considerable fruit in Italian ships which will be due here next month, and am afraid that I shall lose a great deal of it. Sulphur causes green fruit to rot. I had a large cargo of almonds shipped to me a month or so ago, and in the same ship was a consignment of sulphur. Nearly half of my almonds were ruined by sulphur fumes."

THE GIANT POWDER COMPANY.

PATENT OWNERS OF

NOBEL'S DYNAMITE,
NOBEL'S EXPLOSIVE GELATINE,
NOBEL'S GELATINE-DYNAMITE,
Best and Strongest Explosives in the World.

As other makers IMITATE our Giant Powder, so do they Judson, by Manufacturing a second-grade, inferior to Judson.

BANDMANN, NIELSEN & CO, General Agents, San Francisco.

JUDSON POWDER,

The Only Reliable and Efficient Powder

For Stump and Bank Blasting. From 5 to 20 pounds blows any Stump, Tree or Root clear out of ground at less cost than grubbing. Railroaders and Farmers use no other.

Farmers and Viticulturists, Attention!

FERTILIZE! FERTILIZE!

NITROGENOUS SUPERPHOSPHATE.

UNIVERSITY OF CALIFORNIA, Nov. 3, 1886.

DR. J. KOEBIG—Dear Sir: I have analyzed your sample of "Nitrogenous Superphosphate," with the following result:

Soluble Phosphoric Acid.....	12.90 per cent
Reverted Phosphoric Acid.....	.95 "
Insoluble Phosphoric Acid.....	2.83 "
Potash.....	2.23 "
Ammonia.....	1.87 "
Nitric Acid.....	2.95 "

The above amount of Nitric Acid is equal to 0.85 per cent Ammonia, therefore, total of Nitrogen calculated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vineyards, orchards, gardens, farms, and I recommend its use by the cultivators of the soil generally, in California. Yours truly,

DR. E. A. SCHNEIDER.

University of California, College of Agriculture.

BERKELEY, Nov. 20, 1886.

DR. J. KOEBIG, San Francisco—Dear Sir: I take pleasure in adding my testimony to that of Dr. Schneider as to the high quality of the "Nitrogenous Superphosphate" Fertilizer, analyzed by him at your request. It is a high-grade article, and as such returns the user a better money value than a low-grade fertilizer. It is especially well adapted to use in California, on account of the predominance in it of Phosphoric Acid, which is generally in small supply in our soils. Yet it is desirable that "complete" fertilizers be used in our orchards and vineyards, and yours is of that character in furnishing Potash and Nitrogen as well. Very respectfully,

E. W. HILGARD.

The value of this Fertilizer consists in the large percentage it contains of Phosphoric Acid—the chief element of all plant food—in combination with the necessary quantities of Potash and Ammonia, and the ease and cheapness with which it can be applied.

In ordinary soils the following quantities will be found sufficient: For Wheat, Barley, Corn and Oats, 300 to 350 pounds per acre. For Grass, Sugar Beets and Vegetables, 250 to 300 pounds per acre. For Vines, Fruit Trees, from 1 pound to 1 pound each. For Flower Gardens, Lawns, House Plants, etc., a light top dressing, applied at any time, will be found very beneficial.

FOR SALE IN LOTS TO SUIT,

On board cars at Sbranto, Station of the C. P. R. R., 20 miles north of San Francisco, at \$30 per ton, by the MEXICAN PHOSPHATE & SULPHUR CO., H. DUTARD, President, room 7, Safe Deposit Building, or

H. M. NEWHALL & CO., Agents, 309 and 311 Sansome St., San Francisco.

TO

FRUIT GROWERS, FRUIT SHIPPERS, CANNERIES, ETC.

The ALLEGRETTI GREEN FRUIT TREATMENT and STORAGE SYSTEM COMPANY announce that they are now ready to store and treat all kinds of Green Fruit, Vegetables, and other Perishable Articles, on Storage System, by the week, month, or for shipment East.

This system is well known among fruit-growers, its power of preserving fruits, etc., in a fresh state, having been fully demonstrated with most satisfactory results.

For particulars, address

ALLEGRETTI STORAGE CO.,

Main Storehouse, West Berkeley, Alameda Co., Cal.

WEST BERKELEY, CAL.

AMERICAN EXCHANGE HOTEL,

319 & 321 Sansome St., San Francisco.

One door from Bank of California.

The above well-known hotel offers superior accommodations to parties visiting the city.

The table is kept at top grade and the prices are within the reach of all.

RATES—\$1.00, \$1.25 and \$1.50 per day.

Free Coach to and from the Hotel.

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WINCHESTER HOUSE,

44 Third Street, San Francisco, Cal.

This Fire-proof Brick Building is centrally located, in the healthiest part of the city, only a half block from the Grand and Palace Hotels, and close to all Steamboat and Railroad Offices.

Laundry Free for the use of Families

HOT AND COLD BATHS FREE.

Terms, Board and Room, \$1.00 per Day

And upward.

ROOMS WITH OR WITHOUT BOARD.

FREE COACH TO THE HOUSE.

J. POOLEY.

DR. ROWELL'S FIRE OF LIFE

A MAGIC CURE

—FOR—

Rheumatism, Neuralgia, Pneumonia, Paralysis, Asthma, Sciatica, Gout, Lumbago and Deafness.

Everybody should have it.

G. G. BURNETT, Agt.

327 Montgomery St., S. F.

Price, \$1.00. Sold by all Druggists. Call and see

DR. CHAS. ROWELL.

Office, 426 Kearny St., San Francisco.

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Authorized Capital, \$1,000,000

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$624,160.

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CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up, and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty.

COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

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ALBERT MONTPELLIER, Cashier and Manager.

San Francisco, July 1, 1887.

SEND STAMP FOR

80-PAGE ILLUSTRATED CATALOGUE

of Guns, Pistols, Cartridges, Powder, Shells, Air Guns, Hunting Coats, Leggings, Loading Implements, Base Ball Goods, Lawn Tennis, Boxing, Fencing and Gymnasium Goods, Dumb Bells, Hammocks, etc.

Fine Gun work done by first-class smiths.

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The WHITE IS KING

FOR FAMILY USE,

Dressmaking, Tailoring and General Manufacturing.

IN ITS GREAT RANGE OF WORK IT STANDS WITHOUT AN EQUAL.

THE LIGHTEST RUNNING,
THE MOST DURABLE,
THE FINEST FINISHED,
THE BEST SATISFYING.

WHITE SEWING MACHINE COMPANY,

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This space is reserved for the NEW HOME SEWING MACHINE COMPANY, 725 Market St., Bancroft History Building, S. F., Cal.

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Each Piano on our list is SELECTED for PARTICULAR MERIT, and every one the Best of its class.

DECKER BROS., the Artist's Piano.

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WE BUY FOR CASH and "Take our Pick."

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Microscopes, Telescopes, Field & Opera Glasses, Magic Lanterns, Barometers, Thermometers, Compasses, Electric Batteries, Drawing, Mining, Surveying and other Scientific Instruments.

Send for Illustrated Catalogue and Eye Tests, free.

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North First St., SAN JOSE, CAL.

A large list of orchard and fruit lands and suburban homes in Santa Clara Valley and rural retreats in the celebrated warm belt. Correspondence solicited

BEST TREE WASH.

"Greenbank" 98 degrees POWDERED CAUSTIC SODA (tests 99 3-10 per cent) recommended by the highest authorities in the State. Also Common Caustic Soda and Potash, etc., for sale by

T. W. JACKSON & CO.,

Manufacturers' Agents,

104 Market St. and 8 California St., S. F.

FERTILIZERS!

FEED THE LAND AND IT WILL FEED YOU!

Fertilizers lessen the necessity for irrigation, increase the yield, improve the quality of crops, and keep the soil in a strong, healthy condition.

SPECIAL FERTILIZERS FOR ALL CROPS.

THE CALIFORNIA BONE FERTILIZERS ARE CHEAPER THAN BARN-YARD MANURE.

Owing to the gratifying success our product has met with during the past season, we feel greatly encouraged in offering our Fertilizers, and can guarantee our patrons that our former standard of excellence will be fully maintained.

SEND FOR CIRCULARS, WITH PRICE AND FULL INFORMATION TO

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116 California Street, San Francisco, Cal.

NITROGENOUS SUPERPHOSPHATES

—OF THE—

MEXICAN PHOSPHATE & SULPHUR CO.,

The Best Fertilizer in the World!

**IN USE IN ALL PARTS OF THE OLD WORLD AND ACKNOWLEDGED TO BE
 THE BEST KNOWN.**

We have been shipping this material for years to our Agents, Messrs. SCHRODER & MICHAELSON, HAMBURG, and under date of January 4, 1887, they wrote:

"The demand for your phosphates continues very good, as you will see from our having sold so far ahead as September and October arrival, at full prices, and we could to-day place a much larger quantity if we only had them to offer."

Under date of January 26, 1887, Messrs. SCHRODER & MICHAELSON, alluding to letters acknowledged, write as follows to H. M. NEWHALL & CO.:

"They referred partly to the quantity of Mexican Guano which we may expect to receive in the course of the present year, in regard to which our repeated inquiries addressed to the Company had so far brought no reply. We are glad to note from your telegram that Mr. Halsey has now written us on the subject, but we are, on the other hand, somewhat disappointed at the SMALLNESS of the figure you name (8000 to 10,000 tons) which we hope is exclusive of the 'Tranmere' and 'Saigon' cargoes. We have, in fact, in consequence of the numerous inquiries for this guano, been placed in an awkward position, through not being able to give any reliable information to our buyers in regard to the quantity of Mexican Guano forthcoming during the present year."

Its Introduction into California has been marked with the most gratifying results.

**IT IS THE CHEAPEST, BECAUSE THE MOST EFFICACIOUS! THE SAFEST, BECAUSE DIVESTED OF ALL ORGANIC MATTER!
 AND IS TOTALLY INOFFENSIVE TO TOUCH OR SMELL!**

We invite correspondence with Farmers, Viticulturists and others interested, and are prepared to give the minutest details in regard to this most valuable Fertilizer. For particulars of Analysis see certificate of Dr. Schneider and testimonial of Professor Hilgard in another column.

MEXICAN PHOSPHATE & SULPHUR CO.,

SAFE DEPOSIT BUILDING, Room 7.

H. M. NEWHALL & CO., Agents, 309 & 311 Sansome St., San Francisco.

Arizona Honoring Miles.

On Tuesday of this week the citizens of Arizona, in grateful recognition of the services done them by Gen. Nelson A. Miles, presented that famous Indian-fighter with an elegant gold-hilted sword.

The occasion was made a gala-day at Tucson. There were visitors from various portions of the Territory, and the denizens of the adjoining country came pouring in—Mexicans, Indians and all—till the town was flooded with the tide of people. A band of several hundred Papago warriors, hereditary foes of the Apaches, rode through the streets in paint and feathers. About 300 Mexicans appeared on horseback, and civic societies and school-children were in line.

The procession, numbering some 3000 persons, and headed by the Fourth U. S. Cavalry band, was reviewed by Gen. Miles and staff from the balcony of the San Xavier hotel, and then attended the honored guest to the park, where the presentation ceremonies were performed.

Gen. Royal A. Johnson presided, and after prayer had been offered Justice W. H. Barnes of the Supreme Court of Arizona made the address of welcome and presentation. He sketched the advance of civilization upon the wilderness, the struggles and hardships of settlers on the frontier, the craft and cruelty of the savages, and, above all, the terrors and atrocities of the warfare waged by Geronimo, Nachez and their followers, happily ended by the sagacity and prowess of Gen. Miles.

Judge Barnes spoke for half an hour, his eloquent address being often interrupted by applause, and when, at the close, the General rose to accept the sword handed him by the orator, the entire audience rose also in a tumult of enthusiastic and long-continued cheers.

Gen. Miles' response was not only graceful and felicitous, but singularly interesting also. In his opening acknowledgments he said:

I feel that you have honored me in the highest degree by making me the recipient of this token of your gratitude, and I accept it as an emblem chosen by the people of a vast Territory, not as a testimonial to me alone, but more especially in recognition of the services of that gallant body of men who, in a recent arduous Indian campaign, achieved most gratifying success. Aside from its intrinsic worth, its beautiful design, wrought in precious metals and executed with artistic skill, I prize far more than all else that spirit of generous consideration which prompted you to join together in so graceful a compliment, and I shall treasure it with more than grateful appreciation.

On this occasion I have but one regret, and that is, that the officers and soldiers who were engaged in that worthy cause, some of whom gave their lives in helping to secure peace for this Territory, cannot be present to witness this manifestation of your gratitude; and I would be less than worthy to command such men did I not accord to them the full measure of praise which their faithful services so richly deserve.

He spoke at considerable length upon the problem which confronted him, when he was assigned to the command of the department in April, 1886, and how he became convinced that permanent peace and security could be attained only through the capture and utter disarming of the hostiles, and banishing them with all their abettors and sympathizers to a far-distant region. Finally, said he:

When that was accomplished, I felt that the citizens of Arizona and New Mexico could enjoy a lasting respite from Apache depredations, and the military could be relieved from the interminable, dangerous and laborious service of contending with that dreadful foe of civilization.

Nor did he omit to mention the efficient aid and co-operation toward the success of his campaign that was given by the people and officers of the Territory and by Gov. Torres of Sonora.

The close of his response was the signal for another mighty outburst of cheering. A floral tribute from the ladies of Yuma was presented; letters were read from Gen. Sherman, the Secretary of War, the Governors of New Mexico, Sonora and Chihuahua and other persons of distinction; and an address by Carlos Velasco was tendered on behalf of the Mexican Republic.

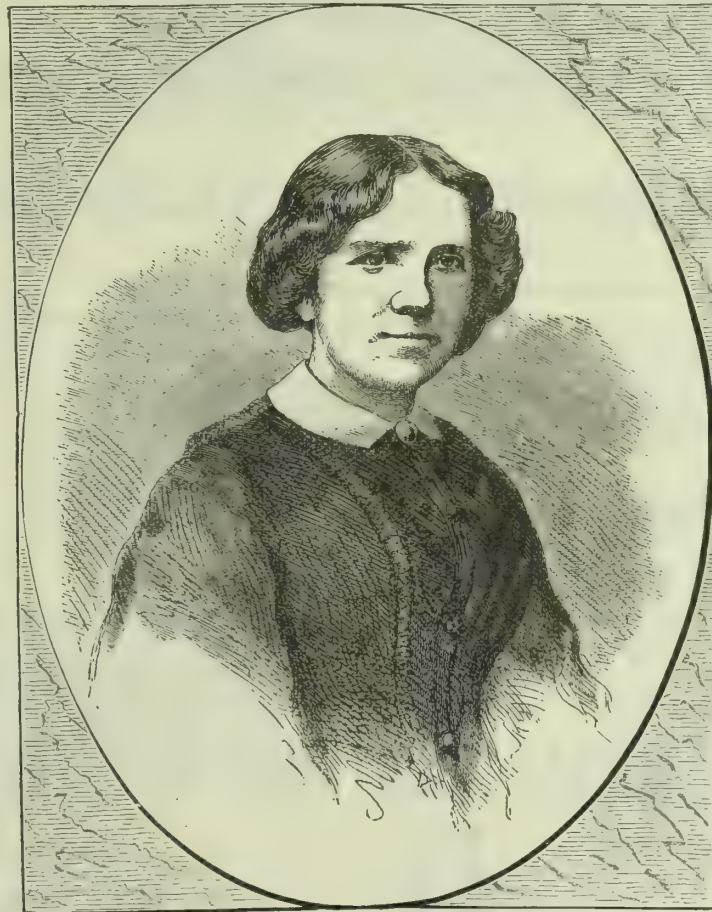
After the people had pressed upon the platform to take the General by the hand, he was escorted to his hotel by the G. A. R. In the evening, the festivities were continued with a grand reception and ball and an illumination of the city.

We have deemed this occasion worthy of somewhat extended notice as marking an important stage in the history of our territorial neighbor. Her riddance of the savage pests that so long harassed settlers within her

borders, and the opportunity now secured to her citizens of cultivating the arts of peace without fear of pillaging and murderous Apaches, goes far toward guaranteeing the prosperous development of Arizona.

The Beet-Sugar Enterprise.

EDITORS PRESS:—For the last week or ten days, Messrs. A. N. Judd and Gus Sanborn, two prominent Watsonville farmers, have been canvassing the valley for the purpose of ascertaining of farmers their willingness to engage in beet culture, and to be prepared to make definite proposals to Mr. Claus Spreckels when he arrives here, which event happened to-day. At two o'clock the rink was filled with a very large number of eager farmers drawn hither to hear the proposals of the great sugar king. The meeting was called to order by Mr. Edward White, who in a few well-chosen words introduced Mr. Spreckels. This gentleman came forward without ostentation and gave a lucid account of the manner and extent of the sugar manufactories of the world, concluding by making the statement that California could and should supply not only herself but export large amounts of this valuable article, thereby saving millions of dollars to the State. On being informed that the signatures of farmers to the extent of 3000 acres of land suitable for beet culture had been secured, Mr. Spreckels expressed himself much pleased, but could make no extended pro-



JENNY LIND GOLDSCHMIDT.

posals, as a location would necessarily govern him in his future definite arrangements. On motion, a committee on location and consultation, consisting of Dr. Chas. Ford, W. R. Radcliff and Wm. V. Gaffey, were appointed with the request that they report at their earliest convenience, after which the meeting adjourned sine die.—ONE WHO WAS THERE, Watsonville, Nov. 5.

Our correspondent does not state whether Mr. Spreckels stated explicitly what he desired in the matter of location, but we may gain a point by inference from a letter written by J. L. Koster of this city, who is a director in the great incorporation which has been organized with Mr. Spreckels at the head. In a letter to E. C. Smith of San Jose, Mr. Koster writes:

In relation to selecting a site for the plant for the Beet Sugar Company's factories, I would say that the company is looking now for the most eligible site for that purpose, and that it will require a large area of ground where the sugar beet can be grown, with soil like that near Alvarado, to raise the quantity of beets required. The company does not intend to buy these lands, but only the products of sugar beets grown thereon, and expect from the owners of such lands their co-operation with this company by the donation, gratis, of from 40 to 60 acres of land, whereon their factories are to be placed, as it will enhance the value of every acre of land surrounding the factories immensely. In Germany, every person possessing beet lands has grown wealthy. Adobe lands cannot be used.

This will perhaps give the reader a clearer idea of what the company expects.

In another column of this issue may be found a full outline of Mr. Spreckels' address at Watsonville, which may be taken as the basis upon which his great enterprise is to rest. This statement will, no doubt, attract wide attention.

Jenny Lind Goldschmidt.

Madame Goldschmidt, who died in London a few days since, at the age of 66, is better remembered in America as Jenny Lind, "the Swedish nightingale." People now in middle life can well recall the marvelous popular excitement which anticipated her coming to this country, and the furor of enthusiasm which attended her singing in various cities of the Union nearly 40 years ago. The rush and rivalry to purchase tickets to her concerts, the enormous profits which accrued to her and P. T. Barnum, under contract with whom she had crossed the ocean, and her triumphal progress from place to place are part of the history of a past generation. It is many years since she withdrew with her husband into private life, whence she came forth at intervals for some benevolent purpose; but the news of her death awakens tender memories of a woman whose personal character and charitable deeds were as lovely as her voice was enchanting.

California Poultry Association.

A special meeting of the California Poultry Association was held in this city last Saturday evening, November 5th. There were present

Shipping Young Gum Trees.

EDITORS PRESS:—I have about 3000 or more young gum trees, grown from the seed, which are now from three inches to nine inches in height; they are still in the shallow boxes in which the seeds were planted. I wish to transplant them in Antelope valley, Los Angeles county. Will you please enlighten me as to the safest and surest way to transport them? The freight charges for 400 miles of distance would be too great, were they shipped in boxes.

An early answer to my inquiry will greatly oblige a subscriber to your valuable paper.—B. F. H., San Francisco.

[We should ship them in the boxes, even at the cost of freight, believing that we would more than get our money back in the greater number which would grow after being set out without displacing the earth from the roots. If we had had such a job in view, however, we should have sent down the seed and grown the trees nearer the plantation. Perhaps some reader can give a safe way of handling the seedlings without the dirt, but we do not know of any. We suppose, of course, that the trees have to take things as they come, after planting.—EDS. PRESS.]

HEREFORD SALE.—The sale of the Hereford cattle recently made in this city by Killip & Co., for Vaughan & Williams, shows that this breed is attracting much attention, and that there is a growing market for the celebrated "white faces." The prices realized were very good, amounting to \$12 630 in all for 32 head of Herefords—an average of \$407 a head.—C. F. Swan and J. C. Bailey being the principal buyers, these two buying nearly the whole herd sold. These prices should encourage importers, for there are many other cattle growers who would like to get good blood as well as those who purchased this herd.

A Valuable Map.

The beautiful map of California, compiled by the Geological Survey, is now issued in a thoroughly revised form, giving new surveys, township and range, railroad lines, new cities, towns, and county boundaries. As now completed, the map is a most valuable acquisition to business offices or private libraries.

Those wishing to procure this admirable map should do so at once, as this is probably their last opportunity, the price of the map being now reduced to a very low figure, and the expense of labor and material in printing being very great. It is beautifully colored in outline form suitable for the use of schools.

The price, well mounted on cloth, rollers, etc., is \$3.50.

Those wishing copies can procure them by addressing the agent, E. M. SLEATOR, 529 Shotwell St., San Francisco.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

JARRED C. HOAG—California.
G. W. INGALLS—Arizona.
GEO. McDOWELL—Santa Clara Co.
WILLIAM POOL—Fresno Co.
R. G. HUSTON—Butte, Montana.
E. P. SMITH—Washington Ter.
WM. WILKINSON—San Joaquin Co.
W. J. FERRMAN—Lassen and Plumas.
A. F. JEWETT—Tulare Co.
F. B. LOGAN—San Mateo Co.
E. H. SCHAEFFLE—Calaveras Co.

THE Fish Commission boat Albatross has about finished fitting out for her extended Pacific cruises, and will probably leave the Washington navy-yard in a few days.

THE San Bernardino postoffice business has developed so rapidly that the postmaster is compelled to employ extra clerical help at his own expense.

ABOUT 20 head of Alvaro Evans' band of sheep died from the effects of eating frosty alfalfa the other morning on Powning's Addition, Reno.

To Consumptives.

Or those with weak lungs, spitting of blood, bronchitis, or kindred affections of throat or lungs, send 10 cents in stamps for Dr. R. V. Pierce's treatise on these maladies. Address the doctor, Buffalo, N. Y.

"How Can She Ever Love Him?"

Is what you often hear said when the prospective groom is the victim of catarrh. "How can she bear such a breath?" "How resolve to link her destiny with that of one with a disease, that unless arrested, will end in consumption, or perhaps in insanity?" Let the husband that is, or is to be, get Dr. Sage's Catarrh Remedy, and cure himself before it is too late. By druggists.

How Women Would Vote.

Were women allowed to vote, every one in the land who has used Dr. Pierce's "Favorite Prescription" would vote it to be an unfailing remedy for the diseases peculiar to her sex. By druggists.

Prof. Loissette's Memory Discovery.

Prof. Loissette's new system of memory training, taught by correspondence at 237 Fifth Ave., New York, seems to supply a general want. He has had two classes at Yale of 200 each, 350 at Oberlin College, 300 at Norwich, 100 Columbia Law Students, 400 at Wellesley College, and 400 at University of Penn. etc. Such patronage, and the endorsement of such men as Mark Twain, Dr. Buckley, Prof. Wm. R. Harper, of Yale, &c., place the claim of Prof. Loissette upon the highest ground.

THE SCORPION'S STING.—Professor A. G. Bourne has made a number of experiments on three species of scorpions found at Madras, with the object of determining whether the popular notion that scorpions can commit suicide is true. He finds that it is undoubtedly physically impossible for a scorpion to sting itself in a vulnerable place, and when one is placed in very unpleasant circumstances, it not unfrequently lashes its tail about and causes actual penetration of the sting. But the poison of a scorpion is quite powerless to kill the same individual or another of the same or even of another species. Two scorpions, when fighting, repeatedly sting one another with little if any effect, the stronger killing the weaker by tearing it to pieces. The poison may be pressed out of the sting with the fingers or a pair of forceps, when it is found to be a milky white fluid with a very pungent smell resembling that of formic acid.

INSECT REPRODUCTION.—Perhaps no more striking illustration of the wonderful reproductive power of certain insects could be given than that contained in a work recently published by Theodore Wood, an English entomologist. It is assumed, first, that 100 aphides weigh no more, collectively, than a single grain; and, second, that only a very stout man can weigh as much as 2,000,000 grains. Then it is found that if multiplication were entirely unchecked, the tenth brood alone of the descendants of a single aphid would be equivalent, in point of actual matter, to more than 500,000,000 very stout men, or one-third of the human population of the globe, supposing each person to weigh 280 pounds.

TO REMOVE SHEPHERDS' MARKS.—As is well known, the removal of shepherds' marks from the wool occasions great trouble. They are frequently cut out with shears. This, however, is difficult, costly and tedious. A French firm received a patent some time ago for a process by which they remove these marks quickly by submerging the raw or worked wool for from 15 to 20 minutes in a bath heated to 104° Fahr., and containing a sufficient quantity of water-glass to raise the solution to 2° B., and besides this four pounds of soap.

HE APPRECIATED THE TABLE.—At the Western house in Marysville, a few mornings ago, the *Appeal* says the waiters in the breakfast-room were electrified by the numerous orders they received from one man. In less than 25 minutes he drank nine cups of coffee and ate 15 sausages, besides innumerable slices of bread, scooped all the auxiliary dishes, and upon reaching the cashier's counter modestly proffered a smooth quarter, remarking that he had enjoyed a hearty breakfast.

Lands For Sale and To Let.

FARMS FOR SALE.

One Small Hop and Vegetable Farm. The annual yield of this place will equal 50 to 75 per cent of the purchase price.

One Fruit Farm of 50 acres. This year's crop will amount to nearly half the amount asked for the place.

120 Acres; all first-class Fruit Land; 70 acres planted to Fruit and just beginning to bear.

135 Acres; good Hop and Fruit Land near this city.

Also, several other Good Tracts, and 20 Good City Lots.

All these Tracts are intrinsically worth the money asked for them without the "Boom," and with it a handsome profit.

Terms easy. For further particulars call on or write to

W. R. STRONG & CO.,
SACRAMENTO, CAL.

CROSETT

& CHAPMAN,
REAL ESTATE AGENTS,

628 Sacramento St., San Francisco.

Parties desiring to sell or purchase property are invited to call or correspond.

WEST COAST LAND CO.

TEMPLETON, SAN LUIS OBISPO CO., CAL.

Home of Wheat, Fruit, Wine and Olive; 15,000 acres sold in past 8 months to 220 settlers, representing a population of 1100; 49,000 acres—small subdivisions—average, \$22.50 an acre; 1/2 cash, balance 5 years, 6 per cent. Catalogues and maps free. C. H. PHILLIPS, Manager.

A NEW COLONY

On the new extension of Southern Pacific Railroads, on the lands belonging to R. T. BUELL, Esq., near Los Alamos, Santa Barbara county, Cal. Parties desiring to visit the property now, can go via San Luis Obispo and take the cars from thence to Los Alamos, thence by stage to the Colony. 20,000 acres of the best lands in California, subdivided into 20, 40 and 80-acre farms; \$20 to \$30 per acre. INTERNATIONAL IMMIGRANT UNION, 401 California St., San Francisco

GOOD CROPS EVERY SEASON WITHOUT IRRIGATION.

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SANTA CRUZ COUNTY.
Address, "EXCHANGE AND MART," Santa Cruz, Cal.

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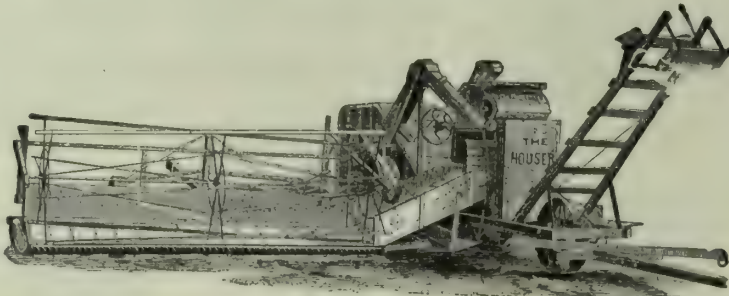
Have correspondents in all the chief cities of the United States, Europe, Australia, India, China and the principal islands of the Pacific. Purchase goods and sell California products in those countries.

General Agents for the Pacific Coast of NATIONAL ASSURANCE CO., of Ireland; ATLAS ASSURANCE CO., of London; BOYLSTON INSURANCE CO., of Boston, Mass.

HOUSER COMBINED HARVESTERS FOR 1888.

Large and Small.

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BOTH HAND AND POWER MACHINES.

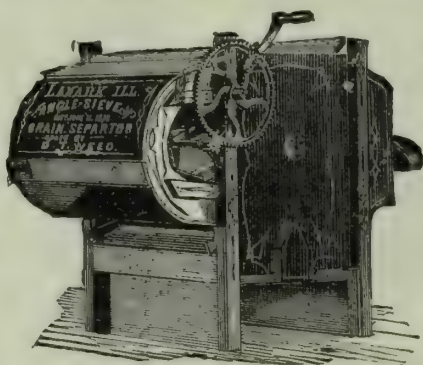
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Wheat
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THE ONLY
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WHICH WILL
SEPARATE
BARLEY,
OATS,
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From Wheat with once putting through, leaving clean seed and no second grade.

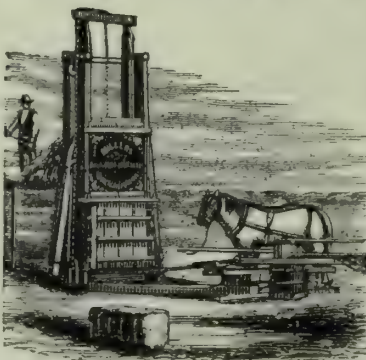
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CAPACITY,

30 Tons per
Day,

Or with Unskilled Labor
from

16 TO 20 TONS.



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Contest Money,
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It is the Best Press in the World for all kinds of Baling

The above are Manufactured by the

Stockton Combined Harvester and Agricultural Works.

All are invited to Call at Works,

Corner MAIN AND EAST STS., STOCKTON, CAL.,

AND INSPECT THE MACHINES.

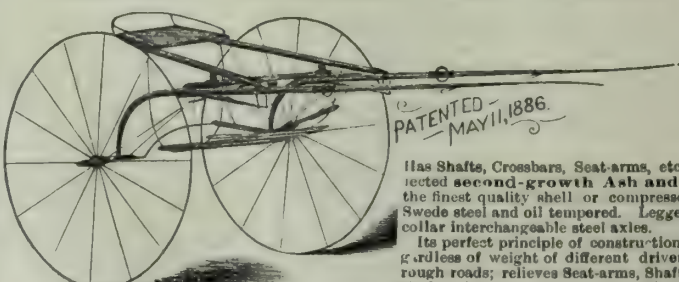
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Send for Circulars with Testimonials.

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FLINT
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Has Shafts, Crossbars, Seat-arms, etc., of the very best selected second-growth Ash and Hickory; wheels of the finest quality shell or compressed band Springs best Swede steel and oil tempered. Leggett's or Sheldon's double collar interchangeable steel axles. Its perfect principle of construction balances the cart regardless of weight of different drivers; prevents jolting on rough roads; relieves Seat-arms, Shafts and Crossbars from strain. Does not chafe or worry the horse.

VALENTINE'S BEST VARNISHES. ALL WORK GUARANTEED. Address
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Personal attention given to Sales and Liberal Advances made on Consignments at low rates of interest.

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COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. P. O., Penn's Grove, Sonoma Co., Cal. Wilfred Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

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The only Cow that has given 26,021 lbs. 2 ozs. of milk in a year.
The only four-year-old that has given 23,602 lbs. 10 ozs. in a year.
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The only herd of mature cows that has averaged 17,166 lbs. 1 oz. in a year.
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The only two-year-old Holstein-Friesian that has made 21 lbs. 10 1/2 ozs. of butter in a week.

Fifty-two cows in this herd averaged 20 lbs. of butter in a week.
100 cows and heifers in this herd average 17 lbs. 1.43 ozs. of butter in a week. Over 100 cows in the Advanced Registry. Fine studs of choice highly-bred Clydesdale, French Coach and Hambletonian Horses. Send for Catalogue giving full records and pedigrees. In writing always mention PACIFIC RURAL PRESS.

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Booth's Sure Death Squirrel Poison For Squirrels, Gophers, Birds, Mice, Etc.



Patented Jan. 23d, 1863.

For Sale by all Wholesale and Retail Dealers.

Endorsed by the Grange and Farmers wherever used.

The Cheapest and Best.

Put up in 1-pound, 5-pound, and 5-gallon Tins. Every Can Warranted.

This Poison has been on the market less than two years, yet in this short time it has gained a reputation of "Sure Death," equaled by none. By its merits alone, with very little advertising, it is now used extensively all over the Pacific Coast, as well as in Australia and New Zealand.

SEND FOR TESTIMONIALS.

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BOOTH & LATIMER, San Luis Obispo, Cal. Special Terms on Quantities in Bulk.

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Heifers in Calf in such grand bulls as Netherland Star, Clifden Prince (Holstein) and Ashantee's Sultan (Jersey) for sale at reasonable prices.

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POULTRY—All Varieties.

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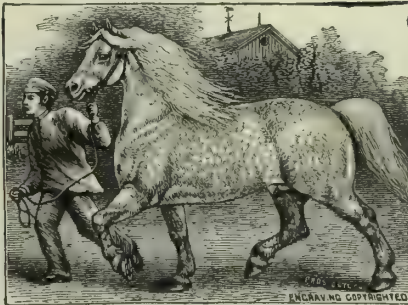


Redwood Duke, 13,368.

IMPORTED BERKSHIRES.

Prize winners at all the Fairs in California, and entire list of sweepstake premiums at State Fair, 1886. Importations made direct from England every year from the most noted breeders, selected from the best blood and most fashionable families of Dishfaced Berkshires, regardless of cost, and all recorded in English and American Berkshire records. Young pigs from these importations, male and female, from different families, for sale at reasonable prices, and every pig guaranteed. Address, **ANDREW SMITH**, Redwood City, or 215 California St., San Francisco.

Percheron Horses, SACKRIDER & CHISHOLM, Number 370 - OAKLAND, CAL. Eleventh St.



We have a choice collection of Imported Registered Stallions on hand and for sale, unsurpassed for quality, breeding and prices. Call and see them, or write for further information.

ROBERT J. DAWSON, VETERINARY SURGEON, GILROY, CALIFORNIA.

Member of the Royal College of Veterinary Surgeons, England; also Registered at the Ontario Veterinary College, Canada.

BADEN FARM HERD Of Short Horn Cattle and Dairy Cows.

Catalogues and Prices on application to **ROBERT ASHBURNER**, Baden Station. - San Mateo Co., Cal.

HEALD'S BUSINESS COLLEGE, 24 Post St. S. F. Send for Circular.

Shorthand, Typewriting, Penmanship, Bookkeeping.

THE DOG In health, habits and disease. All breeds and treatment; 50 cuts; 25c. This office.

CHILD'S CARBOLCRYSTAL SHEEP DIP.

"Patented in Europe and America."

SHEEP



DIP.

A positive scab cure. A liquid, soluble in cold water. It is absolutely non-poisonous. The cheapest and most effective dip on the market, one gallon making one hundred gallons of wash.

Price, \$1.25 per gallon.

Special discounts and terms to agents and large consumers. For samples and other information apply to **LYNDE & HOUGH**, Agents for Pacific Coast, 116 California St., San Francisco, Cal.

Italian Sheep Wash. EXTRACT OF TOBACCO.

Free from Poison.

Cures thoroughly the SCAB OF THE SHEEP. The BEST remedy known. Costs less than 1 cent per head for dipping. Reliable testimonials at our office. For particulars apply to **CHAS. DUSENBERG & CO.**, Sole Agents, No. 314 Sacramento St., San Francisco.

ON 30 DAYS' TRIAL.

EGGLESTON'S ELASTIC TRUSS Has a Pad different from all others, is cup shape, with Self-adjusting Ball in center, adapts itself to all positions of the body, while the ball in the cup presses back the intestines just as a person does with the finger. With light pressure the Hernia is held securely day and night, and a radical cure certain. It is easy, durable and cheap. Sent by mail Circulars free. **EGGLESTON TRUSS CO.**, Chicago, Ill.

W. A. SUBLETT.

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Sylvester & Sublett, DENTISTS.

Painless Extraction with Vitalized Air.

43 Sixth St., cor. Mission, San Francisco. Rooms 10, 11, 12, 13 and 14.

BOOK OF BEAUTIFUL SAMPLE CARDS. It tricks in Magic, 200 Autograph Album Vases, 24 Amazing Games, 43 Ways to Make Money. All for a two-cent stamp. FULL CARD WORK, CADIZ, OHIO.

POULTRY, ETC.



The Halsted Incubator Co., 1312 Myrtle St., Oakland, - - Cal. Price from \$20 up. Model Brooder from \$5 up. Thoroughbred Poultry and Eggs. Send for new Circulars containing much valuable information.

A GREAT CHANCE FOR POULTRY MEN.

On account of the death of the proprietor, the well-known and full-stocked

Piedmont Poultry Yard

Will be sold, including good will, as a whole or in lots to suit. A fine lot of imported Carrier Pigeons just arrived from Holland; also Scotch Terriers. Inquire of

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FOR SALE.

The Thoroughbred Stock of the Pablo Poultry Yards, near San Diego.

Ground at a low rent. Business well established with wide connections. Yards in fine condition, with piped water, shade trees and alfalfa on the grounds, and all the modern appliances, such as Incubator Houses, Brooding Houses, etc. Apply immediately to **C. A. BANCROFT**, Helix, San Diego Co., Cal.



THE PACIFIC EGG FOOD.



Manufactured by the **PACIFIC INCUBATOR CO.**, Oakland, Cal. Recipe, the result of 20 years' successful experience with poultry. Its use insures plenty of Eggs when prices are highest and keeps fowls in good health. For sale by all seedsmen and grocers. ASK FOR IT.

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Importer and Breeder of

Langshans, Plymouth Rocks, Brown Leghorns, Pekin Bantams, Light Brahmas, Partridge Cochins, Buff Cochins, Registered Berkshire Pigs. Also one pen of Langshans direct from China.

706 TWELFTH ST., OAKLAND, CAL. Large lot of young birds ready for sale; send for circulars.



THE IMPROVED EGG FOOD.

Has for more than ten years been the "Standard Poultry preparation." It cures every disease and makes hens lay at all seasons of the year. Everybody knows it! Everybody uses it! Ask for it. **B. F. WELLINGTON**, Proprietor, also Dealer in Seeds of every variety, 425 Washington St., San Francisco.

JOHN T. SULLIVAN, Manufacturer of CUSTOM MADE

Boots and Shoes,

20 Fourth St., Pioneer Building.

FACTORY, N. E. Cor. Battery & Jackson. SAN FRANCISCO, CAL.

Full line of Ladies', Misses' and Children's Fine Shoes.

AGENTS FOR

Howell's Men's \$3.00 Shoes

In Button, Congress and Balmorals; Opera and French Toes. SEND FOR TRIAL PAIR.

CUSTOM HEAVY WORK A SPECIALTY.



GLADDING, McBEAN & CO. SEWER & CHIMNEY PIPE, DRAIN TILE, ARCHITECTURAL TERRA COTTA ETC. 1358-1360 MARKET ST. S. F. MANUFACTORY AT LINCOLN CAL.

S. H. MARKET REPORT

NOTE.—Our quotations are for Wednesday, not Saturday, the date the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Nov. 9, 1887.

In the produce market, the past week was quiet, with very few changes in prices. Continued dry weather is a source of uneasiness in some sections. The foreign grain markets have been only moderately active, but the tone reported is one of considerable strength. To-day's cable is as follows:

LIVERPOOL, Nov. 9.—Wheat, quiet but steady. California spot lots, 6s 2½d to 6s 5½d; off coast, 3s 6d; just shipped, 3s; nearly due, 3s 3d; cargoes off coast, quiet; on passage, few bids in market; Mark Lane wheat, quiet; English country markets, slow; French, firm; wheat on passage to Continent, 200,000 qrs.; wheat and flour on passage to U. K., 1,474,000 qrs.; wheat and flour in Paris, quiet; weather in England, wet.

Foreign Review.

LONDON, Nov. 7.—The *Mark Lane Express*, in its weekly review of the British grain trade, says: Trade in native wheat throughout the week has been in buyers' favor. Sales of English wheat during the week were 66,087 quarters at 30s 3d per quarter, against 49,325 quarters at 30s 8d during the corresponding period last year. Flour is dull. Foreign wheat continues to lose strength. Supplies keep pouring in and rates are low. Flour values are weak. Corn is quiet. Seven wheat cargoes arrived, one withdrawn and three were sold. At to-day's market wheat was dull and dragging. Prices were notably unchanged, but all sales were in buyers' favor. Flour was dull and cheaper. American was flat. Corn is dull. Round is scarce and rather dearer. Oats are weaker. Peas are 6d dearer.

Chicago Markets.

A special telegram received by S. S. Floyd & Co. from Chicago is as follows:

CHICAGO, Nov. 7.—Wheat market continues dull and neglected; local operators want to see some life in the market before they go from shore and are waiting for the outsiders to start the ball rolling. Visible supply shows 1,200,000 bu. increase for last week. This makes the total visible supply 35,144,574 bu. This is still 22,000,000 bu. less than this time a year ago. Corn market, lifeless. Receipts of wheat at 7 primary points to-day, 541,936 bu. Shipments, 311,603 bu. No session of the Board to-morrow in New York or Chicago, on account of State election. Wheat, Dec., opened 73½; highest, 73½; lowest, 72½; closed, 73½. Wheat, May, opened, 78½; highest, 78½; lowest, 78½; closed, 78½. Corn, Dec., opened, 41; highest, 41; lowest, 40½; closed, 40½. Corn, May, opened, 45½; highest, 45½; lowest, 45; closed, 45.

Eastern Wool Markets.

BOSTON, Nov. 5.—The wool sales for the week comprise 1,683,500 lbs. of domestic fleece and pulled and 220,000 lbs. foreign, making the weeks transactions close up at 1,903,500 lbs. against 1,797,800 and 2,097,800 lbs. for the two previous weeks' transactions. There were sold 190,000 lbs. California spring and Oregon and 30,000 lbs. California fall at private terms.

NEW YORK, Nov. 7.—The demand is moderate but the situation is not without some encouraging features. Advances at hand report gathering strength in Australia. The trade thinks the market has seen its worst, and feels hopeful. Among sales were 10,000 lbs. Eastern Oregon at 20c, 20,000 lbs. fine Territory at 19c, 10,000 lbs. spring California at 22½c.

PHILADELPHIA, Nov. 7.—The market is dull and featureless. There is little change in prices for desirable wools. The feeling among holders is pretty steady. Sales include 2000 lbs. Territory, fine, at 14c; 7500 lbs. same, fine medium and coarse, 15½c; 3000 lbs. Montana, fine medium, 20c; 4000 lbs. Territory, medium, 22c.

Eastern Wheat Markets.

CHICAGO, Nov. 9.—72½c for cash, 72½c for Nov., 73½c for Dec., 73½c for Jan. and 78½c for May.

NEW YORK, Nov. 9.—85½c for cash, 83½c for Nov., 84½c for Dec., 85½c for Jan. and 89½c for May.

Florida Oranges.

NEW YORK, Nov. 5.—The *Mail and Express* says: The first shipments of Florida oranges are just arriving. A large proportion of them are rusty and the flavor is not so good as it will be in a couple of weeks. Leading dealers estimate the crop this year at 1,000,000 boxes, or 200,000 less than last year. This estimate may prove to be a low one, as many new groves come into bearing for the first time this year.

California Fruit at the East.

CHICAGO, Nov. 5.—The supply of fruit from California is only moderate. The demand is good and prices rule steady and firm. Peas are nearly out of market, as the season for them is nearly over. They sell at from \$1.75 to \$2.75 per box, according to condition. Grapes from all quarters are getting scarce and there are very few in market. Prices have risen, as predicted some time ago, and rule at \$3.75 to \$4 for Tokays in double crates and \$2.75 to \$3.25 for Muscats in same size packages. Only moderate offerings of quinces are noticed, and as they are all mostly off quality, there is a light demand and slow sales. Good quinces bring \$1.50 to \$1.75 per box, while common bring less.

Eastern Hop Markets.

NEW YORK, Nov. 7.—The hop market remains more or less unsatisfactory. Strictly choice hops are in demand at 20c to 23c, but are very scarce. Interior reports show weak markets at all points. Pacific coast, 1887, fair to prime, 16c to 20c; same, 1886, common to good, 8c to 12c; same, 1885, good to prime, 5c to 7c.

Raisins.

NEW YORK, Nov. 7.—California raisins, 2-crown, \$1.95 to \$2; 3-crown, \$2.10 to \$2.40; London, \$2.15 to \$2.40.

Local Markets.

BAGS—Calcutta June-July delivery next year, can be bought at 7½c.

BARLEY—The market is active on Call for futures, with heavy sales recorded at slight fluctuations. The tone of the market appears to be strong. To-day's sales are as follows:

Morning Session: Buyer season—200 tons, 96½c; 200, 96½c; 1000, 96½c. Buyer 1887—100 tons, 87½c; 400, 87½c. Old contract—100 tons, 87½c. Afternoon Session: Buyer season—300 tons, 96½c; 1900, 96½c. Buyer 1887—700 tons, 87½c; 300, 87½c.

BUTTER—The market is without essential change. Choice grades are still scarce and command high figures.

CHEESE—The market is steady and firm. The stock of choice is quite light. The East reports a weaker market.

EGGS—Strictly choice fresh laid are scarce and wanted. The market is lightly supplied with all kinds, which causes a strong market.

FLOUR—The market is barely steady at the lower quotations.

WHEAT—Transactions on Call in futures continue to increase, showing that more operators are being drawn in. Prices, the past week, showed but slight changes. At to-day's Call, the sales recorded are as follows:

Morning Session: Buyer season—400 tons, \$1.44½; 100, \$1.44½. Afternoon Session: Buyer season—1900 tons, \$1.44½; 100, \$1.44½; 200, \$1.44½.

COMMUNICATED.

Market Information.

Cereals.

Owing to the near approach of seedtime, farmers naturally desire all the information they can regarding the present condition and future prospects of wheat, and that too from the most reliable sources. The latest information bearing on the subject is that given by the New York Produce Exchange Reporter, which is herewith annexed. The Reporter says that the statistical position of wheat, not only in this country but also for foreign countries, is a strong one, and operators do not feel like putting out large lines of "short" wheat, and cover whenever the market develops more than ordinary firmness. A feature of the trade has been the increased orders from abroad during the past week, both for immediate and future delivery, indicating rather more confidence in the position at present prices. The visible supply of wheat is now some 22,481,347 bushels less than last year, being according to last statement, reported at 33,443,191 bushels, against 55,924,538 bushels same date last year. Indications are favorable for a larger increase in the visible supply for the week closing than there was last week. The following table is made up on basis of the October report of the agricultural department:

	Bushels.
Crop of 1887 as returned by the Agricultural Bureau.....	450,000,000
Reserves July 1st, estimated at.....	70,000,000
Total.....	50,000,000
Minimum reserves.....	40,000,000

Leaving available for home use and export.....480,000,000
The estimated requirements of 61,780,000 population, including food, seed and manufactures, are.....345,000,000

Exports of wheat and flour both coasts in the 16 weeks from July 1st to October 22d, including that to the East Indies, and to Canada for consumption, there have been about.....54,000,000

Available export surplus October 22d.....81,000,000

According to the above table, if 15,000,000 bushels are to go to Central and South America and West Indies, but 66,000,000 bushels remain to be shipped for Europe to July 1st next. The above Government estimate of the crop yield is looked upon by many operators as absurd. The Reporter in commenting on the Government report, says that from their correspondents scattered all over the country, it learns that the quantity of old wheat now in the country has not been less in 30 years. The same paper also says that "consumers' stocks, the world over, are almost unprecedentedly small, and from the crop figures furnished us by our old and reliable correspondents, we assume the exports of the country for the cereal year will not exceed 80,000,000 bushels. The excess of production over consumption, at its maximum with the large general world's crop of 1884, has since diminished, and has at the present time nearly if not quite disappeared. This statement is illustrated and emphasized by the statistical fact that in the United States alone the aggregate crops of the last three years since 1884 are more than 200,000,000 bushels less than for the three preceding, including 1884. A similar comparison holds true in the wheat crops of the world for the same periods. Values are in no small degree affected by the statistical facts that the rye, oats, barley, root and potato crops of Europe are greatly deficient, while in the surplus-producing sections American kindred crops, and the meat-producing crops of corn, hay and oats, have seldom been so generally short. The general opinion is that prices have touched bottom on this crop. Supplies generally are moderate, and the hand-to-mouth policy is not so persistently followed as it sometimes has been."

Oregon advices report continued heavy receipts of Walla Walla wheat, with buyers' ruling bids about \$1.10 at Portland. The quantity in store at Portland was 10,000 tons. Valley wheat was in fair inquiry, but held above buyers' views.

In this city trading is light, owing to holders' views being above shippers'. The latest sale of strictly No. 1 shipping wheat is reported to have been made at an advance on \$1.30. Dry weather and continued firmness in the English and French markets. Millers have been taking the more choice grades with more freedom, at from \$1.35 to \$1.45, but then these grades on the market are in light supply. Barley has exhibited more strength and general activity the past week than for some time past. There appears to be a growing impression that the supply here will barely meet the consumption up to next harvest, and as stocks become depleted, prices will advance. Continued dry weather increases the consumption. Oats are strongly held at full prices, with some

out of the market except at a still higher range of values. Light stocks and a fair demand cause the strong market.

Corn continues to hold firm. The supply of choice Californian is only an average, and firmly held. The crop of the United States is now placed as low as 1,350,000,000 bushels, while the highest estimate is 1,550,000,000 bushels.

Fruits.

Both wine and table grapes have ruled fairly steady throughout the week. Choice, sound table grapes are wanted for shipping up North.

Apples continue to grow in favor as the holiday seasons approach, causing choice sound to be more readily placed, with at times a slight advance on top prices. Defective apples are still slow, except at concessions.

Quinces are dull. Pears are steady and firm. Limes and oranges are unchanged.

Strawberries continue to rule fairly steady. It looks as though the local market had touched bottom on dried peaches, and a better inquiry prevails for unpeeled dried peaches, though there is still a very soft feeling in peeled dried peaches. It is said that a quiet concentration has been going on for some time in peeled and evaporated peaches, and that much higher prices can be looked for shortly. Prunes still continue firm, supplies being chiefly in the hands of one party. Dried apples are weak and in buyers' favor.

In the local market, raisins continue in their old unsatisfactory condition, strong for a day or so, then dropping off again as supplies accumulate. The market in New York continues firm for shipments up to November 15th. Considerable loose in sacks are coming. The holiday demand is fairly active.

Feedstuff.

Hay continues to grow scarcer and higher for the more choice, but buyers, at the advance, are slow in taking hold and purchase in as small quantities as possible. Continued dry weather increases the consumption and causes holders to hold more firmly at full figures.

Brans, middlings and ground barley are going into consumption upon a larger scale than known for years. The market is firm.

Live-Stock.

Choice bullocks are scarce and command better prices. Several large holders are reported to be stall-feeding. Choice mutton sheep are wanted, with a slight advance reported to have been paid. Hogs are in fair receipt, with only choice hard-fed fetching top prices. Packers expect lower prices when corn-fed hogs come in. In horses there is nothing new to report. Matched teams and good driving animals are wanted, but work horses are slow and hard to sell.

The following are the wholesale rates of slaughterers to butchers:

BEEF—Extra, 7½c; first grade, grass fed, 6½c; second grade, 5½c; third grade, 5c.
MUTTON—Ewes, 5½c; wethers, 6c.
LAMB—Spring, 7c.
VEAL—Large, 6c; small, 6c.
PORK—Live hogs, 4½c for heavy and medium; hard dressed, 6½c per lb; light, 4½c; 4½c; dressed, 6½c; soft hogs, live, 3½c. On foot, one-third less grain for or stall fed, and one-half less for stock running out.

Vegetables.

Onions have made another advance, with choice hard reported to be scarce.

Free receipts of potatoes the past week kept values down, notwithstanding the demand was good. Cabbages are strongly held, with a free call reported for the hard, sound heads.

Tomatoes are slow and in buyers' favor; other summer vegetables show few changes.

Beans are not coming in so plentifully. The market is strong at full figures, with at times a slight advance paid for a round parcel of very choice.

Owing to the low prices ruling for canned tomatoes, packers bid down for raw tomatoes, and as the retail trade is only fair, prices rule in buyers' favor.

Miscellaneous.

The tonnage movement compares with last year at this date as follows:

	1887.	1886.
On the way.....	333,667	252,780
In port, disengaged.....	87,240	72,000
In port, engaged.....	26,231	96,018

Totals.....447,140 420,798
To get the carrying capacity, add 60 per cent to the registered tonnage as given above.

Wool is without change. Desirable clips are reported to have been sold last month. Hops, if choice, are wanted, but fair to good are more or less neglected. Choice to extra choice hops appear to be scarce the world over.

In poultry, there are no changes to note. Consignments of dressed turkey continue to come to hand from Selma.

San Francisco, Nov. 9, 1887.

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

	50 @	80 @	100 @	135 @	140 @
Apples, box com.	50 @	80 @	100 @	135 @	140 @
do choice.....	1 00 @	1 35 @	1 40 @	1 45 @	1 50 @
Apricots, lb.....	— @	— @	— @	— @	— @
Bananas, bunch.	1 50 @	4 00 @	— @	— @	— @
Blackberries, ch.	— @	— @	— @	— @	— @
Cantaloupes, or.	— @	— @	— @	— @	— @
Cherries white box	— @	— @	— @	— @	— @
do black box.....	— @	— @	— @	— @	— @
do Royal Ann.....	— @	— @	— @	— @	— @
Cherry plums.....	— @	— @	— @	— @	— @
Cranberries.....	— @	— @	— @	— @	— @

Cranberries.....	10 00 @	11 00 @	Prunes.....	10 @	13 @
Currants ch.....	— @	— @	do French.....	11 @	14 @
Gooseberries lb.....	— @	— @	Zante Currants.....	8 @	— @
Figs, black box.....	— @	— @	RAISINS.....	— @	— @
do white box.....	— @	— @	Dehesa Olus, fcy 3 50 @	— @	— @
Grapes, white.....	30 @	45 @	Imperial Cabaret, fancy.....	2 25 @	— @
do black.....	40 @	50 @	Crown London.....	1 60 @	— @
do Rose Peru.....	— @	— @	Layers, fcy.....	2 00 @	— @
do Muscat.....	40 @	65 @	do Loose Muscatella, fancy 1 75 @	— @	— @
do Tokays.....	50 @	75 @	do Loose Muscatella.....	1 75 @	— @
Isabel.....	— @	— @	do Valencia.....	1 80 @	— @
Wine, Zinfandel 16 00 @	21 00 @	26 00 @	do Lancers.....	1 60 @	— @
do Mission.....	12 00 @	16 00 @	do Sultanias.....	1 75 @	— @
Limes, Mex.....	3 00 @	5 00 @	Fractions come 25, 50 and 75 cents higher for halves, quarters and eighths.	— @	— @
do Cal box.....	— @	— @	Artichokes, doz.....	— @	— @
Lemons, Cal, box	— @	— @	Asparagus, fcy.....	— @	— @
do Sicily, box.....	6 00 @	7 00 @	do extra choice.....	— @	— @
do Australian.....	— @	— @	Okra, dry, lb.....	15 @	20 @
Nectarines box.....	— @	— @	do green box.....	— @	— @
Oranges, Combx.....	— @	— @	Paranips, oil.....	1 50 @	— @
do Choice.....	— @	— @	Peppers, dry lb.....	10 @	— @
do Navel.....	5 00 @	— @	do green, box.....	25 @	65 @
do Panama.....	— @	— @	Pumpkins pr ton.....	— @	— @
Peaches, box.....	— @	— @	Squash, Marrow.....	8 00 @	9 00 @
Crawforda, box	— @	— @	do Summer box.....	— @	— @
do choice.....	— @	— @	do String beans lb.....	4 @	5 @
do Bartlett, box	— @	— @	Tomatoes box.....	20 @	30 @
do Perimons.....	— @	— @	do choice.....	30 @	40 @
do Choice.....	2 00 @	4 51 @	Turnips oil.....	40 @	60 @
Pineapples, doz.....	— @	— @	Beets, sk.....	40 @	50 @
Plums lb.....	— @	— @	Cabbage, 100 lbs.....	65 @	90 @
Pomegranates, b.....	— @	— @	Jarros, sk.....	35 @	— @
Prunes lb.....	40 @	60 @	Peas, dry lb.....	4 @	5 @
Quinces box.....	— @	— @	Lettuce, doz.....	10 @	— @
Raspberries, ch.....	8 00 @	11 00 @	Lima Beans lb.....	— @	— @
Strawberries, 100.....	6 00 @	12 00 @	Mushrooms, lb.....	8 @	20 @
Watermelons, ch.....	6 00 @	12 00 @	Rhubarb box.....	— @	— @

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

BEANS AND PEAS. Paper shell..... 15 @ —
Brazil..... 11 @ 12½
Pecans..... 6 @ 9
Peanut oil..... 4 @ 5
Pumpkins..... 10 @ 11
Hickory..... 7 @ 8

POTATOES.

Burbank..... 60 @ 95
Early Rose..... 40 @ 55
Golden Wonder..... 20 @ 30
Hudson..... 10 @ 15
River reds..... 35 @ 50
Humboldt..... — @ —
do Kidney..... — @ —
do Oregon..... 60 @ 80
do Peerless..... 50 @ 75
do Salt Lake..... — @ —
Sweet..... 75 @ 1 00

DAIRY PRODUCE, ETC.

Cal. fresh roll, lb..... 32½ @ 37½
do Fancy brnds..... 40 @ 45
do Eagle..... 20 @ 25
do Fisk, new..... 24 @ 28
do Eastern..... — @ —
do Sprig..... 13 @ 16
do Eastern style..... 14 @ 17
do ranch, doz..... 45 @ 46
do store..... 37½ @ 42½
Ducks..... — @ —
Oregon..... — @ —
Eastern..... 25 @ 27½

FLOUR.

Extra, City Mills 4 00 @ —
do Country Mills 3 75 @ —
Superfine..... 3 25 @ —
GRAIN, ETC.
Barley, feed, ct..... 85 @ 92½
do Brewing..... 1 25 @ 1 35
Chevalier..... 1 25 @ 1 40
do Coast..... — @ —
Buckwheat..... 1 00 @ 1 25
Corn, White..... 1 15 @ 1 30
Yellow..... 1 15 @ 1 25
Small Round..... 1 20 @ 1 30
Oats, milling..... 1 50 @ 1 65
Choice feed..... 1 40 @ 1 45
do good..... 1 37½ @ 1 40
do fair..... 1 20 @ 1 35
do black..... 1 25 @ 1 40
do Oregon..... — @ —
Eye..... 1 25 @ 1 50
Wheat millings..... 1 42½ @ 1 45
do Choice..... 1 40 @ —
do fair to good 1 35 @ —
Shipping choice 1 32½ @ —
do good..... 1 27½ @ 1 30
do fair..... 1 25 @ —

Alfalfa..... 8 @ 9
Canary..... 34 @ 40
Clover red..... 11 @ 12
White..... 20 @ 22
Cotton..... 2 @ 3
Flaxseed..... 2 @ 3
Hemp..... 4 @ 4½
Italian Ryegrass..... 10 @ 11
Perennial..... 7 @ 9
Met. German..... 5 @ 6
do Common..... 6 @ 8
Mustard, white..... 3 @ 3½
Brown..... 3 @ 3½
Rye..... 14 @ 20
Blue Grass..... 15 @ 17
do quality..... 13 @ 15
Sweet Grass..... 12 @ 14
Orchard..... 17 @ 18
Red Top..... 9 @ 10
Hungarian..... 8 @ 10
Lawn..... 30 @ 40
Mesquit..... 8 @ 9
Timothy..... 7 @ 7½

PROVISIONS.

Cal. Bacon..... 9½ @ 10½
Heavy..... 11 @ 12
Medium..... 11 @ 12
Light..... 11 @ 12
Extra Light..... 12½ @ 13½
Lard..... 7½ @ 11
Cal. Smoked Beef..... 11½ @ 13
Chevalier..... 12½ @ 14
do Eastern..... 14 @ 15
Alfalfa..... 8 @ 9
Canary..... 34 @ 40
Clover red..... 11 @ 12
White..... 20 @ 22
Cotton..... 2 @ 3
Flaxseed..... 2 @ 3
Hemp..... 4 @ 4½
Italian Ryegrass..... 10 @ 11
Perennial..... 7 @ 9
Met. German..... 5 @ 6
do Common..... 6 @ 8
Mustard, white..... 3 @ 3½
Brown..... 3 @ 3½
Rye..... 14 @ 20
Blue Grass..... 15 @ 17
do quality..... 13 @ 15
Sweet Grass..... 12 @ 14
Orchard..... 17 @ 18
Red Top..... 9 @ 10
Hungarian..... 8 @ 10
Lawn..... 30 @ 40
Mesquit..... 8 @ 9
Timothy..... 7 @ 7½

Wool, ETC.

Wool, ETC.
Humboldt..... 18 @ 20
do Merino..... 18 @ 20
Sect's valley..... 14 @ 20
Free Mountaineer..... 18 @ 20
do Nether defective..... — @ —
do Joaquin valley..... 11 @ 13
do mountain..... 12 @ 17
do Common..... 12 @ 17
Oregon Eastern..... 14 @ 20
do valley..... 16 @ 17
do Southern Coast..... 14 @ 15

FALL—1887.

It is said that the next railroad built in Northern California will be that from Pinedo, in Placer county, to Georgetown, in El Dorado county. The road will be 35 miles in length, good grade, and will open up an almost inexhaustible timber belt.



PERCHERON HORSES.

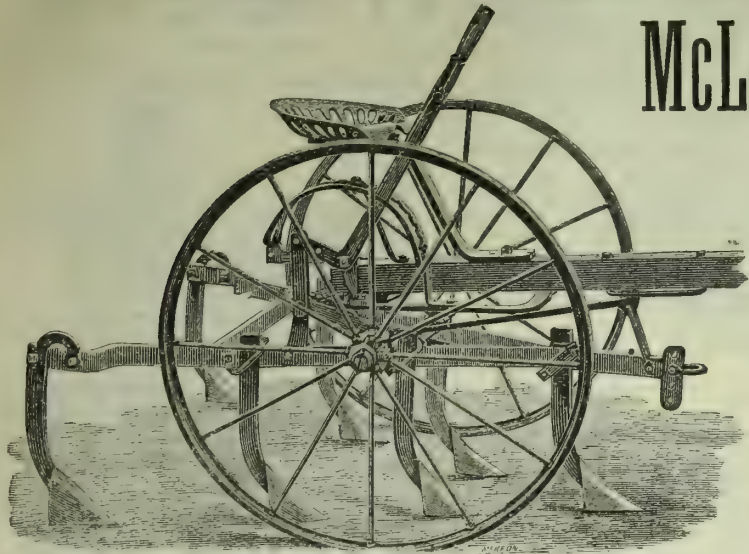
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PATENTED AND MANUFACTURED BY

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For descriptive circulars, prices, etc., address

N. McLEAN, Watsonville, Cal.

List of U. S. Patents for Pacific Coast Inventors.

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From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING NOVEMBER 1, 1887.

- 372,285.—AIR-TIGHT BUTTER PACKAGE—E. F. Badgley, S. F.
 372,353.—WHIFFLETREE—S. Baltzly, Livingston, Cal.
 372,403.—SIDE-HILL GANG PLOW—S. M. Cunningham, Coyote, Cal.
 372,611.—ELEVATOR SHAFTS—N. A. Fisher, Sacramento, Cal.
 372,415.—WHEELED SCRAPER—C. B. Hunter, Traver, Cal.
 372,373.—STATION INDICATOR—J. H. Hurlbut, S. F.
 372,317.—DENTAL ENGINE—W. A. Knowles, Alameda, Cal.
 372,483.—PAPER-CUTTER—J. F. Meador, Prescott, A. T.
 372,554.—BRAKE BLOCK—W. T. Milliken, Cheney, W. T.
 372,387.—BALL CASTER—A. Rix, S. F.
 372,432.—GATE—W. Ruble, Salem, Or.
 372,332.—OIL CAN—E. V. Runyon, Selma, Cal.
 372,338.—DYNAMITE—S. D. Smolianoff, S. F.
 372,349.—SASH-FASTENER—Emma J. Whitman, Oakland, Cal.

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THE ranges in Monterey county have suffered so much by fires that stockmen will have to move their stock from the devastated district. The farmers have suffered great damage.

FRESNO is to vote upon the question of issuing bonds in the sum of \$100,000 for a complete system of sewerage.

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PACIFIC COAST WEATHER FOR THE WEEK.

(Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.)

DATE.	Portland.				Red Bluff.				Sacramento.				S. Francisco.				Los Angeles.				San Diego.			
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.
Nov. 3-9.																								
Thursday.....	.00	52	Nw	Cy.	.00	72	N	CL.	.00	68	N	CL.	.00	64	Nw	CL.	.00	76	W	CL.	.00	62	Nw	CL.
Friday.....	.00	52	S	Fy.	.00	70	S	Fr.	.00	64	SE	Fr.	.00	56	W	Cy.	.00	68	W	Cy.	.00	64	Nw	CL.
Saturday.....	.20	58	S	Cy.	.T	64	S	Cy.	.T	66	W	Fr.	.01	62	SW	Cy.	.00	72	Nw	Fr.	.00	64	Nw	Fr.
Sunday.....	.00	50	Nw	Cy.	.00	68	N	CL.	.00	60	N	CL.	.01	57	E	Cy.	.00	66	S	CL.	.00	64	SW	CL.
Monday.....	.07	48	W	Cy.	.00	68	N	CL.	.00	60	Nw	CL.	.00	59	W	CL.	.00	66	Nw	Cy.	.00	66	W	Fr.
Tuesday.....	.02	54	S	Ry.	.00	66	N	Fr.	.00	62	Nw	CL.	.00	58	E	CL.	.00	70	W	CL.	.00	64	Nw	CL.
Wednesday.....	.18	60	S	Cy.	.00	66	S	CL.	.00	66	SW	CL.	.00	59	Nw	CL.	—	—	—	—	—	—	—	—
Total.....	1.07				T				T				.02				.00				.00			

EXPLANATION.—CL for clear; Cy, cloudy; Fr, fair; Fy, foggy; — indicates too small to measure. Temperature. Wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

WEST COAST LAND COMPANY.

SAN LUIS OBISPO COUNTY FARMING LANDS. 21,000 acres, representing \$600,000, sold in 14 months, to Nov. 1, 1887, to 260 settlers:

From New York.....	9	From San Luis Obispo county.....	34
“ Minnesota.....	8	“ Santa Clara county.....	34
“ Colorado.....	8	“ San Francisco.....	41
“ Michigan.....	4	“ Los Angeles county.....	17
“ Texas.....	5	“ Monterey county.....	6
“ Kansas.....	5	“ Other counties.....	48
“ Iowa.....	11	Total from California.....	184
“ Other States.....	24	Total from other places.....	76
“ Canada.....	4		
Total.....	76	Grand total.....	260

43,000 acres of Vine, Fruit, Olive, Fig, and Farming Lands, being the balance of the Company's property, are for sale at \$10 to \$35 an acre, on same terms— $\frac{1}{3}$ cash, balance in four equal payments on or before 2, 3, 4 and 5 years; interest, 6 per cent per annum. Parties who have purchased are building, fencing, planting olives, vines for wine and raisins, fruits, figs, wheat, oats, barley and all other products adapted to the soil and climate. These lands are located in San Luis Obispo county on the Salinas river and are traversed by the Southern Pacific Railway for 15 miles, affording near market to all parts. All lots have timber for domestic use, and good water at 20 to 40 feet. There is living water in springs and streams on many tracts and sufficient rainfall throughout, requiring no irrigation.

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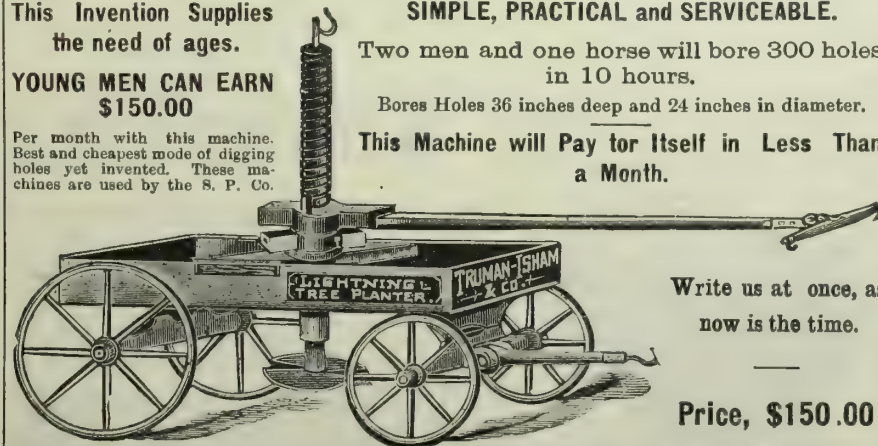
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Templeton, Cal.

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WANTED.—TO CORRESPOND WITH PARTIES in California having small Apiaries to sell. State all particulars and give price and terms. Address at once, W. J. CULLMAN, Kansas City, Mo.

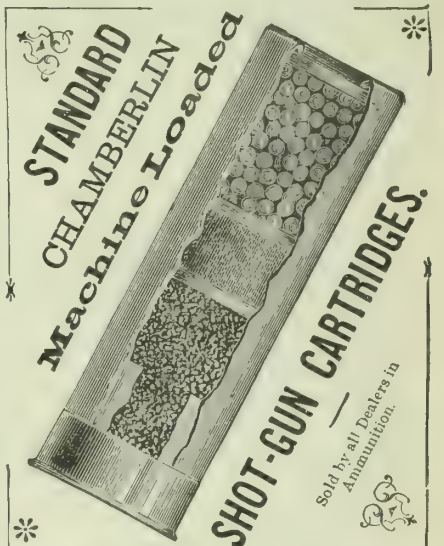
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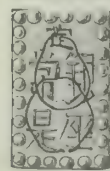
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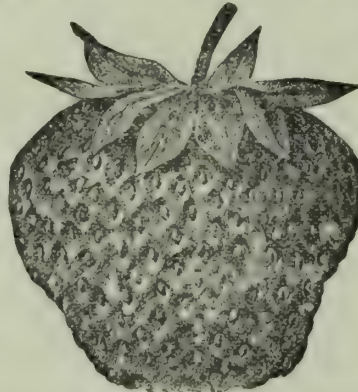
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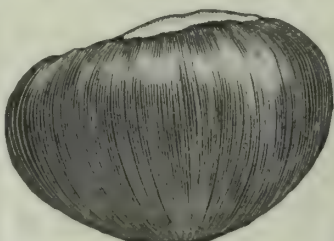
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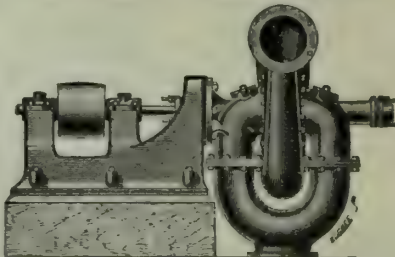
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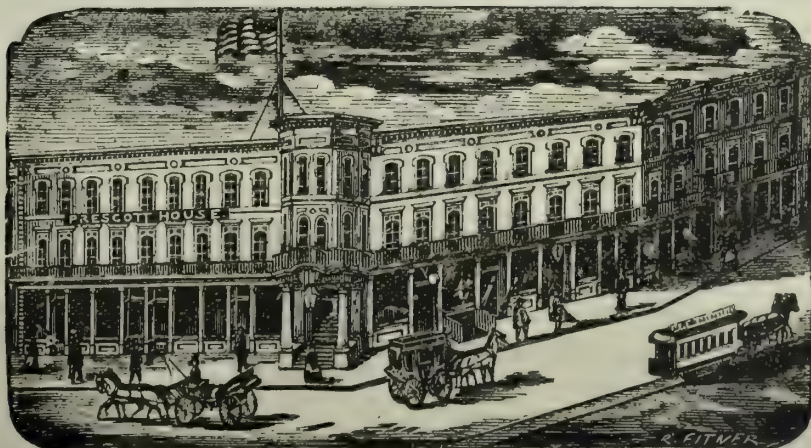
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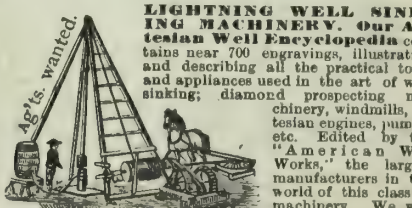
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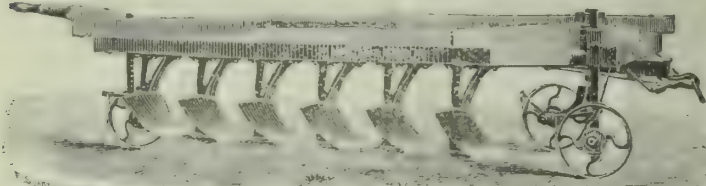
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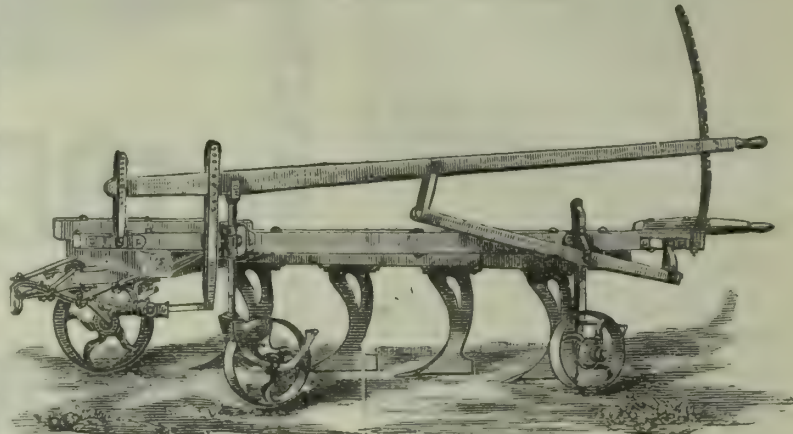
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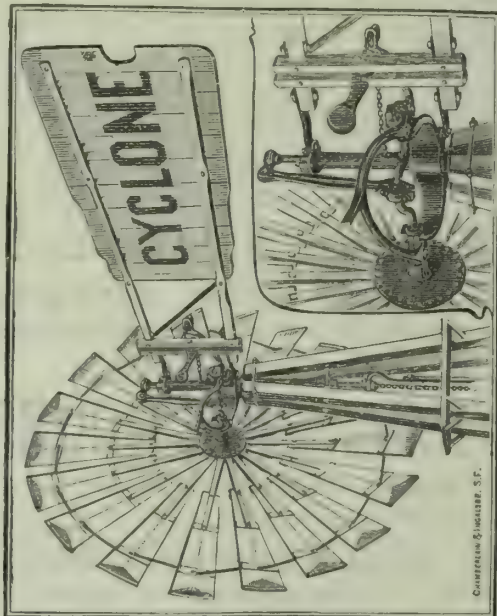
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The Croaker.

The croaker may serve a good purpose in the economy of nature, on the theory that all created things are designed for some use. The point of view from which a thing is regarded has much to do with determining judgment of

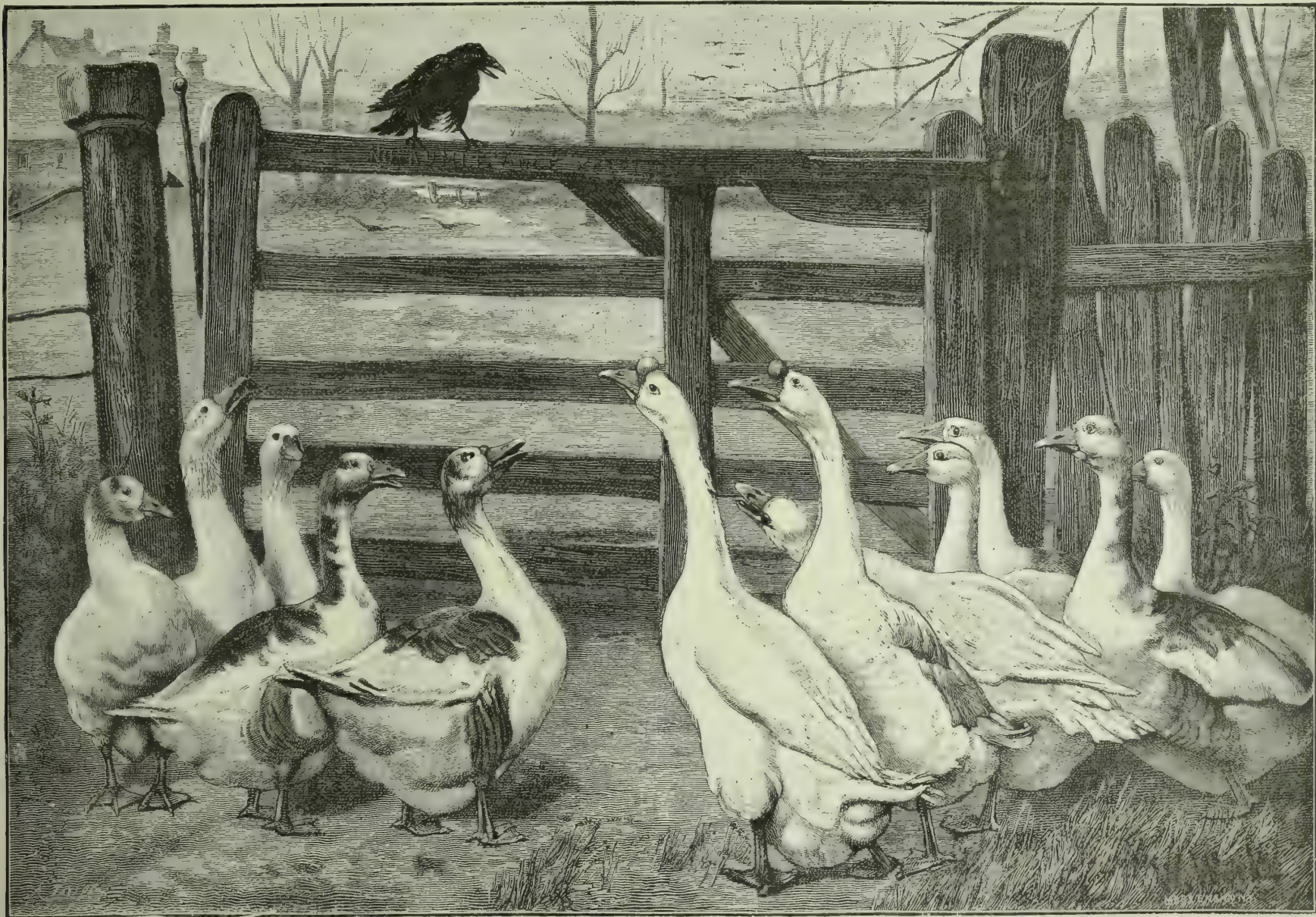
activity in California affairs and predicts reaction. Fortunately such croakers are few. They have lost their voice during the many years that California has been going steadily forward.

Let the croaker appeal to the geese; it is the only audience which can appreciate his serv-

California Pork.

We print upon a following page a very striking illustration of the effect of different food upon the flesh of the hog as determined by accurate experiment in Wisconsin. The data secured should be turned to practical account by

ened" with grain before marketing, there is no better pork in the world than is made here. Another important item in the career of the California hog is, that he passes most of his life out of doors and enjoys our glorious climate to its fullest extent. He generally has the freedom of a large field, and thus plenty of exer-



THE CROAKER'S WARNING OF THE APPROACH OF THANKSGIVING.

it. The ill-omened bird, as the poets say, which is proclaiming approaching danger to the poultry from the holiday slaughters, does not, from our point of view, accomplish any good, because he may spread discontent without saving the necks of the geese who listen to him. It is much the same with croakers generally. We presume some of them are tuning their voices to a wail, because the rain comes not, and if so, they will do no good, because there is every chance that we shall have all the water we can dispose of. The rain will fall upon the croaker and the hopeful alike, but the greater joy will certainly come to him who hopes and is confident of blessing, because he is by nature of his mind better fitted to appreciate a good thing. It will be much the same with the croaker, who is miserable over the present

ices. We will add force to his words and declare that the prospect is that the holidays of 1887 will make a greater inroad upon the feathered ranks than any previous holiday season in this State. We have more mouths to fill and heavier purses to secure supplies to fill them. There will be grand, good times this year for all but the geese; let the feathered hosts beware!

THE steamer Parthia, sailing from Vancouver the 11th for Yokohama and Hongkong, took out 190 Chinese and a full cargo, principally flour. She was to call at Victoria for 150 more Chinese.

THE *New Era* states that work at the agricultural works at Benicia is very brisk at present.

feeders. We note the results with especial satisfaction because the food which the hog receives in California is much of the kind declared by the experiment to be best for the building up the whole body of the hog used for promoting a healthy discharge of its animal functions. The California hog fares far better for protein substances than his Western contemporary. Here the hog which lives on corn alone would be hard to find. Along the dairy regions of the coast there is abundance of skim-milk, and if there is any fault to be found it is that grain food is deficient other than excessive. In the interior the hog revels in alfalfa, which is also a food rich in protein, and is finished up on barley which is less "heating" than Indian corn. The California hog has good growing food in his skim-milk and alfalfa, and if his body is properly "hard-

cise, and his habitation of a "stye," in which his Western cousins swelter and stifle and become diseased, is almost unknown here. All these things give us healthy swine. There are occasional losses from disease, of course, and even some herds are almost swept away; but prevalent disease, such as causes such frightful losses in the prairie States, does not exist here. The California hog has a good time, and he shows it.

THE California State Board of Trade has removed its headquarters two or three doors to the south, and now occupies more commodious apartments on the southwest corner of Second and Stevenson streets, under the Grand hotel, S. F. The managers seem to be extending their labors energetically and successfully.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

The Coast Valleys to the Santa Ynez.

EDITORS PRESS:—It was recently my pleasure to take a trip through some of the coast counties and greatly to enjoy the improvement that has taken place since my visits of two years ago and more. The advantages of climatic influences and of productive capacity of the different portions of our State are so varied that one cannot help being interested in every move he may make in journeying through this favored land. The mountain portions of California will always have their advantages, and the interior warm valleys theirs, while the delightfully situated coast valleys and foothills will claim the attention of thousands who come to learn of the merits of the Pacific Coast. As homes are sought after as well as business opportunities, all portions of the State will be benefited by the influx of new residents and the final settling down of those who have long been in California and adjacent regions. This latter is of no small moment to the welfare of the State that those who have for years, perhaps, been unsettled in mind and home, should realize that the sooner they come to an investment in a home, the greater their chance of securing one at all upon any terms within their means.

Value of California Lands and Climate.

It is evident that the time is now at hand when it behooves those who wish to settle down upon landed property to make their choice early. This thought was forced upon me peculiarly from some of my own past experiences and from my recent observations of the great changes undergone in the past two years, and now rapidly undergoing this autumn and winter.

The ride through the wonderful Santa Clara valley, my old home, with its pretty towns and its beautiful city of San Jose, was an enjoyment indeed, and a reminder of many pleasant days and years there spent. Two years ago property there was sold far below its intrinsic value, during a temporary period of discouragement. Now the same properties are approximating their true values, and are hard to be secured at many times the value of those days. This past season has demonstrated to many doubting ones, and to those heretofore strangers to the wonders and beauties of California, the great returns which may follow fortunate investment in these charming coast valleys. When I saw that lands, after being planted in orchard, as for example a piece of eight acres that I planted in 1882 for a friend, putting in apricots and French prunes, was sold recently for \$12,000, I began to feel that the statement I had often made several years since that such property would, ere long, become worth \$1000 per acre, had already come to pass. The many attractions of these valleys for healthful, pleasant homes are becoming duly appreciated, and not many years hence we will see every available acre in the suitable portions of California, each in itself a paradise.

Much as many may deary the stress we put upon climate, yet that is a factor of the greatest importance to us. In no other part of the world is there a climate that can be compared with this of our own California, with such variations as may suit every invalid, almost, and make life enjoyable to the well also. There is no question whatever that our climate should be considered worth as much and even more than our very choicest land and should be paid for as cheerfully. Twenty-two years' residence in California has convinced me of the truth of this statement.

In passing through these regions along the coast, and yet a little inland, it is remarkable to witness the wisdom of the old Mission fathers displayed in the selection at suitable intervals of the Mission-sites. In no instance did they make a mistake, as the San Diego, San Luis, San Gabriel, Santa Barbara, Santa Ynez, San Luis Obispo, San Miguel, Monterey, San Jose and all attest. In some, in fact almost all of them now of these Mission valleys as you may term them, the settlement has become close. It is a pity that the old Missions should be allowed to go on into decay. They should be preserved with the greatest care for the future generations. To me it is a great attraction to see these old temples of the wisdom and industry of noble, self-sacrificing men who were the real pioneers in redeeming the waste places of an unknown land.

Improvement and Progress.

Leaving San Jose and passing on down through the Santa Clara valley, the evidences of a constant and active improvement are manifest on every hand. Large stock-ranges have been transformed into beautiful orchards and vineyards, with tasteful home-buildings at frequent intervals. Gilroy has changed greatly within two years past, the settlement of aggravating land questions having given titles a stability which they have heretofore lacked.

A very noticeable feature all along the railroad on that route is the very substantial and ornamental depots now to be found at every point. Arriving at Castroville, after passing through a portion of the fertile Pajaro valley, not, however, seeing the best of it from the car windows, dinner is taken with comfort and luxury, an excellent meal being furnished for 50 cents.

In the vicinity of Castroville, it always

seemed to me that about as much wind prevailed as in any portion of California, but I have yet to learn that such winds are unhealthy, except in the way of being somewhat too bracing to those of weak lungs. The great Salinas valley has not yet been cultivated to much else than grain, and for the many years I have known it I can see but little change in it. It is not attractive to the eye to see that no improvements go on to the land, even if it be profitable to the purses of the owners. Time will, however, change this to a greater or less extent.

The terminus for so many years, Soledad, has now become a way station and the railroad has been rapidly extended the past year through the great length of the Salinas valley, opening up much new country and giving access to numerous side valleys of which the Cholame is one of the most important. At suitable intervals are convenient stations with telegraph, express and mail facilities, and with attractive villages springing up as by magic. At the old San Miguel Mission is quite an important town now, where I quite well remember in the old stage days only a store and stage station existed. The railroad here passes through the old Mission grounds, cutting the walls, portions of which are still standing, in twain. The front of the Mission church faces away from the train to the right. Heretofore from the time of leaving the Pajaro valley we have seen but little timber. Soon now a new country of oaks is entered and by the time we get into the Paso Robles region it is evident that the name is well given, the noble Pass of the Oaks being the most attractive and grateful to the eye, after so long a trip through a treeless region. Is it not strange that so many can be content to live in a country for years where nature has not been kind enough to furnish trees, and not do some tree planting to redeem the desolate appearance of things? This fault has been one of too long continuance in the large wheat-growing regions, but happily that spirit is giving way to progressive ideas, and the thought of making home comfortable and pleasantly attractive to the young, by the ornamentation given by the planting of fruit and other trees, the cultivation of a flower garden and those seemingly small but very necessary adjuncts of a perfect home. It has often been forced upon my attention that one of the chief things lacking in farm-life here has been the too-little attention paid to make the home attractive to the children, and thus save them from the desire to go to the town and city as the only desirable places of the world in which to live.

A little time spent at the Paso Robles Hot Springs is a pleasant diversion, and a comforting one as well, when you enjoy the baths. As the genial clerk of the hotel remarked: "You get as much Hammam bath here for 50 cents as you can get in San Francisco for \$2.50." This resort has long been noted for its remarkable healing hot springs. Rheumatic and neuralgic diseases are directly benefited, and as an alternative to the clogged-up system, this medical water has long enjoyed a world-wide reputation. The atmosphere here, too, is most conducive to the comfort of invalids. The new town is growing fast, and the character of the buildings is of a permanent and attractive nature. The brick block in which is the Masonic hall is one of the finest to be found outside of the large cities. One of the most elegant drug stores of the State, owned by Mr. Booth, occupies the prominent corner of this fine block. It is the understanding that new and expensive brick buildings will be erected next season by the proprietors of the Hot Springs—the Messrs. Blackburn Bros. & James—to replace the present structures. The plans of the new hotel, which I saw, if carried out, will give to California one of the most elegant and commodious hotels to be found anywhere.

Although the railroad is at present extended a few miles further to Templeton, the stage ride through the oaks to that place is a pleasant one, and from this point it is a compulsory one to San Luis Obispo, a distance of 24 miles. It is, however, not a disagreeable one, for the same character of country covered with oaks is passed through for many miles, the Santa Margarita ranch, owned by Hon. P. Murphy, consisting of many thousand acres of land, and crossing the Santa Lucia range of mountains over a good grade, the descent is rapidly made into a very different country, the warm, dry climate of the interior Salinas valley giving way to the moisture-laden atmosphere of the San Luis Obispo Coast. The difference from dryness to moisture is striking. This is so marked that it is not wondered at that one of the most valuable dairy districts of the State is to be found here in this portion of San Luis Obispo county.

Many persons here have achieved a competence and even wealth in the dairy business. The large and flourishing town of San Luis Obispo, now taking on the appurtenances of a city, is here established, having been for many years the distributing point of commercial supplies and the county seat. Many beautiful homes adorn the town and valley. A great impetus was given to the growth of this section by the construction of the Pacific Coast Railway, a narrow-gauge road now running from the port of San Luis Obispo, Port Harford, to Los Alamos, a distance of 63 miles. This road is now being extended some 12 miles to a new terminus in a portion of the great

Santa Ynez Valley.

To those who have not been in this portion of the State, this would at once seem to be a

country by itself, and different from any other in many ways, and the man would be hard to suit who could not in this region find land and climate adapted to his needs. A reference to the map will show a territory something near 150 miles in length, commencing on the north at Cambria, where the coast range of mountains begins to recede from the ocean, and gradually falling back in a southeast trend, and widening out until in the Santa Ynez valley, itself some 75 miles in length, it is lost by the closing together of the Santa Ynez range with the main Coast range. This is somewhat in the shape of a leg of mutton, with the thick and fat portion of it lying in the main Santa Ynez valley. In the upper portion of this area about Cambria and Cayucas are many of the rich dairy farms. All through are interspersed ranges of hills and lying between them fertile valleys of varying extent and area. Along the coast are fogs, of course, but somewhat inland these are far less, and in many valleys there is almost entire freedom from fog and strong wind.

A few miles south of San Luis Obispo is the northern boundary of the immense possessions of the well-known and everywhere respected Steele Bros. These gentlemen, while in possession of such a kingdom, have been mindful of the welfare of others besides themselves, and have made themselves beloved by all by their fair dealings and their public spirit, never being behindhand in yielding a hearty co-operation to whatever will benefit their county and State. Their uprightness and integrity in all their immense transactions has won for them an enviable reputation and a guaranty to all who have dealings with them that their word is as good as their bond. They have evidenced their desire to accommodate small landholders by the selling of many hundred tracts of land to others who have made profitable homes thereon. One of the richest of their possessions was the now noted

Arroyo Grande.

One of the richest tracts of land in the State, and in the center of which is the thriving town of Arroyo Grande. This locality is now, however, getting out of the reach of persons with moderate purses, just as all the choice tracts of land in the State are fast becoming so high-priced that the poor must hasten if they would secure a foothold. In the Arroyo Grande are to be seen beautiful orchards, vigorous and thriving trees that do one good to behold. Moreover, these trees are laden with the choicest fruit. Not only fruit grows here, but it is one of the head centers of the bean industry, which is of no mean proportions, as the 20 and 30 car trainloads of beans now being transported to supply the all-consuming East will testify. The large crops of beans in this State are grown in but very few localities for market purposes. In fact, the land where this industry can be carried on profitably is very limited indeed. Other products of this character are grown in this portion of the State as nowhere else. The Arroyo Grande is quite near the ocean, and after leaving here and crossing the Nipomo country the road emerges into the broad

Santa Maria Valley.

In the northern portion of Santa Barbara county, much of which in the lower portion near the sea is a wide expanse of sand, while much is also land of great fertility. That nearest the ocean of which Guadalupe is the center is in the fog belt, while further up the valley the thriving town of Santa Maria is making vigorous strides. Surrounding this is a country making rapid advancement; wheat-growing and grazing has been the great dependence. Here an artesian well is now being sunk in the center of the town expecting to obtain a flowing well. There is no reason to suppose that in many of these valleys artesian flowing water cannot be obtained, and at various points such wells will be sunk and the fact ascertained. There is a notable fact, however, that in much of all this territory alluded to, irrigation is not required. Going up by railroad and leaving the broad Santa Maria valley, low hills are crossed and the

Los Alamos Country

Reached. Los Alamos is the town for this section of country, for no other exists that I could learn. This being for so long the terminus of the narrow-gauge railroad, has made it a good business point for numerous mercantile houses and for a very profitable hotel, which has been well kept and where the tired traveler can eat at well-supplied tables and sleep in comfortable beds. This valley, in respect to climate, is much like that of the Santa Maria, but it has an attractive feature in the large white oaks that are found dotting the landscape. At this point, up to this time, travelers have had to leave the all-convenient rail travel and betake themselves to the stage to make the distance of 60 miles to the city of Santa Barbara. This stage ride, after crossing a low mountain region some 10 miles in distance, is through a country most marvelous for some 40 miles of its route.

This is in the Santa Ynez valley, a kingdom in itself if there were no other California, and yet almost unknown. That such a region should so long be unknown to the general public seems marvelous, yet there are reasons for this. No longer, however, will this immense territory of fertile land remain in obscurity, for the railroad development going on by the building of the main line of the Southern Pacific railroad through this rich region will bring it prominently before the people. Other leaven is working and the efforts now being made by energetic men will mark a wonderful change

before long. The paradise of the fruit-grower, the delightful home for the invalid, the charming climate for all to enjoy, the rich lands for the wheat-grower, the verdure-clad hills for the stock-raiser, are all to be found here.

I purpose in another article to give a description of this great valley of the Santa Ynez. Auburn, Cal. S. F. CHAPIN.

HORTICULTURE.

Berries.

EDITORS PRESS:—Of all the great varieties of berries that are indigenous to the American, the strawberry, raspberry, blackberry, huckleberry and cranberry are the most familiar in the market, and all can be transplanted and cultivated profitably; but the writer believes there are two other berries that would amply reward the man who has enough enterprise to procure the plants and try propagating them in the genial soil and climate of California.

J. S. Newberry in *Popular Science Monthly*, in an article entitled, "Food and Fiber Plants of the Indians," mentions a huckleberry that surpasses in the excellence and abundance of its fruit any other huckleberry, and from the description given it is widely different from the black huckleberry that grows in some of our northern coast counties, or the blueberry (of the same family) that is a stranger in San Francisco markets, but is not unknown in Eastern markets.

Prof. Newberry says of this huckleberry; "It covers great areas on the flanks of the Cascade mountains in Oregon, where the forests have been burned off, growing two to four feet in height, standing close on the ground, sometimes really bending under its load of berries. These are round, half an inch in diameter, of a light wine color, of a delicious vinous flavor. So abundant is this fruit that sitting down in a clump of bushes, I have filled a quart cup without changing my position."

"The Indians make long journeys to the localities where these berries grow most abundant, and gather and dry them for winter use."

There is no doubt that both this huckleberry and the blueberry by cultivation could be made to produce fourfold what they do in a wild state. The blueberries of Wisconsin grow on a light, sandy soil, and have a bloom on them like some of our grapes. A few persons who have tried transplanting and cultivating the blueberry have met with success. The size of the berries is increased by cultivation, and there is also an increase in productiveness.

Blueberries stand transportation well, and do not become stale and soft as soon as either strawberries or raspberries. In Wisconsin they were brought into town in lumber wagons, over rough roads often for a distance of 20 to 25 miles, yet were in good condition. Large quantities were dried for winter use, and the juice of blueberries fermented makes a pleasant wine.

Service-Berry.

This berry is well known and highly spoken of by those who have tested its merits. The service-berry, whose botanical name is *Amelanchier Canadensis*, grows throughout nearly the entire wooded region of the Mississippi, not as tree, but as a shrub which forms tufts or thickets, that in some regions become store-houses of delicious food. The berry is black when ripe, ovoid in form, often half an inch in length. It is very sweet, palatable and nutritious, and no one need to suffer from hunger where it is plentiful. Prof. Newberry says of their prolific growth: "I have seen thousands of acres thickly set with bushes six to eight feet high, fairly bending under the weight of fruit. Service-berries are dried and stored in large quantities by the Indians for winter use."

A friend of mine living near a large town in Northern Illinois, who devoted part of his land to growing small fruits for his home market, obtained a choice variety of raspberries accidentally. He owned part of a grove of timber, situated convenient to his farm, where he procured his firewood.

One summer day, in the raspberry season, in driving into the grove after wood, he noticed a small bunch of raspberry bushes, covered with berries which seemed of unusual size. They looked so fine, he was tempted to try them, and found that they were not alone superior in size, but in flavor, to any other wild raspberries that grew among the timber. He placed marks about the bushes, tied bits of cloth about them, and the next spring removed them all, and separated them, and carefully planted them by themselves, and they proved to be a better market berry than any raspberry he had heretofore grown.

A trial of the service-berry and the huckleberry, described by Prof. Newberry, as well as the Eastern blueberry, by some horticulturist who can afford the expense, and understands how to grow berries successfully, might increase our list of market berries and prove a success financially. M. A. S.

BESSEMER AND COMMON STEEL.—The difference between Bessemer steel and crucible steel is as follows: Bessemer steel is made from pig iron direct, while crucible steel is made from bar iron, which is first cemented in charcoal, then broken up and melted in crucibles, then cast into ingots, which are afterward heated and rolled to the size wanted. The cementation in charcoal is done to charge it with the proper amount of carbon.

THE STOCK YARD.

Dehorning Cattle.

I believe in dehorning cattle for the following reasons, viz.: Horns are not necessary to the health, comfort or welfare of domestic animals. In a wild state horns were provided in nature for self-protection. In a domesticated state horns are not only unnecessary but dangerous both to man and beast. Having lost valuable animals and come near losing my own life and the life of a child by cows supposed to be perfectly docile, and frequently seeing accounts from the public press of persons killed by domestic animals, I feel that my opinion is based on positive evidence. I know by experience cattle may be dehorned without injury to health or any useful quality, and that cattle so treated become docile and easy to handle.

We dehorned three large bulls and turned them into the corral together, and it was as good as a circus to see them perform. They immediately started in for a fight and the air resounded with their battle-cries while they covered themselves with dirt. They soon discovered that their power for mischief was gone, and became gentle to each other and a child can handle them. One of them had the habit of taking a gate on his horns and walking through at pleasure. His second move was for the gate—he placed his head in position to take the gate on his horns and raised it up in the usual way, but the gate did not rise. He stepped back and looked at it in astonishment. He tried it three times, when it dawned on his understanding that his power had departed and he made the welkin ring with a cry of disappointment. It is important to sever the horn from the head of the animal in just the right place to secure the best results, which requires some skill and a knowledge of the structure of the head and horn, but this can be easily acquired. The skull of a cow, calf and bull will enable a person to see just where the cut should be made. H. H. Haaff has published a work of 48 pages on the subject of dehorning, price 30 cents, that is worthy of a perusal by every cattle-raiser. He has also invented tools for dehorning well suited to the work, which he will furnish at a low price if addressed to Atkinson, Ill. Mr. Haaff says: "The saw the writer uses is a pointed tool so made as to operate at the very place, to prevent bleeding or growth of horn afterward. On this depends the whole operation. The gouge for calves works automatically, and it takes but a moment to make a mulley of any calf." These tools and the book containing full directions for dehorning may be had of G. G. Wickson & Co., 3 and 5 Front St., San Francisco. Being in no way interested in the sale of the work or tools referred to, they are mentioned for the benefit of farmers. The time is not far distant when horns will disappear from our herds, and H. H. Haaff will be regarded as a public benefactor.—I. C. Steele in *Cal. Patron*.

Polled Bulls Not Innocent.

EDITORS PRESS:—As so much is being said about dehorning cattle just now, I send you a clipping from the Chicago *Live-Stock Journal*. I have been among bulls and handling them all my life (at least for more than 40 years of the 53 that I have lived), and the only bull that I have any recollection of seeing that had killed a man was a Polled-Angus bull at the English Royal show in 1855. I suppose this would be a good text for an article on handling bulls, but as I have written on that subject for the *RURAL* before, I will leave it for the present, any more than to say in regard to danger, that there is more in the handling of bulls than in their horns. I never had a vicious bull, nor ever had the handling of one. ROBT ASHBURNER.

Baden Farm.

The following is the item to which our correspondent refers:

The going to death of three men recently has been used as an argument by advocates of dehorning, and they have urged the removal of the horns indiscriminately from all cattle, particularly bulls. Now comes the report from Minnesota that Mr. John Sherwin of Otter Tail county has been killed by a Polled-Angus bull. The animal became ugly, rushed at Mr. Sherwin, threw him down, then dropping on his knees bunted him until he was unconscious. He died soon afterward from his injuries.—*Live-Stock Journal*, Oct. 11th.

Home Canning of Meat.

EDITORS PRESS:—Is there any practical way that farmers can put up fresh meat in cans? We now buy canned meat, but do not like it; the canners cook it too much, and it does not have a good flavor. Answer through the PRESS, if you choose.—F. B. CLAYTON.

Perhaps some reader can give an account of experience as desired.

HOG CHOLERA REMEDY.—An exchange says that burnt corn is a sure and speedy remedy for hog cholera. The best way is to make a pile of corn on the cobs, effectually scorch it and then give the affected hogs free access to it. This remedy was discovered by E. E. Lock at the time his distillery was burnt in Lewiston, Ill. A large lot of stored corn was so much injured as to be unfit for use, and greedily de-

voured by the hogs, several of which were dying daily. After the second day not a single hog was lost, and the disease entirely disappeared. The remedy has been tried in a number of cases since, and has never failed.

THE LUMBERMAN.

The Redwood Forests of Mendocino.

Mr. W. W. Clendenin, who has recently been sojourning in Mendocino county, sends the *San Jose Times* the following paper upon the great redwood forests and lumber interests of that section of the State. It will be of interest to new-comers to California, and contains information for old residents as well:

"You will never miss the water until the well goes dry." Old settlers of this valley remember the magnificent redwood forest that 30 years ago covered the eastern slope of the Santa Cruz mountains between Los Gatos and Stevens Creek. That forest disappeared many years ago, much of it being wasted and destroyed by those who did not know or appreciate its value. The redwood timber on the western slope of those mountains is rapidly disappearing and a few years hence scarcely a vestige of it will remain. For building, fencing and many other purposes the California redwood is the most valuable timber in the world. As the wood contains no resin, no other timber stands fire as well, and black redwood never rots or decays. As an evidence of this fact, there is in Humboldt county a redwood tree that fell many years ago, and on the top of this log, more than a hundred feet from its roots, a fir tree is growing that is three feet in diameter, the redwood log being about the same size where the roots of the fir tree straddle it. Midway from the roots of the redwood log to where the fir tree stands, a section of the redwood was cut out, a short time ago, for a roadway, and the timber was found to be as sound as it was the day it fell. How long that redwood log has lain there is a problem for some smart Aleck to solve.

Mendocino Redwood.

I recently visited the redwood forests of Northern Mendocino and during the trip gathered considerable information in regard to the redwood timber trade on this coast. At Mendocino City I visited the Big River Lumber Co.'s mill and watched the modus operandi by which the huge redwood logs are converted into merchantable lumber. The logs are rafted down the river a distance of 12 or 13 miles, and are drawn into the mill from the water on a car, two at a time. All the logs over four feet in diameter are split through the center with a big mule saw and then passed over to the circular saw. The circular saws—two of them are used, one above the other—are 60 inches in diameter, and they plow their way through a three-foot log, 16 feet long, in about eight seconds. This company received an order, while I was there, from the San Diego Water Co. for 2,000,000 feet of clear lumber. The capacity of this mill is 90,000 feet per day. The next place visited was the new band-sawmill at Fort Bragg. This mill was built last year and is the first band-sawmill put up on this coast. The Fort Bragg Lumber Co. own a large tract of timber land and have three sawmills in operation. The mill that I visited is situated on the coast and the other two are back in the timber. A railroad runs from the wharf back into the woods a distance of six and a half miles, and the lumber and logs are brought down on the cars. This company employ about 1000 men and ship all of their lumber to San Pedro and San Diego. The week that I was there they shipped 1,200,000 feet.

The Powerful Band-Saws.

In the mill that I visited, two band-saws are used, and the capacity of the mill, when both saws are run, is 90,000 feet per day. These huge band-saws are 52 and 54 feet in length and 6½ and 8 inches wide. They run over wheels nine feet in diameter and they go through a big redwood log like a hot knife through a roll of butter. As a band-saw cuts a furrow through a log but one-eighth of an inch wide, they save over the circular saw 280 feet of lumber on every 1000 feet cut and they require but little over one-half the power to run them that the circular saws do. The lumber cut by the band-saw is much smoother than that cut by the circular saw. An ingenious contrivance in this mill—the men called it the "Yankee fireman"—carries the sawdust away from the saws and feeds it into the furnaces, and all that the firemen have to do is to open the furnace doors once in awhile and stick in a few slabs to make the wet sawdust burn freely.

Exportation of Redwood.

The foreign demand for redwood lumber is rapidly increasing. It is shown by the State Board of Forestry that the shipments of redwood to Australia, the Pacific Islands and Mexico in 1885 were 9,500,000 feet. In 1886 there was shipped to these points, according to the statistics of the redwood trade, 15,900,000 feet, nearly double the amount of the previous year. The great bulk of the redwoods of Santa Cruz, San Mateo, Sonoma and the southern part of Mendocino counties is cut, and it has all gone in Santa Clara, Alameda and Marin counties. The northern part of Mendocino county, Humboldt county and a small part of

Del Norte county are all that can be counted on to supply the bulk of the demand for the future. On Ten-Mile river, 20 miles north of Mendocino City, the redwood forest extends a distance of nine or ten miles from the coast, and there is found some of the grandest redwood trees in the State. These trees are mostly six and seven feet in diameter, and rise from the ground as straight as a ship's mast to a height of 300 feet, many of them being 200 feet to the first limb and keeping their size nearly that distance up. The writer was informed by a young man, who is well acquainted with that section of the country, that farther up the river he had measured a redwood tree which was nearly 30 feet in diameter.

That the enormous demand for redwood lumber will constantly increase, there is not the shadow of a doubt, for new towns are springing up like mushrooms all over the State, especially so in the treeless section of Los Angeles, San Bernardino and San Diego counties. Our matchless redwood forests are now melting away before the woodman's axe and the ravenous tooth of the saw like snow under a tropical sun. A score of years hence scarcely a vestige of it will be left, and then our people will know and appreciate its great value.

STEAM LUMBER SCHOONERS.—A new feature of the lumber trade on this coast is the steam schooner. The steam schooner is a California production, introduced only a few years ago, and they are rapidly taking the place of all other rigs in the coasting trade. They cost \$40,000 each, and are, for the most part, vessels about 150 feet long, 16 feet beam and 10 feet depth of hold. They measure about 280 tons and carry compound surface-condensing engines of 250-horse power. They are fast sailers, capable of carrying large deckloads, and are just the thing for our rock-bound coast. At the present time five of these vessels are in course of construction at one shipyard in San Francisco. The Fort Bragg Co. owns one of these vessels, and is having another one built in San Francisco. Quite a town has been built at Fort Bragg during the past year, and it now contains three hotels, two stores, eight saloons, postoffice and school. The demand for redwood lumber in the southern part of this State during the last three years has been enormous, and it is rapidly increasing. Three or four steamers have been carrying lumber from Humboldt and Mendocino to San Diego, and every coastwise vessel is under engagement and new ones cannot be supplied fast enough to satisfy the demand.—*San Jose Times*.

POULTRY YARD.

About Turkeys.

"The turkey is a native of America," writes Helen E. Buck of Lancaster, Mass. "The obscurity which hangs over the domestication of this bird, except by industrious ferreting among old family records and memorandum-books, shows that those who carried it to the Old World, whence we obtained our stock, doubtless had no idea of the value of what they were transporting, but probably regarded it like any other remarkable production of nature—a macaw or tortoise. The English name, 'turkey,' is somewhat difficult to account for, but by historical accounts we believe the name to have been given by the English, as about the time when the bird appears first to have been known in England, the Turkish power was held in dread in Europe. It might have been that the outlandish aspect of this bird, its deep, guttural notes, its haughty carriage and irascible disposition led to the imposition of the name.

"Among the living tributaries to the luxury of man, the turkey is an instance of the results yet to be expected from the exploring spirit of our day.

They are Profitable.

"The rearing of turkeys is one of the most profitable pursuits in which one may engage under proper conditions. Upward of \$100,000 worth of turkeys are annually brought into the Eastern markets for consumption and for use as breeders. At the present time a number of varieties are reared, but of thousands of birds prepared for market, a large percentage will not average over six pounds each. Of the pure bred stock, the breeding turkeys require care and skill. As a rule, broad-backed, full-breasted and large-boned breeding birds are selected. Young hens will lay more eggs, but not of young size as older ones. Six hens and a tom make a very good breeding pen, but one can use as many as 12 hens with a good, vigorous tom. Owing to their stealing nests, they cause much trouble, so we find it a much better way to have yards attached to their buildings with two-feet by-four coops for laying-boxes, or piles of brush carelessly placed about in the yards, which answers the same purpose.

"It is often the case that turkeys lay in the early part of the day, and can be released in the afternoon to roam at large, which will insure greater fertility in their eggs. For sitting, turkeys should be allowed to occupy the same coop as when broody, or by making a covering over the brush. Great care should be exercised in keeping the eggs clean, as they sometimes sweat and get gummy. Lukewarm water can be used in such cases to clean the eggs. This process should be done when the turkey is off the nest and out of sight, as they are very sensitive creatures, and in some cases would leave

their nests should they notice it had been turbed.

"The time of incubation with turkeys is 28 days. Young turkeys are very delicate, and the less handling and fussing with that they receive for the first 24 hours of their existence the better chance for raising them. Leave the care entirely with the mother hen until she shows a desire to roam in fresh fields with her young. Then remove the whole family to a coop, which should be in readiness, of a size four by six feet, say 3½ feet front, 2½ feet back, giving a slanting roof of one foot in pitch. Place boards around the body of the coop, with spaces three-quarters of an inch between each, thus insuring plenty of fresh air. This coop should be thoroughly whitewashed and provided with a board floor covered with clean sand. The front should be made to close at night and in stormy weather. An orchard where but little grass is growing is preferable to any other place for starting them. Mother hens can be confined to the orchard by a light board or shingle secured on their backs by soft, flat strings drawn through holes and tied under their wings. This method will not injure them in the least. After the first 24 hours, they will begin to look about for food.

How to Feed Them.

"The young turkeys should be fed with egg-bread curd or light bread crumbled in milk. Hard boiled eggs with a little black pepper are excellent for a morning feed during the first week. After this period crushed corn, boiled the same as hominy, with a clean dish of sour milk, will answer very well until they are four weeks old, when they should have an addition of cracked corn and wheat just before retiring for the night.

"After the turkeys are six weeks old they can be allowed to roam at large and roost in a low shed or under a cornhouse. They may be taught to go home every night by taking pains to feed them near their roosting-place. Care should be taken to feed them on the same ground but a short time in succession, as the ground becomes stale. One can change about after they get accustomed to their roosting-place without danger of their wandering off in search of new quarters. At this age the turkeys may be fed on whole grain at night. A warm feed, consisting of cornmeal, one-third as much middlings and the same of ground oats, mixed with boiling water, makes a good morning feed. Boiled potatoes once a week may be added to the morning feed. Cayenne pepper added in small quantities to their feed on damp mornings serves as a gentle stimulant."

Chicken Lice.

EDITORS PRESS:—This pestilence that "walketh by night" and "sticketh closer than a brother" by day, is the bane of all poultrymen living in warm climates. When I purchased my present home, I found chicken-house, sheds, wood-piles and fences covered with an innumerable host in gray attire, all thirsting for blood. The poultry showed "discretion the better part of valor" by taking to the trees to roost. If I made a protracted stay in the yard, I soon felt that I would like "to mount and soar away" from the visible and yet invisible pest. Forced to meet the enemy, we armed ourselves with whitewash and brush and advanced upon his stronghold. First, the nest-boxes, roosts and all boards that would furnish hiding places were taken out and burned; then the entire house, sides, ends and roof, inside and out, was given a coat of whitewash. When dry, all crevices were dusted full of air-slaked lime. The floor was cleared up and six inches of fresh soil wheeled in. A separate room for the nests was built. This was given two coats of whitewash. Nest-boxes were coated inside and out, and a handful of sulphur scattered through the hay in the nests. For roosts, two poles were hung from the rafters of the house by wires; at every two feet cross-poles were laid and held in place by projecting nails. This roost was two feet from the ground and level to avoid crowding on top nests. The ends and sides swung clear of the roof by two feet. This gave me a roost that no vermin could reach from floor or walls, with poultry on or off. It was of easy access on all sides if I wished to catch a chicken, and could be removed in a minute when the house needed cleaning.

All the loose lumber about the yard was burned; that remaining was whitewashed. Once a week the inside of the chicken-house and all parts of the roosts were given a coat of whitewash, and the floor cleaned. The poultry were given a dust bath, and once a week fed sulphur to cause them to shed any tramp lice they might be affected with. Soon the place that knew these pests knew them no more forever.

I would like to add, the three requisites are cleanliness, dusting-place, and a roost that the lice cannot reach with the poultry, on or off.

Murphys, Cal.

E. H. SCHAEFFER.

Sore Head in Fowls.

EDITORS PRESS:—Having seen an inquiry in the *RURAL* to know what will cure the disease called sore head, I give my remedy: Take salt and vinegar, made strong, and wash their heads freely a few times, and in a few days they will be well. If their mouths are sore, take and make a swab with a small stick and a piece of fine cloth, and wash their mouths well with the vinegar and salt at times. It is a sure remedy. N. Temescal.

SARAH F. JOHNSON.

The Grange Attains a Majority.

[By MORTIMER WHITTIER, N. L.]

November 16th the National Grange commences its 21st annual session in the city of Lansing, Michigan. It meets under the most favorable circumstances. The Governor of the State, Cyrus G. Luce, is, and has been for several years, at the head of the Grange in his State. In the matter of organization substantial progress has been made. Nearly twice as many new Granges have been instituted as in last year, or in any one year for many past. Hundreds of Granges in all parts of the country have been reorganized. Rhode Island, the only State in the Union that never had a Grange, comes to the front with nearly every township organized. In matters of legislation, much progress has been made. The work of the Grange in the direction of railroad control has been crowned with success, and the Interstate Commerce law has come to stay. Laws, State and National, controlling the sale of adulterated dairy products, have been passed and sustained. Efforts to remove the tariffs on farmers' "raw materials," and leave existing high tariffs on manufactured goods, have been defeated. Tax-reform bills have been passed. Better men in all parties have been elected to office. The great temperance cause has been advanced, and in thousands of ways in thousands of neighborhoods, the business, social and educational interests of the farmer, and of all his family, have been advanced. In no one year since its birth, 21 years ago, can the Grange point to so many and so great practical results, and it comes to its years of manhood, its majority, flushed with success, and with bright hopes and prospects for its future.

PROMISING PRODUCTS.—It is difficult to say which of our products promises best just at this time, when all seem to have such a grand future. We were struck, however, with the greatness of the dried fruit industry when Bro. D. C. Feeley told us the other day of the hundreds of carloads which would be shipped this year from Santa Clara county, and of which we hope to have full statistics in time. The aggregate is something immense. Bro. Feeley told also of his hopes in the shipment of fruits for winter sale at the East. It is well known that the cold-storage companies in the great Eastern cities keep Eastern grapes until late in the winter, and if they thus treat the superior grapes of California it seems almost certain that great quantities can be sold at good prices. As a test of this matter Bro. Feeley has sent a carload of the choice table grapes for the growth of which he is noted, and they will be put in cold storage and placed upon the Chicago market in February. We anticipate good results from the fact that the quality of the grapes on entrance to storage are fine. Bro. Feeley has given us good opportunity to judge of this fact by the gift of a box of half a dozen assorted varieties, which we have gladly enjoyed, and for which we make due acknowledgment.

THE WORTHY MASTER'S KNOWLEDGMENTS.—Bro. Overhiser, W. M. (Gloria S. G.), has an official card in the *Recot-Union* expressing his warmest thanks and kindest wishes to the people of Sacramento and vicinity who so liberally responded to and assisted him in making up the display for the Natl. Grange, to be placed on exhibition at Lansing, Mich., and for their liberal money donation to defray the expenses of the exhibit, every dollar of which, he assures them, shall be faithfully accounted for.

MR. AND MRS. BABCOCK. North Temescal celebrated the 25th anniversary of their marriage Nov. 9th. A number of their friends were present, and handsome gifts befitting the "Silver Wedding" were received. Mrs. Babcock is well known as the former Secretary of Temescal Grange, of which both her husband and herself were charter members in June, 1873.

HON. WM. JOHNSTON, W. M. of the State Grange, was in this city last week securing a large centrifugal pump for draining on his fine fruit farm at Richards, dozen miles below Sacramento. Like many other fruit-growers, Brother Johnston has garnered well this year; and like a thrifty American who believes in his native land, is proving by his works his faith in its future.

A BASKET LUNCH.—Temescal Grange will have a basket lunch from 1 to 1 P. M. Saturday, Nov. 19th, and open the Grange at 1 o'clock for work in the till, and perhaps the fourth degree. It is the first experiment of the kind by this Grange. God will answer if it prove worthy of recommendation. A good attendance is hoped for.

BENNETT VALLEY GRANGE is planning a Christmas-tree social.

APPLE BLOSSOMS IN NOVEMBER.—Mr. Wm. Hofschneider of the firm Jos. Winterburn & Co. steps into the editor's room this Wednesday morning, with a little twig just plucked from a Winter Greening tree on his place near Fruitvale. The twig bears several well-developed apple blossoms, and Mr. H. says the like beautiful promises cover an entire tree. No, we were not used to see such things in November when we lived back East, but the phenomenon cannot be called very rare in California. Our glorious climate sometimes beguiles the orchard.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

PEANUTS.—Haywards Journal: Tuesday we secured a peanut bush from the Bassett place. Mr. B. pulled it out of the ground, and underneath were the peanuts, clustered about the roots like potatoes. There were fully a hundred peanuts on the vine. The vines were planted in June, and have indeed made remarkable growth.

CARROTS.—From one acre Frank Mendall of Castro Valley realized 20 tons of carrots, which he readily disposed of at \$5 per ton, clear. \$100 an acre is not such a small sum about this time of year.

Amador.

DISTRICT ASSOCIATION.—Jackson Ledger, Nov. 12: The first annual meeting of the 26th Dist. Agric. Assoc'n, comprising the counties of Amador and Calaveras, was held in Lone last Monday. There was a very small attendance. W. P. Peek, the Jackson Director, was about the only one present from the outside. Between 20 and 30 votes were cast. From the financial statement presented it appears that, if all the money still outstanding in promises is paid, the Association will be about \$1000 in debt. Over \$2000 remains to be collected, of which \$1200 comes from the State, which will of course be paid. The track, etc., it was estimated cost between \$6000 and \$7000, of which between \$4000 and \$5000 was subscribed in Lone and vicinity. The gate receipts and privileges more than paid for the expenses attending the fair. \$2100 was paid in prizes for racing contests, and about \$300 in premiums for exhibits. U. S. Gregory and W. P. Peek were re-elected Directors. In the matter of building a pavilion, it was thought that an appeal for help from both counties would be in order. After some discussion it was resolved to leave the appointment of committees and general management of the new enterprise in the hands of the Board of Directors.

Fresno.

A TWELVE-MILE VINEYARD.—Cal. A. P. telegram, Fresno, Nov. 12: The Cal. Land & Wine Co. has purchased a tract in this county six miles long and two wide and will plant it to raisin grapes. W. C. West, the Horticultural Commissioner of this district, has been chosen superintendent. Over 100 men will be employed. The contract for building a dwelling of 12 rooms and a house for the hands with 40 rooms has been let. The capital behind it is several millions.

Plumas.

AN INVINCIBLE BRONCO.—Quincy National: Geo. Herring started from Indian valley for Gibsonville, in a cart drawn by a wild mustang. When he came to the soda springs he stopped to get a drink, stumbled against the mustang and frightened it so that it started to run, with George hanging to the lines. Horse, cart and driver went over the grade and down the hill 50 feet, bringing up against some bushes. He got the horse and cart back on the grade, when the horse fell and was unable to rise. George tied the halter-strap to the cart, and proceeded to unharness. As soon as the harness was off, the horse struggled to his feet and went off the grade again, dragging the cart by the halter-strap. George managed to get the horse back on the grade again, leaving the cart, and attempted to ride back, but was ignominiously bucked off twice in about a minute, and compelled to lead the horse to Shoshly, where he got a saddle and attempted to resume his journey. The bronco again bucked him off; his foot hung in the stirrup and the horse ran over him a couple of times and kicked his clothes nearly off. George came to the conclusion that a freight wagon was the safest mode of traveling, so he came to Quincy with Mr. McCutcheon, arriving a little sore and with his clothes badly damaged.

San Benito.

PUMPKINS FOR COWS.—Free Lance: Many of our dairymen are feeding pumpkins to their cows, and report the result very satisfactory. At \$3.50 a ton, pumpkins are said to be more economical for cows than bran, and the result in the quantity and quality of milk is much better.

GRAPES.—The finest box of grapes we have ever seen was a box presented us by Wm. Palm-tag. The grapes were grown on his vineyard in the Gabilan foothills. The clusters were remarkably large, full and symmetrical. There were three varieties, Muscat, Flaming Tokay, and Rose of Peru. We do not believe that a better box of grapes can be furnished by any vineyard in the State.

San Bernardino.

HEAVY ORANGE CROP.—Riverside Press: Cole & Suman, proprietors and manufacturers of the patent orange-tree props, are working night and day and are still some 20,000 behind in supplying their orders. This indicates an immense crop this year, as the trees are over-loaded to a much greater degree than last year to require such an increased demand for props.

San Diego.

SAMPLES FROM SAN JACINTO.—Register, Nov. 3: Wednesday morning we inspected the fruit, vegetables, etc., that were being packed in boxes to be shipped to San Diego for exhibition. The first that met our gaze was a small-sized sweet potato, five feet three inches in

length, and a pumpkin weighing 110 pounds. Fine peanuts, beets, Irish potatoes, corn, watermelons, muskmelons, peaches, onions and various other products of the valley were being shipped. This is the right move, and it will show the people of San Diego and the incoming tide of immigration what can be raised to perfection in this beautiful valley. On its fertile plains are successfully and profitably raised wheat, barley and all other cereals produced throughout the State, oranges, figs, apricots, nectarines, plums, almonds, walnuts and vines of all varieties.

San Luis Obispo.

BIGGEST IN THE U. S.—Chronicle dispatch, Nov. 11: J. D. Roberts of Arroyo Grande today received a check for \$150 from W. H. Maule of Philadelphia as a premium for the largest specimens of onions and beets raised in the U. S. the present season. The largest onion weighed 5 pounds 2½ ounces. Mr. Roberts last season produced a pumpkin weighing 274 pounds and a beet weighing 100 pounds.

San Joaquin.

LODI ALFALFA.—Cyclone, Nov. 10: Geo. F. Cluff three weeks ago last Saturday sowed a small plot at his place on the Pope tract in alfalfa seed. This was irrigated for two weeks, but during the last seven days, there being no wind, and the irrigating being done by means of a windmill, the alfalfa received no water. This morning Mr. Cluff pulled and brought to town several bunches of the clover. It was found that the root was 12 inches long, and the growth above ground 8 inches, making the growth from the seed in three weeks 20 inches.

LARGE ALMOND TREES.—Wm. Langhorst of this city has three large almond trees growing on his place. One of them measures 58 inches in circumference two feet above the ground and is 30 feet high. The other two measure over 40 inches.

Santa Cruz.

THE WATSONVILLE DRIER.—Courier-Item: By the kindness of the secretary, Mr. A. A. Morey, we are able to present a synopsis of the operations of the company for the present season. Amount of fruit purchased: Apricots, 40 tons; peaches, 25 tons; prunes, 30 tons; apples, 195 tons or 8600 boxes, for which was paid: Apricots, 1 to 1½ cts. @ lb.; peaches, 1 to 1½ cts.; French prunes, 2 cts.; German prunes, 1½ to 1½ cts.; apples, 20 to 30 cts. per box. Employed 30 to 45 hands; weekly pay-roll, \$260. The experiment has proved satisfactory to stockholders. The fruit found ready market at good prices. The capacity will be increased three times for the coming season's work, with a capacity of 25 to 30 tons of green fruit per day, and will employ about 100 hands.

FLAX-MILL PROPOSED.—Pajaronian: Mr. Hatfield, proprietor of a flax-mill near Menlo Park, was in Watsonville Wednesday. He came to the valley seeking a new site for his mill, and will locate here if farmers will agree to put 600 or more acres in flax each year. He will pay \$10 per ton for the flax cut green and unbaled, and will furnish the seed. His factory will employ 25 men. He felt much encouraged by his talks with the farmers, and we trust he will move his works to this valley.

Solano.

EDITORS PRESS:—The weather has been damp and cloudy, and signs of rain plenty, but now the sun shines brightly and all immediate prospects of a shower have vanished. Dust is abundant everywhere, and there is more or less sickness in the shape of colds, sore throats and light bilious attacks, which always occur at the change of the seasons. There have been quite a number of cases of diphtheria in Suisun and Fairfield, some fatal. Mr. J. W. Gates picked some white freestone peaches last week which grew on a seedling tree. They were of fair size, and would be a good variety to bud from for late peaches. Everybody has been busy since fruit was done, with housing boxes and trays and getting ready for the rains. Some have commenced pressing. Pruning vines now will make them start early, which is not desirable where there is any danger of frost. There has been a great deal of building done around here this summer and fall, and carpenters have been in demand. A pamphlet descriptive of Solano county has been issued containing 84 pages. It is well printed, has some good views of buildings and natural scenery, and contains a large amount of valuable information. Persons wishing a copy can get it by applying soon to Platt & Sons, Vacaville.—G., Nov. 14th.

SHORT BITS.—Dixon Tribune, Nov. 12: Probably before this number of the Tribune reaches all of our subscribers, Chas. Martell of Vacaville will begin the shipment of oranges. The weather is getting so cool and damp that it is difficult to cure the second crop of raisins by the sun-drying process. Summer-fallowed grain is about all sown and farmers are anxiously waiting for rain.

Tulare.

LEMOORE LOCALS.—Visalia Times, Nov. 10: No frost yet. There is still a good supply of grapes, apples and pears in the market and a few peaches. Game is plentiful and our young men are having much sport killing geese, ducks, swans and cranes. The farmers are busily engaged in seeding their lands. There will be a large acreage sowed in this section this season. Large quantities of seed wheat have been hauled from here to the West Side in the last few weeks. Thousands of acres will be put in wheat in the Summit lake and Huron sections this year which will force the sheep men to hunt

pastures new. Mr. Newton of Pomona was here a few days since and bought two carloads of horses which he intends to ship to Los Angeles county. He says that the horses in this section of the State are superior to those in the southern counties.

Yuba.

FOOTHILL POTATOES.—Marysville Appeal, Nov. 11: A search yesterday at all the stands and stores where potatoes are sold, revealed not a single sack from the foothills east of this city. "Mountain potatoes," said one dealer, "are certainly superior to the valley-grown potatoes. All that are brought to town are easily sold by the producer." Another dealer said: "We have potatoes from Dayton, Nevada, on which a heavy freight is paid, and they are not as good as can be grown in our foothills, but they can be purchased in quantities, and that is the reason we handle them. It is surprising that more attention is not given to raising potatoes by foothill land-owners." The other day a man named Campbell hauled into Red Bluff 400 sacks of mountain potatoes which he raised on two acres of land. There was over 40,000 pounds in the lot, for which he received \$750 from C. R. Mahew. No doubt a large product of potatoes will eventually be made by the foothill region. The lack of cheap transportation is at present one of the drawbacks to the cultivation of the tubers in the hills.

GLANDERS STAMPED OUT.—A Marysville township farmer told an Appeal reporter yesterday that the report that glanders was assuming an alarming shape out there is without foundation. There have been two or three cases, but all trace of their existence has been destroyed.

NEVADA.

FALL ALFALFA.—Silver State: Commissioner Thies of Lovelock says ranchers are busy harvesting the third crop of alfalfa. The crop on his ranch is about three feet tall, but not so heavy as the first crop. The first crop was cut in the latter part of June, the second in August, and he started mowing the third crop on the 22d of September. The three crops on his ranch average over six tons to the acre.

OREGON.

GRAPE TRANSFORMATION.—Rogue River Courier: Dr. McFadden has brought us a cluster of grapes weighing 2½ lbs., which are somewhat a curiosity. Seven years ago the vine was planted a "White Sweetwater." For three years the fruit was "White Sweetwater," and then came a change. In the fourth year the grapes took a reddish tinge, and each subsequent year changed in color and contour until now they resemble somewhat the "Isabella." The flavor also improved, and Dr. McFadden now regards the changed grape as about the best of his varieties. A large number of cuttings have been taken from the vine and a new name is to be given them.

DEATH OF MRS. JAMES M. COSTIGAN.—Mrs. Kate A. Costigan, wife of James M. Costigan, died suddenly at the family residence, 1305 Franklin street, of neuralgia of the heart. Mrs. Costigan was a native of New York, and 39 years of age. She had lived in Oakland and Alameda county for many years, and by her many noble traits of character endeared herself to a large number of friends, who will join with her family in mourning her death. The funeral services were held on Sunday afternoon at 2 o'clock, from the residence of the family.—Oakland Tribune, Nov. 11th.

Mrs. Costigan was for a time a member of Eden Grange. We well remember that she with willing heart and hand assisted the Temescal sisters at the Harvest Feast. Her funeral was largely attended, and many friends mourn her loss.

NAPA NURSERY.—Leonard Coates issues his annual price list and catalogue with the famous Centennial cherry still occupying the place of honor. Mr. Coates' list contains several new seedlings of great promise which are worthy the attention of planters, and his general collection is good. An ornamental card with tested remedies for insects is calculated to do much good and is in handy form for preservation for reference.

THE SHORTHORN AUCTION. advertised for December 7th at the Sacramento fair grounds, will doubtless draw together many admirers of the stanch old Durham stock. Sixty head of high-bred cattle from R. M. Dunlap's Galesburg (Ill.) farm are to be sold, and Col. Judy of Tallula is to be the auctioneer.

FANCHER CREEK NURSERY.—F. Roeding, proprietor of the Fancher Creek Nursery, Fresno, issues his wholesale catalogue for the current season. It covers a large selection of deciduous fruits, and is especially full in the list of figs, nuts, etc.

THE CAMELLIAS IN GILLS' NURSERIES on Twenty-eighth street in Oakland are wonderfully luxuriant growers and prolific bearers. His conservatory is 16 feet in height, and he was obliged to raise the roof two feet last season in order to give them room to rise.

WHO SENT IT?—We have received a postal note from Selma, Fresno county, without the name of the sender. Will he do us the favor to send name and amount of order?

PATRONS OF HUSBANDRY

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Sierra Valley Grange Fair.

EDITORS PRESS:—Seven years ago Plumas Grange held her first fair, and has held them annually ever since with increasing success, until this season, when it was thought best to give way in favor of the Sierra Valley Grange, which has been reorganized within the last few months at Sierraville.

The fair took place Oct. 13th and 14th, and proved indeed a surprise to those individuals (to be found in every community) who are gifted with a prophetic faculty of foreseeing failure in every new enterprise. The fair was also a surprise to those who had never attended any of those held by Plumas Grange. That a region of so great an altitude, and so given over to summer frosts, one, moreover, where the people are so far removed from each other, could bring together so large a variety of products, and those of so fine a quality, was a fact of which many among us had no previous conception.

When this mountain valley, 5000 feet above the sea, was first settled, no one thought of it as an agricultural region further than grazing and producing some hay were concerned. The first field of grain was put in by the firm of Arms & Enoscoe, about the year 1862. Some of this grain was sold in Virginia City for 12½ cents per pound. Soon after this the same firm brought the first thrashing machine into the valley. Now, grain-raising is one of our most important industries, and four thrashers—one steam and three horse-power—are kept busy for weeks.

The samples of grain and natural grasses at the fair were interesting to those who have watched the growth of different industries in our valley.

Every year the residents here are paying more attention to home-making, and gardens are made, not only on the hillside ranches, but also in the frosty tule. The display of vegetables was remarkably fine, being, as the writer was informed, better than at the Nevada State Fair in Reno. Artesian water has helped to bring about this happy result.

The display of fruits, though small, proved its culture to be among the possibilities in portions of our valley.

The results of the efforts of childish hands in the culinary line looked toothsome and inviting. The flowers as well as the fancy-work showed that the perplexing cares of every-day life had not deprived our women of their love of the beautiful. The display of fancy-work particularly was better than a few years ago at the district fair.

Some very fine honey was on exhibition; also cheese from the factory of Wm. Arms. This is an industry which a few years ago some of our best dairymen thought could not be successfully carried on, owing to the difficulty of curing at our high altitude, etc.

A collection of Mexican curiosities, exhibited by Dr. Maurice Pritchard, attracted much notice.

Some very fine horses were to be seen; also some horned stock. Our farmers have paid considerable attention to improving their stock. Many of our large horses have been shipped to San Francisco, where, we are informed, they stand well in the market.

A committee from Plumas Grange was appointed to lend what assistance they could toward the Sierra Valley Grange Fair. This committee, consisting of District Lecturer A. B. Huntley, Owen McElroy and Mrs. Hattie Bringham, had had so much experience in overcoming difficulties at our Beckwith fairs as enabled them to render efficient service to the Sierraville Committee—Master George Haines, N. Strang and B. F. Lemmon—who, with others, felt greatly pleased at the success of the first fair of Sierra Valley Grange. P. F.

The above is a good answer to those who question, "What good has the Grange done?" Also, to those who may ask, what can the Grange do? National Ranch Grange, Watsonville Grange, Santa Rosa and Bennett Valley Granges, and Plumas and Sierra Granges can all echo back telling answers, as well as many others.

Mind the Elections.

The Constitution of the California State Grange designates the first regular meeting in December as the time for electing officers of Subordinate Granges for the ensuing year. In many Granges this occurs on Saturday, December 3d—the anniversary of our noble Order.

We recommend that special pains be taken to provide for interesting exercises on this occasion, and that notice be given early and generally, so as to draw together as large an assemblage as may be. We hope that you, brothers and sisters, will each take a personal interest in the matter of picking out the most effective and promising official timber and wisely yoking older and younger members in electing the ticket for 1888.

See, too, if you cannot do something toward reviving any dormant Grange in your own neighborhood. The time is auspicious. What will you do to improve it?

Sacramento Grange.

EDITORS PRESS:—A pleasant family reunion of Grange-goers took place at the hall on the 12th. The young and gay, the middle-aged and gray veterans in the field, mingled in their best attire. A smile of pride beamed upon their countenances—perhaps they received their photographic impress in the vale of Saint Rose, and have kept them ever since. Why should not Grangers be happy? We have whole families gathered in circles. The Grange was born for such purpose, and we count them by hundreds within our native land schooling themselves for every-day life.

Sacramento Grange can pride herself on having members who devote their early years to training themselves in many ways to better their after life. Our young sisters are engaged in cultivating their voices both in elocution and singing, learning painting and other accomplishments; while our young brothers are fitting themselves for various pursuits. Our older members, more sedate in bearing, are tilling the soil and pursuing their various occupations connected with agriculture.

The benefits resulting from the formation of the Order are noticeable throughout the length and breadth of our land, and as the anniversary of our Order is near at hand, Sacramento Grange will not be backward in observing the natal day. A committee has been chosen to interview our brother Grangers in the county at some early date, in regard to keeping the day, in commemoration of those few who gave it birth; and, no doubt, appropriate exercises will be agreed upon, that all may enjoy the family gathering.

Two sisters and a brother passed in the fourth degree and made full-fledged Grangers. One was balloted for and two applications received. So you see our numbers are growing.

During the field-work, the sisters in the upper hall were preparing one of those outlays which the brothers have a peculiar toothsome aching after (perhaps you have felt the same distressing organic void—in view of the usual palatable make-up, so delicately displayed and fit even for the gods to encounter). One brother calls on you always to prepare a counterpart. I am afraid our brother's mind is too much taken up with fancy dishes, or is not skilled in the make-up for such occasions, for every sister has a way of her own and you cannot please them better than by praising their work, and no two tables are just alike, so he must be "a little off."

Suffice it to say the duties of the occasion were well performed if the hen-roosts were robbed, the pumpkins stolen, or grapes flched from the vine, and hot coffee taken to wash down the varied dishes set for the honest Granger.

After such a task the members were drawn in by our modest W. M. stating that to aid in digesting the heavy burdens we had assumed above we would be entertained by a short program, which was as follows: Duet, Sisters Stevens and Sims; recitation, "Home," Flora Greenlaw; essay, "Dignity," H. W. Johnson; song, "Wooin'g," Lulu Rich; declamation, "Labor," Robert E. Greer; song, "The Old House at Home," Jos. Holmes.

A sister who thinks the brothers do not attend the meetings of the Grange often enough, and to get them here at the near annual election, proposed that all the sisters prepare a gift for the delinquent brothers. Not to be outdone by the better-halves, the males alone voted to make them a surprise on that occasion. So you may hear of some great event between the equal rights—or shall I say "Woman's Rights"—on the 1st of December. Our late State Grange must have made a great impression on the members of Sacramento Grange. The brothers will have to walk straight the coming two years, or they may be handled to the right, to the left, to the front, to the rear, in marching order. Adieu till the 1st of December. R.

Grange Birthday at Oakland.

Eden and Temescal Granges join in invitation to the officers of the State Grange, Past Masters and all other Patrons, to unite in literary, musical and social exercises at Oakland, at 10 o'clock A. M., December 3d.

Brother S. T. Coulter has been invited to make one of his pertinent Grange addresses on that occasion. It is hoped that he will be supported with brief speeches from a goodly number of the State Grange officers and veteran Grange speakers. We learn that Bennett Valley Grange will not have any exercises upon that occasion, and that a number of its good Grangers will be present at Oakland on the 3d. We hope they will be joined by many Patrons from Granges that do not hold special anniversary exercises of their own, yet, knowing the difficulty of many Patrons in going far from home on such an occasion, we wish to state very plainly that this meeting is not designed to compromise or take the place of local celebrations of the Grange anniversary. It is sincerely hoped that most of the Granges in the State will either celebrate by themselves or join with neighboring Granges in making the day a happy and joyous one, so that a good and lasting influence may extend to all farmers in their various neighborhoods.

In our next issue we hope to give more particulars in regard to these exercises. Let us hear from all Granges on this subject.

Exhibits for National Grange.

SACRAMENTO, CAL., Nov. 7, 1887.

MESSRS. EDITORS:—By your request we herewith report that we have packed and shipped to the National Grange, to be held at Lansing, Michigan, the following articles from the various counties mentioned:

SACRAMENTO COUNTY—Mrs. Lockett, two bottles grape must; one-half dozen boxes of very fine dried fruits, of various kinds. Mr. Isaac Lee, branch with olives on and licorice. Mrs. H. C. Kirk, one bush with oranges. Mrs. Joseph Gray, oranges and lemons. Mrs. E. B. Crocker, oranges on bush. Dan'l Flint, bale of hops and alfalfa seed. W. R. Strong & Co., two boxes of grapes. Dr. Harvey, one box fruit. Mr. C. H. Cummings, two boxes fruit. Mr. Wm. Johnston, box of fruit and pampas grass. E. K. Alsip & Co., six boxes of grapes. Mrs. Reel, pampas grass. Mrs. Parsons, persimmons. O. A. Lovdall, bunch of large persimmons. Mr. E. Greer, nuts and fruits. Mr. J. Rutter, box fruit. Natoma vineyard shipped one box sample grapes. Dutch Flat, one box assorted fruit. Also one large box from Sacramento county, containing assorted fruit.

We could not get the names of the parties shipping from other counties, as they were not furnished us. We will give you the number of boxes from each county.

Mr. Newman of San Francisco, two cases silkworms and silk. Two boxes from State Board of Trade, San Francisco. A. T. Hatch, Suisun, one box assorted almonds. Santa Rosa, H. W. Byington, shipper, six boxes assorted fruits. San Jose, 37 boxes; among the shippers we made out the following names: Eleven boxes from Yerba Buena vineyard and one box from Barber & Washburn. Six boxes from Pacific Orchard cannery. One box from George A. Fleming. Three boxes from Farmers' Union. From Stockton and Lodi, 27 boxes fruit, chicory and assorted merchandise. Among the shippers being the Stockton flour-mills, California Chicory Company and E. F. Grant. From Napa, two boxes. O. W. Hendricks, Secretary of State, bundle of large palm leaves for decoration. One bundle of newspapers from Oakland Enquirer. G. N. Platt & Sons, Vacaville, one box fruit. Contra Costa county, six boxes assorted merchandise.

We are sorry we are unable to give the names of other contributors, but I presume the Worthy Master upon opening the boxes at Lansing, Michigan, will find the names of all the contributors. There are a great many points from which we expected shipments of fruit that did not contribute anything, and we are greatly disappointed and think they will be the loser thereby, as one object lesson is more convincing than all the periodicals or reading matter you could furnish to impress correct ideas upon people abroad. The exhibit forwarded will make a very creditable display. Yours very truly,

EDWIN K. ALSIP.

We are informed that the following have been forwarded by mail or express since the car left Sacramento:

By Past Master I. C. Steele, Pescadero, San Mateo county, a glass-framed bouquet of sea mosses and shells, an album of sea mosses, abalone shells, natural and polished, sea-shells in case, pebbles from Pescadero sea-beach. The bouquet and album were the result of much "pains-taking," "labor of love" on the part of Mrs. E. M. Dickerman, nee Steele, of Pescadero. The beauty and variety of these mosses, pebbles and shells, must make one of the richest and most beautiful of exhibits.

A choice collection from Contra Costa county, we believe, was forwarded after the exhibit car left Sacramento. Please forward lists not yet published, friends.

From San Jose.

Yours of the 12th inst. received, and in answer will say, I shipped to National Grange, Lansing, Mich.: 10 cases of assorted wines; 3 cases of canned fruit in glass; 4 cases of canned fruit in tin; 2 boxes green apples; 2 boxes of pears; 1 sample wheat; 1 sample barley; 1 box containing four dozen cartons assorted glass fruit; 15 crates of assorted grapes; 1 box English walnuts; 1 large box assorted dried fruit; 1 box dried prunes; 1 large squash; 1 large box containing pamphlets giving the resources of Santa Clara Co. Weight in all one ton and 50 pounds. Most respectfully yours, CYRUS JONES, Chairman Committee.

LOOK OUT FOR THEM!—The Los Angeles Times tries to put people on their guard against a gang of genteel and plausible swindlers who have lately come to winter in California. They are "confidence" operators of the most polished and pretentious type. Both the men and women dress well and seem to have plenty of money. Among their numerous games is one that has never before been worked on the coast, although it is very old in New York and other Eastern cities. It is worked in this way: The "crooks" arm themselves with a lot of cheap brass watches, which they scatter around at pawn shops. The watches are pawned by the female thieves for from \$20 to \$30, and as soon as the pawn-ticket is placed in the male robber's hands he sails out and soon has some "sucker" on a string. The crook is very hard up, and won't his dear friend take up the ticket? The watch cost him over \$100, and he will sell the ticket to his dear friend for a few

dollars." The sucker thinks he has a chance to get a good watch for less than half its value. He goes down in his pocket and digs up \$15 or \$20, and the crook turns over the brass-watch ticket. The sucker betakes himself to the pawn shop, throws down \$30, and marches off with his Peter Funk watch. He goes to his jeweler to have it set, and in a boastful manner tells how he got it for less than half its original cost, when the jeweler informs him that he can buy them at the rate of \$50 a dozen. The poor gull sees too late that he has been made a fool of, and in nine cases out of ten he will steer clear of criminal detectives, if possible.

Backing an Upright Journalist.

At a regular meeting of the Santa Rosa Grange, held Saturday, Nov. 12th, E. W. Davis, E. A. Rogers and Jona. Roberts, who had been chosen a committee to draft resolutions regarding the arrest of R. D. Cannon, editor of the Santa Rosa Republican, on a charge of criminal libel preferred by one Clinton C. Tripp, submitted the following:

WHEREAS, One Clinton C. Tripp has brought suit to recover a part of the land on which the city of Santa Rosa is built, and a portion of adjacent lands; and

Whereas, Said Tripp has not, by any legal decision, obtained title, nor is it likely he will obtain title to any of said property, though the suit might have been tried and decided many years ago, had Tripp so elected; and

Whereas, Said Tripp has undoubtedly held said suit on the calendar of court for the sole purpose of causing a defect in the title to all of the property against which said action was brought, in order that he might be able to "levy an assessment" in case any of said land was sold; and

Whereas, He has levied many of said "assessments;" and

Whereas, Mr. R. D. Cannon, editor of the Santa Rosa Republican, has fairly, fully and truthfully shown Clinton C. Tripp in his proper light; and

Whereas, Clinton C. Tripp has caused the arrest of R. D. Cannon on a charge of Criminal Libel, thereby causing the people of the State of California to become the prosecutors of one of our esteemed citizens who has done a public service in exposing the schemes of Tripp; therefore

Resolved, That Santa Rosa Grange pledges its hearty and united support to R. D. Cannon and the Santa Rosa Republican in the contest with C. C. Tripp.

Resolved, That we will individually and collectively contribute in any and all legitimate ways to the protection of our protectors, and the support of any outspoken, honest journal. That the arrest of R. D. Cannon on a warrant sworn out in another county was unwarranted, cowardly and revengeful, and we believe was not done with a desire to obtain or accord justice.

Resolved, That, in our opinion, the editor of the Republican did a public service in publishing the articles on the Tripp claim.

Resolved, That a copy of this preamble and these resolutions be furnished Mr. R. D. Cannon, the Santa Rosa Republican, the Sonoma Democrat, and the Santa Rosa Day Book.

Resolved, That we, as an organization, are anxious that the law shall take its course, believing that thereby justice is done and that Clinton C. Tripp will be shown to be without an honest claim either against Mr. Cannon or the property he sues to recover.

Resolved, That the suit now pending, viz., the Tripp suit, should, in our judgment and in justice to all concerned, be pushed to speedy trial and decision.

Anti-Debris in Yuba.

A conference was held last week, as we learn from the Marysville Appeal, between the supervisors of Yuba county and the Advisory Board of the Anti-Debris Association.

Dr. C. E. Stone, president of the association, had received answers from Senator Hearst and Congressmen Morrow, Vandever, McKenna and Thompson, respecting the invitation extended the California Senators and Representatives in Congress to visit this section and see for themselves the injury and danger to navigation caused by hydraulic mining. Senator Hearst and Congressman Vandever expressed regrets that their engagements would not allow them time to come. The others would try to make the inspection as desired. Senator Stanford and Congressman Felton had not then been heard from.

The offer of a reward of \$500, by the county of Yuba, for evidence to convict certain hydraulic mining companies of a violation of anti-debris injunctions, which has just gone into effect, does not stop the employment of watchmen by the Anti Debris Association.

DANVILLE GRANGE, at their mid-October meeting, celebrated the 14th anniversary of their organization with a Pomona feast. They appear to be prospering as a Grange. At their meeting the 5th inst., the tariff question was taken up, and the discussion proved so earnest and entertaining that it is to be resumed on Saturday of this week, at 1 P. M., and neighboring Granges are invited to participate.

CONTRA COSTA SOCIALITIES. — Alhambra Grange's social, week before last, was well attended and greatly enjoyed. The seasonable hours at which these parties are brought to a close induce many of the older folk to share in their pleasures. Valley Grange had a social hop in Odd Fellows' hall, Pacheco, Friday evening, 4th inst. About 50 couples were present, and as usual they had a good time.

The Grange Attains Its Majority.

[By MORTIMER WHITEHEAD, N. L.]

November 16th the National Grange commences its 21st annual session in the city of Lansing, Michigan. It meets under the most favorable circumstances. The Governor of the State, Cyrus G. Luce, is, and has been for several years, at the head of the Grange in his State. In the matter of organization substantial progress has been made. Nearly twice as many new Granges have been instituted as in last year, or in any one year for many past. Hundreds of Granges in all parts of the country have been reorganized. Rhode Island, the only State in the Union that never had a Grange, comes to the front with nearly every township organized. In matters of legislation, much progress has been made. The work of the Grange in the direction of railroad control has been crowned with success, and the Interstate Commerce law has come to stay. Laws, State and National, controlling the sale of adulterated dairy products, have been passed and sustained. Efforts to remove the tariffs on farmers' "raw materials," and leave existing high tariffs on manufactured goods, have been defeated. Tax-reform bills have been passed. Better men in all parties have been elected to office. The great temperance cause has been advanced, and in thousands of ways in thousands of neighborhoods, the business, social and educational interests of the farmer, and of all his family, have been advanced. In no one year since its birth, 21 years ago, can the Grange point to so many and great practical results, and it comes to its years of manhood, its majority, flushed with success, and with bright hopes and prospects for its future.

PROMISING PRODUCTS.—It is difficult to say which of our products promises best just at this time, when all seem to have such a grand future. We were struck, however, with the greatness of the dried fruit industry when Bro. D. C. Feeley told us the other day of the hundreds of carloads which would be shipped this year from Santa Clara county, and of which we hope to have full statistics ere long. The aggregate is something immense. Bro. Feeley told also of his hopes in the shipment of fruits for winter sale at the East. It is well known that the cold-storage companies in the great Eastern cities keep Eastern grapes until late in the winter, and if they thus treat the superior grapes of California it seems almost certain that great quantities can be sold at good prices. As a test of this matter Bro. Feeley has sent a carload of the choice table grapes for the growth of which he is noted, and they will be put in cold storage and placed upon the Chicago market in February. We anticipate good results from the fact that the quality of the grapes on entrance to storage are so fine. Bro. Feeley has given us good opportunity to judge of this fact by the gift of a box of half a dozen assorted varieties, which we have greatly enjoyed, and for which we make due acknowledgment.

THE WORTHY MASTER'S ACKNOWLEDGMENTS.—Bro. Overhiser, W. M. California S. G., has an official card in the *Record-Union* expressing his warmest thanks and kindest wishes to the people of Sacramento and vicinity who so liberally responded to and assisted him in making up the display for the National Grange, to be placed on exhibition at Lansing, Mich., and for their liberal money donations to defray the expenses of the exhibit, every dollar of which, he assures them, shall be faithfully accounted for.

MR. AND MRS. BABCOCK of North Temescal celebrated the 25th anniversary of their marriage Nov. 9th. A number of their friends were present, and handsome gifts befitting the "Silver Wedding" were received. Mrs. Babcock is well known as the veteran Secretary of Temescal Grange, of which both her husband and herself were charter members in June, 1873.

HON. WM. JOHNSTON, W. P. M. of the State Grange, was in this city last week securing a large centrifugal pump for land-draining on his fine fruit farm at Richland, a dozen miles below Sacramento. Like many other fruit-growers, Brother Johnston has garnered well this year; and like a thrifty American who believes in his native land, is proving by his works his faith in its future.

A BASKET LUNCH.—Temescal Grange will have a basket lunch from 12 to 1 p. m. Saturday, Nov. 19th, and open the Grange at 1 o'clock for work in the third, and perhaps the fourth degree. It is the first experiment of the kind by this Grange. Echo will answer if it prove worthy of recommendation. A good attendance is hoped for.

BENNETT VALLEY GRANGE is planning a Christmas-tree social.

APPLE BLOSSOMS IN NOVEMBER.—Mr. Wm. Hofschneider of the firm of Jos. Winterburn & Co. steps into the editor's room this Wednesday morning, with a little twig just plucked from a Winter Greening tree on his place near Fruitvale. The twig bears several well-developed apple blossoms, and Mr. H. says the like beautiful promises cover the entire tree. No, we were not used to see such things in November when we lived back East, but the phenomenon cannot be called very rare in California. Our glorious climate sometimes beguiles the orchard.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

PEANUTS.—Haywards *Journal*: Tuesday we secured a peanut bush from the Bassett place. Mr. B. pulled it out of the ground, and underneath were the peanuts, clustered about the roots like potatoes. There were fully a hundred peanuts on the vine. The vines were planted in June, and have indeed made remarkable growth.

CARROTS.—From one acre Frank Mendall of Castro Valley realized 20 tons of carrots, which he readily disposed of at \$5 per ton, clear. \$100 an acre is not such a small sum about this time of year.

Amador.

DISTRICT ASSOCIATION.—Jackson *Ledger*, Nov. 12: The first annual meeting of the 26th Dist. Agric. Assoc'n, comprising the counties of Amador and Calaveras, was held in Ione last Monday. There was a very small attendance. W. P. Peek, the Jackson Director, was about the only one present from the outside. Between 20 and 30 votes were cast. From the financial statement presented it appears that, if all the money still outstanding in promises is paid, the Association will be about \$1000 in debt. Over \$2000 remains to be collected, of which \$1200 comes from the State, which will of course be paid. The track, etc., it was estimated cost between \$6000 and \$7000, of which between \$4000 and \$5000 was subscribed in Ione and vicinity. The gate receipts and privileges more than paid for the expenses attending the fair. \$2100 was paid in prizes for racing contests, and about \$300 in premiums for exhibits. U. S. Gregory and W. P. Peek were re-elected Directors. In the matter of building a pavilion, it was thought that an appeal for help from both counties would be in order. . . . After some discussion it was resolved to leave the appointment of committees and general management of the new enterprise in the hands of the Board of Directors.

Fresno.

A TWELVE-MILE VINEYARD.—Cal. A. P. telegram, Fresno, Nov. 12: The Cal. Land & Wine Co. has purchased a tract in this county six miles long and two wide and will plant it to raisin grapes. W. C. West, the Horticultural Commissioner of this district, has been chosen superintendent. Over 100 men will be employed. The contract for building a dwelling of 12 rooms and a house for the hands with 40 rooms has been let. The capital behind it is several millions.

Plumas.

AN INVINCIBLE BRONCO.—Quincy *National*: Geo. Herring started from Indian valley for Gibsonville, in a cart drawn by a wild mustang. When he came to the soda springs he stopped to get a drink, stumbled against the mustang and frightened it so that it started to run, with George hanging to the lines. Horse, cart and driver went over the grade and down the hill 50 feet, bringing up against some bushes. He got the horse and cart back on the grade, when the horse fell and was unable to rise. George tied the halter-strap to the cart, and proceeded to unharness. As soon as the harness was off, the horse struggled to his feet and went off the grade again, dragging the cart by the halter-strap. George managed to get the horse back on the grade again, leaving the cart, and attempted to ride back, but was ignominiously bucked off twice in about a minute, and compelled to lead the horse to Shoo-fly, where he got a saddle and attempted to resume his journey. The bronco again bucked him off; his foot hung in the stirrup and the horse ran over him a couple of times and kicked his clothes nearly off. George came to the conclusion that a freight wagon was the safest mode of traveling, so he came to Quincy with Mr. McCutcheon, arriving a little sore and with his clothes badly damaged.

San Benito.

PUMPKINS FOR COWS.—Free *Lance*: Many of our dairymen are feeding pumpkins to their cows, and report the result very satisfactory. At \$3.50 a ton, pumpkins are said to be more economical for cows than bran, and the result in the quantity and quality of milk is much better.

GRAPES.—The finest box of grapes we have ever seen was a box presented us by Wm. Palm-tag. The grapes were grown on his vineyard in the Gabilan foothills. The clusters were remarkably large, full and symmetrical. There were three varieties, Muscat, Flaming Tokay, and Rose of Peru. We do not believe that a better box of grapes can be furnished by any vineyard in the State.

San Bernardino.

HEAVY ORANGE CROP.—Riverside *Press*: Cole & Suman, proprietors and manufacturers of the patent orange-tree props, are working night and day and are still some 20,000 behind in supplying their orders. This indicates an immense crop this year, as the trees are overloaded to a much greater degree than last year to require such an increased demand for props.

San Diego.

SAMPLES FROM SAN JACINTO.—Register, Nov. 3: Wednesday morning we inspected the fruit, vegetables, etc., that were being packed in boxes to be shipped to San Diego for exhibition. The first that met our gaze was a small-sized sweet potato, five feet three inches in

length, and a pumpkin weighing 110 pounds. Fine peanuts, beets, Irish potatoes, corn, watermelons, muskmelons, peaches, onions and various other products of the valley were being shipped. This is the right move, and it will show the people of San Diego and the incoming tide of immigration what can be raised to perfection in this beautiful valley. On its fertile plains are successfully and profitably raised wheat, barley and all other cereals produced throughout the State, oranges, figs, apricots, nectarines, plums, almonds, walnuts and vines of all varieties.

San Luis Obispo.

BIGGEST IN THE U. S.—*Chronicle* dispatch, Nov. 11: J. D. Roberts of Arroyo Grande today received a check for \$150 from W. H. Maule of Philadelphia as a premium for the largest specimens of onions and beets raised in the U. S. the present season. The largest onion weighed 5 pounds 2½ ounces. Mr. Roberts last season produced a pumpkin weighing 274 pounds and a beet weighing 100 pounds.

San Joaquin.

LODI ALFALFA.—*Cyclone*, Nov. 10: Geo. F. Cluff three weeks ago last Saturday sowed a small plot at his place on the Pope tract in alfalfa seed. This was irrigated for two weeks, but during the last seven days, there being no wind, and the irrigating being done by means of a windmill, the alfalfa received no water. This morning Mr. Cluff pulled and brought to town several bunches of the clover. It was found that the root was 12 inches long, and the growth above ground 8 inches, making the growth from the seed in three weeks 20 inches.

LARGE ALMOND TREES.—Wm. Langhorst of this city has three large almond trees growing on his place. One of them measures 58 inches in circumference two feet above the ground and is 30 feet high. The other two measure over 40 inches.

Santa Cruz.

THE WATSONVILLE DRIER.—*Courier-Item*: By the kindness of the secretary, Mr. A. A. Morey, we are able to present a synopsis of the operations of the company for the present season. Amount of fruit purchased: Apricots, 40 tons; peaches, 25 tons; prunes, 30 tons; apples, 195 tons or 8600 boxes, for which was paid: Apricots, 1 to 1½ cts. @ lb.; peaches, 1 to 1½ cts.; French prunes, 2 cts.; German prunes, 1½ to 1½ cts.; apples, 20 to 30 cts. per box. Employed 30 to 45 hands; weekly pay-roll, \$260. The experiment has proved satisfactory to stockholders. The fruit found ready market at good prices. The capacity will be increased three times for the coming season's work, with a capacity of 25 to 30 tons of green fruit per day, and will employ about 100 hands.

FLAX-MILL PROPOSED.—*Pajaronian*: Mr. Hatfield, proprietor of a flax-mill near Menlo Park, was in Watsonville Wednesday. He came to the valley seeking a new site for his mill, and will locate here if farmers will agree to put 600 or more acres in flax each year. He will pay \$10 per ton for the flax cut green and unbaled, and will furnish the seed. His factory will employ 25 men. He felt much encouraged by his talks with the farmers, and we trust he will move his works to this valley.

Solano.

EDITORS PRESS.—The weather has been damp and cloudy, and signs of rain plenty, but now the sun shines brightly and all immediate prospects of a shower have vanished. Dust is abundant everywhere, and there is more or less sickness in the shape of colds, sore throats and light bilious attacks, which always occur at the change of the seasons. There have been quite a number of cases of diphtheria in Suisun and Fairfield, some fatal. . . . Mr. J. W. Gates picked some white freestone peaches last week which grew on a seedling tree. They were of fair size, and would be a good variety to bud from for late peaches. Everybody has been busy since fruit was done, with housing boxes and trays and getting ready for the rains. Some have commenced pressing. Pruning vines now will make them start early, which is not desirable where there is any danger of frost. There has been a great deal of building done around here this summer and fall, and carpenters have been in demand. A pamphlet descriptive of Solano county has been issued containing 84 pages. It is well printed, has some good views of buildings and natural scenery, and contains a large amount of valuable information. Persons wishing a copy can get it by applying soon to Platt & Sons, Vacaville.—G., Nov. 14th.

SHORT BITS.—Dixon *Tribune*, Nov. 12: Probably before this number of the *Tribune* reaches all of our subscribers, Chas. Martell of Vacaville will begin the shipment of oranges. . . . The weather is getting so cool and damp that it is difficult to cure the second crop of raisins by the sun-drying process. . . . Summer-fallowed grain is about all sown and farmers are anxiously waiting for rain.

Tulare.

LEMOORE LOCALS.—*Visalia Times*, Nov. 10: No frost yet. There is still a good supply of grapes, apples and pears in the market and a few peaches. . . . Game is plentiful and our young men are having much sport killing geese, ducks, swans and cranes. . . . The farmers are busily engaged in seeding their lands. There will be a large acreage sowed in this section this season. Large quantities of seed wheat have been hauled from here to the West Side in the last few weeks. Thousands of acres will be put in wheat in the Summit lake and Huron sections this year which will force the sheep men to hunt

pastures new. . . . Mr. Newton of Pomona here a few days since and bought two carloads of horses which he intends to ship to Los Angeles county. He says that the horses in this section of the State are superior to those in the southern counties.

Yuba.

FOOTHILL POTATOES.—Marysville *Appeal*, Nov. 11: A search yesterday at all the stands and stores where potatoes are sold, revealed not a single sack from the foothills east of this city. "Mountain potatoes," said one dealer, "are certainly superior to the valley-grown potatoes. All that are brought to town are easily sold by the producer." Another dealer said: "We have potatoes from Dayton, Nevada, on which a heavy freight is paid, and they are not as good as can be grown in our foothills, but they can be purchased in quantities, and that is the reason we handle them. It is surprising that more attention is not given to raising potatoes by foothill land-owners." The other day a man named Campbell hauled into Red Bluff 400 sacks of mountain potatoes which he raised on two acres of land. There was over 40,000 pounds in the lot, for which he received \$750 from C. R. Mahew. No doubt a large product of potatoes will eventually be made by the foothill region. The lack of cheap transportation is at present one of the drawbacks to the cultivation of the tubers in the hills.

GLANDERS STAMPED OUT.—A Marysville township farmer told an *Appeal* reporter yesterday that the report that glanders was assuming an alarming shape out there is without foundation. There have been two or three cases, but all trace of their existence has been destroyed.

NEVADA.

FALL ALFALFA.—*Silver State*: Commissioner Thies of Lovelock says ranchers are busy harvesting the third crop of alfalfa. The crop on his ranch is about three feet tall, but not so heavy as the first crop. The first crop was cut in the latter part of June, the second in August, and he started mowing the third crop on the 22d of September. The three crops on his ranch average over six tons to the acre.

OREGON.

GRAPE TRANSFORMATION.—Rogue River *Courier*: Dr. McFadden has brought us a cluster of grapes weighing 2½ lbs., which are somewhat a curiosity. Seven years ago the vine was planted a "White Sweetwater." For three years the fruit was "White Sweetwater," and then came a change. In the fourth year the grapes took a reddish tinge, and each subsequent year changed in color and contour until now they resemble somewhat the "Isabella." The flavor also improved, and Dr. McFadden now regards the changed grape as about the best of his varieties. A large number of cuttings have been taken from the vine and a new name is to be given them.

DEATH OF MRS. JAMES M. COSTIGAN.—Mrs. Kate A. Costigan, wife of James M. Costigan, died suddenly at the family residence, 1305 Franklin street, of neuralgia of the heart. Mrs. Costigan was a native of New York, and 39 years of age. She had lived in Oakland and Alameda county for many years, and by her many noble traits of character endeared herself to a large number of friends, who will join with her family in mourning her death. The funeral services were held on Sunday afternoon at 2 o'clock, from the residence of the family.—*Oakland Tribune*, Nov. 11th.

Mrs. Costigan was for a time a member of Eden Grange. We well remember that she with willing heart and hand assisted the Temescal sisters at the Harvest Feasts. Her funeral was largely attended, and many friends mourn her loss.

NAPA NURSERY.—Leonard Coates issues his annual price list and catalogue with the famous Centennial cherry still occupying the place of honor. Mr. Coates' list contains several new seedlings of great promise which are worthy the attention of planters, and his general collection is good. An ornamental card with tested remedies for insects is calculated to do much good and is in handy form for preservation for reference.

THE Shorthorn auction, advertised for December 7th at the Sacramento fair grounds, will doubtless draw together many admirers of the staunch old Durham stock. Sixty head of high-bred cattle from R. M. Dunlap's Galesburg (Ill.) farm are to be sold, and Col. Judy of Tallula is to be the auctioneer.

FANCHER CREEK NURSERY.—F. Roeding, proprietor of the Fancher Creek Nursery, Fresno, issues his wholesale catalogue for the current season. It covers a large selection of deciduous fruits, and is especially full in the list of figs, nuts, etc.

THE camellias in Gills' nurseries on Twenty-eighth street in Oakland are wonderfully luxuriant growers and prolific bearers. His conservatory is 16 feet in height, and he was obliged to raise the roof two feet last season in order to give them room to rise.

WHO SENT IT?—We have received a postal note from Selma, Fresno county, without the name of the sender. Will he do us the favor to send name and amount of order?



Thanksgiving.

Tho' shrill-voiced winds go bawling by,
And sober skies look grim and murky,
Men keep the feast of pumpkin pie,
And slay the pompous bird of Turkey.
The crop-haired saints of Plymouth Rock,
Exiled the Mayflower's sacred wood in,
At every other feast could mock,
But—they were human—loved their puddin';
With sermon, prayer, and psalmody they rendered
thanks in meeting,
Then homeward solemnly they trudged, and rendered
thanks by eating.

Far north of Massachusetts Bay,
And westward ever wide and wider,
Has spread the honor of the day
And flowed its hospitable cider.
For all his roaming prodigals
The fatted calf the father slaughters;
The smiling mother round her calls
Her lusty sons and lissome daughters;
Love's beacon, lighted from old days, their home-
ward steps is leading,
And some, whom life has swindled, are not loath to
find good feeding.

Happy whose hearth is spared by fate,
Whose calmer pulses do not tingle,
As musing by his lonely grate,
He minds him of a dearer ingle,
Around whose fires with glowing hearts
His blood and name were wont to cluster—
Ah, well, that kind of wound still smarts
Beneath the balm of many a luster!
Shall we give thanks that strangers sit within our
hallowed places,
Or praise that now the dust of death enshrouds the
dear lost faces?

Go buy a turkey for the poor,
And make an end of silly questions;
Thank God, for once, that you are sure
To scape Thanksgiving indigestions,
Tho' dark November knows no ruth
For flower or song the frolic May had—
Yet for the golden hopes of youth,
As for the memories of the grayhead,
For the long peace of all the dead, for the brief
days of all men living,
May even wandering, homeless hearts make glad
Thanksgiving!

Miss Lucinda's Brooch.

A Thanksgiving Story.

It was the day before Thanksgiving. In the kitchen of the Graham farmhouse great preparations were going on for tomorrow's feast, for all the Grahams and their relatives, and many of their neighbors, were coming to eat Thanksgiving dinner there, and Aunt Susan, as everybody called Mrs. Graham, was one of those hospitable women who can never do enough for her visitors. Already on the pantry shelves great loaves of cake were ranged, sending out tempting odors to tantalize the children who kept hanging about the door for a glimpse of the good things. And pies, too, cranberry and mince, and doughnuts looking as if they were fairly aching to be eaten, and goodness knows there were mouths aching to eat them. "Oh, my!" cried Johnny more than once, "don't they look nice? I wish it was tomorrow now, don't you, Ruth? It's an awful long time to wait. I don't mean to eat another thing till tomorrow."

"Yes, they do look nice," said Ruth. "It took me all yesterday forenoon to stone raisins for the cakes, and I didn't eat hardly any, either. Aunt Lucinda says she knows she never made nicer cakes in all her life. I don't know which looks nicest, the cakes or the pies. I guess they are both good."

"I'd like to try 'em, anyway," said Johnny. "An' I tell you what, the turkey will be just boss, for he's fat as butter."

"It seems 'most wicked to kill him," said tender-hearted little Ruth. "I don't b'lieve he'd have had such an appetite if he'd only known what was going to be done with him."

"But turkeys was made to eat," said Johnny, whose appetite did away with all tender qualms of conscience.

Aunt Lucinda was sifting pumpkin for pies. It had been stewed the day before, but the pies had not been baked because Mrs. Graham held firmly to the belief that pumpkin pies were never at their best three days after making. "You make them to-day, an' I'll tend to the rest o' the work," she said. "Use all the eggs an' cream you want, Lucindy. I never knew anybody who could beat you makin' pumpkin pies. You've got jest the knack, somehow. I remember how Jack Stansbury used to say he'd like to live on 'em. Poor Jack! I wonder what's become of him."

Lucinda was thinking of Jack, as she forced the fragrant, yellow pumpkin through the colender. Jack had been her lover, years ago. Everybody had thought "it would be a match." She had thought so, and so had Jack. But often in this world things go wrong—or anyway, different from what we plan or expect—and a lover's quarrel had parted the paths which

should have merged into each other, and Jack had gone away, and for years nothing had been heard of him. He might be dead, Lucinda thought, and I am quite sure a tear fell into the pumpkin, and perhaps it was that which gave the pies such a rich, delicious flavor on the morrow. Who knows?

Like most lovers' quarrels, this one had been about nothing in particular. She often told herself that she had been most to blame. But she had been too proud—or stubborn—to say that when Jack and she talked the matter over, and so they separated, loving each other the same as ever, and he had seemed to drop out of existence. Poor Lucinda! Her heart was sore yet with its old sorrow, but she had borne it bravely and hidden it from curious eyes by a pleasant face. "If she is an old maid," the neighbors said, "she's as handsome as most girls. It was allus nat'ral for the Grahams to keep their good looks."

Busy with thoughts of the past, she sifted her pumpkin, and beat eggs and cream together and made the savory filling for her pies. "There!" she said, as the clock struck noon, "they're all ready for the oven. If you're going to see to the baking of them, I'll go and fix things in the parlor, Susan."

She went up to her room to wash her hands and comb her hair before she began the task of "fixing things" in the "square-room," as good old Deacon Graham called it. As she stood before the glass she discovered that her brooch was gone.

"Dear me! what if I've lost it?" she exclaimed. "It must be somewhere about the kitchen. I'll run right down and see."

Lucinda's brooch was an heirloom in the Graham family. It was an old-fashioned thing of gold that may have come over in the Mayflower. She had heard grandmother Graham say that it was old when it came to her. Because of its age, and because it had been given to her by her mother in her last sickness, Lucinda prized it very much. She always wore it. "She felt lost without it," she said.

The brooch was not to be found in the kitchen. The house was searched thoroughly. But in vain.

"Dear me!" said Lucinda, with tears in her eyes, "what can have become of it? I haven't been out of the yard to-day, and I know I had it on when I washed the breakfast dishes. I must have dropped it, and somebody stole it. Maybe the Ruggles children found it. They were here, and two or three others, I remember. I wish you'd run over and inquire of all of them, Johnny. I'll give you a handful of doughnuts if you will."

"It's a bargain," declared Johnny, and set out at once on his errand. But he came back without the brooch. Instead he brought a bloody nose.

"I told that Bill Ruggles I'd bet he had got it, an' he up an' thumped me," explained Johnny. "I'd a licked him, only I didn't feel like it, bein' so near Thanksgiving."

Lucinda couldn't sleep that night, for worrying over her lost brooch. It was almost like losing a friend. Because she had had it so long, and because of the fond old memories clinging about it, it had become a part of her life.

Thanksgiving day came, cool and bright, with a crisp, bracing air that brought a soft color into Lucinda's cheeks as she gathered white artemesias from the garden to brighten the parlor. Susan, as she looked out of the kitchen window, thought that her sister-in-law was as good-looking, in spite of her 35 years, as any of the girls, and then sighed a little over the romance in the other's life. Though Lucinda was always cheerful and seemingly contented, her brother's wife knew that her heart hungered for a home of its own. Every woman's does. It is natural that it should.

When Lucinda dressed herself to receive the Thanksgiving guests, she had to make an artemesia with a cluster of its green leaves answer for a brooch. The white flower, against the dark maroon of her dress, showed to such effect that she wondered if folks wouldn't think it almost too gay for a woman of 35. But before she had quite decided the matter in her own mind, she heard a wagon drive up, and looked out of the window to see cousin Nathan's family alighting at the gate. And with them was a stranger. He had already alighted and stood with his back to the house. Something in the broad shoulders and the peculiar carriage of the head struck Lucinda as familiar.

"Jack used to look something like that," she said, with a sigh. Then the man turned to shake hands with Deacon Graham, who had rushed out to greet his visitors with a face half-shaven, and she saw it was Jack himself! Changed, of course, but not so much so that she did not recognize him the instant she saw his face.

The roses faded out of her cheeks, and she had to sit down for a minute to recover herself. Jack was alive, and had come back! What had he come here for?

"Don't be foolish," she said to herself. "It's quite natural that he should come here, for cousin Nathan's wife is his cousin, and if he came to visit them, they couldn't leave him at home while they came here to spend Thanksgiving. Of course not. He comes in a friendly way, and why shouldn't he? So don't be silly, Lucinda Graham, but do your best to enjoy yourself and help other folks to have a pleasant time."

But she couldn't keep her heart from fluttering strangely as she went downstairs. In "the entry" she met cousin Nathan's wife.

"I hope you won't be offended, Lucindy,"

whispered that cheery little woman, as she kissed the other, "but Jack's come back, and I took the liberty to bring him along."

"You did quite right," answered Lucinda, and her cheeks were quite rosy now, for Jack came in, and she went up to meet him with a frank smile and an outstretched hand.

"I am glad to see you," she said. "We were talking about you yesterday, Susan and I, and wondering if you were living. It's been a long time since we have heard from you."

"You haven't grown a year older in looks," he said, and his eyes were full of a look that made her eyes falter and droop. Was he going to hold her hand all day? And so many looking on, too!

"My! that feller they call Jack keeps a lookin' at aunt 'Cindy just as we look at the pies an' things," said Ruth to Johnny, by and by.

"Looks as if he wanted to eat her up, then," chuckled Johnny, with a long, long sniff of the delightfully tantalizing odors coming from the kitchen. "Wonder if he ain't the beau she used to have ever so many years ago? I heard ma an' aunt Desire a whisperin' about aunt 'Cindy an' somebody she thought lots of, a little while ago, an' I'll bet that's him. Oh, my! Wouldn't it be jolly if she'd get married, an' they'd have a bang-up big wedding? I don't s'pose Thanksgiving's anythin' side o' wedding's. Wonder if they have turkey an' such things?"

Jack and Lucinda had no opportunity to talk over old times before dinner. She was busy with the guests and the arrangement of the tables, and he was busy renewing old acquaintances. But his eyes would follow the woman he had loved.

"Dinner's ready," shouted Johnny, by-and-by, and the deacon said the company might as well "pair off," and in the pairing off Jack was fortunate enough to secure Lucinda, and he took her in to dinner with such a radiant look on his face that cousin Nathan's wife nodded with great satisfaction to Susan, and that worthy woman nudged her husband, and told him to look at Jack an' Cindy, and he whispered back that they made a good-lookin' couple, an' he hoped—but the bustle drowned the rest of the sentence, whatever it was. Lucinda felt that everybody was watching them, and her cheeks got red as roses, and Jack, who was utterly oblivious of any one else, at least two-thirds of the time, thought she had grown handsomer as she had grown older, and felt an insane desire to throw his arms around her and tell her so, then and there, and ask her if the past couldn't be forgotten, or some of it, at least, and the divided paths be made to run together again.

"Why, Lucinda, what's become of your brooch?" spoke up cousin Nathan's wife, all at once, across the table. "I never saw you without it on before."

"I lost it yesterday," answered Lucinda.

"I'd give anything if I could find it."

Just then the pumpkin pies were passed.

"They're good, I know," said Susan, "for Lucindy made 'em, an' she can't be beat at pumpkin pies. You remember her pies, don't you, Jack?"

"Yes, I do," answered Jack. And then he took a piece, and whispered to Lucinda that he wondered if it would taste the same as it used to. And she blushed, and Susan winked at cousin Nathan's wife, and cousin Nathan's wife nodded back and the wink and the nod were as comprehensive and intelligible to the two women as a dozen sentences of spoken words would have been.

All at once Jack put his napkin to his mouth, and his eyes twinkled as he removed it.

At last dinner was over.

"Don't you want to take a walk?" asked Jack of Lucinda. "I want to look the place over, it's been so long since I've been here."

"Of course she does," said Susan, who had heard the question. "It'll do her good to get out o' the house, fer she's been tied up in the kitchen the last four days. Cousin Nathan's wife and I'll see to the work, so you jest bundle up an' git a mouthful o' fresh air, Lucinda."

The memory of other walks came back to Lucinda as they went out into the cool air of that November day. She did not feel like saying much. Neither did Jack, just then, so they walked along the road where the maples had scattered their gold, thinking much, but saying little.

At last—suddenly—

"I think you said you'd give anything to find your brooch again, Lucinda?"

"Yes, I would," answered Lucinda.

"Then you've got to be as good as your word," cried Jack, "for here it is."

"Where did you find it?" cried Lucinda in delight. "We hunted high and low for it."

"I found it in my piece of pumpkin pie," answered Jack. "I'm going to ask you to give me yourself, as reward. You won't refuse, will you? Let by-gones be by-gones. I was a fool, in the old days, and I knew it, all the time, but I wouldn't own it. Nathan's wife told me she knew you didn't hold such a terrible grudge against me, for all I used you so. How is it, Lucinda? Can you overlook the past, and make me happy by being my wife? You know what you said about the brooch, and I always took you to be a woman of your word."

He did not need a spoken answer to his pleading. He had it in her eyes.

"It doesn't seem possible that I'm going to have you after all the long years since we parted," he said, as they came up the steps from their walk. "Am I awake, Lucinda?"

"I think so," she said, with a happy, little laugh. "I don't remember that you ever had the reputation of walking in your sleep."

"I used to dream of kissing some one," he said, and then he kissed her lips, just as Johnny and another lad or two came around the corner.

"Oh, that boy!" cried Lucinda. "He's sure to go and tell."

"Let him!" said Jack rapturously. "I feel just like telling it myself."

"Don't be ridiculous—you're too old for that," said Lucinda, and they went in.

Johnny had to tell. He couldn't help it.

"It's all right, Susan," cried Nathan's wife in delight, when Johnny rushed into the kitchen with the news. "I told him I knew it would be."

"Dear Lucindy!" said Susan, wiping her eyes. "I'm so glad for her sake. This has been a Thanksgiving day, indeed, for it's brought two hearts together that never ought to have been separated. I wonder if they'll be married right away?"

"Will there be a wedding, ma?" cried Johnny.

"My sakes!" exclaimed his mother, "I forgot all about the boy. Who said anything about wedding's? What ideas young 'uns git into their heads, don't they?"

"You said you wondered if they'd be married right away, an' I know you meant Aunt 'Cindy an' that man Jack," said Johnny.

"You can't fool me!"

At Christmas, much to Johnny's delight, there was a wedding. He voted it "worth a dozen Thanksgivings," and Jack told Lucinda that it was the pleasantest party he ever attended.

"Why shouldn't it be, since it's our own wedding?" said she.

"Yes, and we've been waiting for it fifteen years," said Jack. "But better late than never!"—Eben E. Rexford.

Thanksgiving With the Poets.

All gracious and tender associations cluster around our Thanksgiving Day. Home loves and joys seem never quite so warm, so bright, so dear, as then. Never does the fabric of our national institutions seem so lofty in itself, so beneficent in its shelter. And never are the heroism, the devotion, the patience that secured its beginning, and therefore its being, seen more plainly.

The day, in memory, and realization and hope, is full of inspirations. It is no wonder that poets should sing of it very tenderly, that they should reproduce the setting of its cheer, should voice the spirit of the day, or should give us hymns that at hearth or altar may well be blending with our thoughts in that service of prayer and praise and penitence the soul holds in its silences before God.

Shall we not listen for a little while to what the poets are saying? At other seasons—at the Christmas-tide, when the New Year dawned, and on Easter morning—we have been glad to listen. We may hear verse as sweet, as melodious, as suggestive, now.

We shall hear dear Alice Cary, one of the sweetest of all our singers and one of the rarest of souls—with her noble womanhood, her great, true, loving heart, her strong, aspiring faith—in a strain very characteristic of her, tell her "Thanksgiving":

"For the sharp conflicts I have had with sin, . . .

For the divine award
Of strength that helps me up the heavy heights
Of mortal sorrow, where, through tears forlorn,
My eyes get glimpses of the authentic lights

Of love's eternal morn

"I thank thee for my common blessings, still
Rained through thy will
Upon my head. . . .

And I would make thanksgiving
For the sweet, double living.

That gives the pleasures that have passed away
The sweetness and the sunshine of to-day."

She paints us many a picture of

"The good old-fashioned homestead,
With its bounteous table spread!"

"And when the winds moan wildly,
When the woods are bare and brown,
And when the swallow's clay-built nest
From the rafters crumbles down;
When all the untrod garden-paths
Are heaped with frozen leaves,
And icicles, like silver spikes,
Are set along the eaves;

Then, when the book from the shelf is brought,
And the firelights shine and play,
In the good old-fashioned homestead,
Is the farmer's holiday."

We may hear Phoebe Cary calling:

"O men! grown sick with toil and care,
Leave for awhile the crowded mart;
O women! sinking with despair,
Weary of limb and faint of heart—
Forget your cares to-day, and come
As children back to childhood's home.

"Go, sit beside the hearth again,
Whose circle once was glad and gay;
And if from out the precious chain
Some shining links have dropped away,
Then guard with tenderer heart and hand
The remnant of your household band.

"Draw near the board with plenty spread,
And if in the accustomed place
You see the father's reverent head
Or mother's patient, loving face,
Whate'er your life may have of ill,
Thank God that these are left you still."

We shall hear Will Carleton:

"The God above! what can we say
Or do, with eyes so dim,

To make this Thursday Sabbath day
Thanksgiving Day to Him?
What love, though grace and beauty clad,
Can thrills to Him impart,
Who all the love has always had
Of every brain-fed heart?
What can we sing to One whose verse
Eternal song unbars?
What give to Him whose cloud-fringed purse
Is crammed with gleaming stars?"

We shall hear one saying:

"Come one, come all! Come home, come home!
From desert sands, from ocean foam,
Beneath the honored home roof-tree,
Join hands and hearts, and you shall see
Sweet thoughts, pure love, and honest living
Flow from the keeper of Thanksgiving."

"Tis then the dead become most dear;
'Tis then the living bring most cheer;
'Tis then the best within us seems
A spring toward our youthful dreams,
And life looks really worth the living
In the old homestead at Thanksgiving."

And another:

"The Pilgrim seed has taken root,
Despite the land so hard and gray,
And, flowered to this Thanksgiving day,
Shall yet bring forth abundant fruit."

And "H. H.":

"Despise their narrow lives, who will!
Pity their poverty, who dare!
Their lives knew joys, their lives wore crowns
We do not know, we cannot wear."

The influences of the day have won from
William Dean Howells these litany-like lines:

"Lord, for the erring thought
Not until evil wrought;
Lord, for the wicked will,
Betrayed and baffled still;
From the heart from itself kept—
Our thanksgiving accept."

"For ignorant hopes that were
Broken to our blind prayer;
For pain, death, sorrow, sent
Unto our chastisement,
For all loss of seeming good—
Quicken our gratitude."

We have one Thanksgiving idyl—J. G. Holland's "Bitter-sweet." It contains this hymn:

"For summer's bloom and autumn's blight,
For blending wheat and blasted maize,
For health and sickness, Lord of light,
And Lord of darkness hear our praise."

"We trace to thee our joys and woes—
To thee of causes still the cause;
We thank thee that thy hand bestows,
We bless thee that thy love withdraws."

"We bring no sorrows to thy throne;
We come to thee with no complaint;
In providence thy will is done,
And that is sacred to the saint."

"Here on this blest Thanksgiving night,
We raise to thee our grateful voice;
For what thou doest, Lord, is right;
And, thus believing, we rejoice."

And yet another hymn we have, not indeed
written for Thanksgiving Day, but given us at
the end of "The Poet's Journal" of Bayard
Taylor, as Edith sang

"To Ernest's heart his own thanksgiving psalm."

It seems to me there can hardly be a lovelier
one—one in which a sincerer and more submis-
sive thankfulness beats, or one more suited to
our Thanksgiving:

"Thou who sendest sun and rain,
Thou who sendest bliss and pain,
Good with bounteous hand bestowing,
Evil for thy will allowing,
Though thy ways we cannot see,
All is just that comes from thee."

"In the peace of hearts at rest,
In the child at mother's breast,
In the lives that now surround us,
In the deaths that sorely wound us,
Though we may not understand,
Father, we behold thy hand."

"Hear the happy hymn we raise;
Take the love which is thy praise;
Give content in each condition,
Bend our hearts in sweet submission;
And thy trusting children prove
Worthy of the Father's love."

The poet Whittier's songs of glad content
and psalms of trustful gratitude, his harvest
praises and household melodies, are held in all
our hearts too deeply to need repetition. He
notes how

"From our daily need,
The joy of simple faith is born;
And he who smites the summer weed
May trust Thee for the autumn corn."

That which he wrote a score of years ago is
as true and tuneful now:

"Rich gift of God! a year of time!
What pomp of rise and set of day,
What hues wherewith our Northern clime
Makes autumn's dropping woodlands gay!
What airs outblown from ferny dells,
And clover bloom and sweet-briar smells,
What songs of brooks and birds, what fruits and
flowers,
Green woods and moonlit snows, have, in its
round, been ours!"

And Lucy Larcom, hardly less New En-
gland's poet than Whittier's self, with her love
for its traditions and its mountains, shores and
rivers, her deep devotion—upspringing and out-
gushing in the lyrics which almost have wings
to upbear our souls, too—has many a heart
song and trustful carol we might linger over.
But in the faith told in two stanzas of her
"Praying Always," and in such belief alone, on
this, our Thanksgiving day, and through com-
mon days as well, we rest:

"And when arise serene days,
Whose air is praise,
The song of thankfulness we raise
On high of shall be,

Not that to some vast All we bend the knee,
But that each soul has one sure friend in Thee.

"Soul of our souls, with boundless cheer
Forever near,
Our being's breath and atmosphere,
The world seems bleak
Only when shelter in drear self we seek:
The joy of life is man to Thee may speak!"
—Olive E. Dana.

THE GREEN SEA OF THE CORAL ISLAND.—Prof.
W. K. Brooks, who accompanied the scientific
expedition sent to the Bahamas by the Johns
Hopkins University, writes as follows in a letter
to a Baltimore newspaper: Our pilot steered us
safely through the crooked inlet between Whale
Key and No-Name Key into the inner sound.
Here we saw for the first time that intensely
green sea which has been so frequently men-
tioned by voyagers among the coral islands.
The vivid color soon became more familiar, but
never lost its novelty, and it still holds its place
as the most brilliant and characteristic feature
of this highly colored landscape. The water is
so perfectly pure and clear that small objects,
like shells and starfish, are visible on the pure
white coral sand at a depth of 50 or 60 feet,
and the sunlight which is reflected from the
white bottom gives to the water a vivid green
luster which is totally unlike anything in our
familiar conception of water. The whole sur-
face of the sound seemed to be illumined by an
intense green phosphorescent light, and it looked
more like the surface of a gigantic polished
crystal of beryl than water. The sky was per-
fectly clear and cloudless, and overhead it was
a deep blue color, but near the horizon the
blue was so completely eclipsed by the vivid
green of the water that the complementary
color was brought out and the blue was changed
to a lurid pink as intense as that of a Novem-
ber sunset. The white foam which drifted by
the vessel on the green water appeared as red
as carmine, and I afterward found in a voyage
through the sounds in a white schooner that the
sides of the vessel seemed to have a thin coat of
rose-colored paint when seen over the rail
against the brilliant green.—*Swiss Cross.*

YOUNG FOLKS' COLUMN.

Pete's Thanksgiving Turkey.

[Written for the RURAL PRESS BY MARTHA T. TYLER.]

Pete had never had so much as a bite of tur-
key in all the 12 years of his life! That may
seem a strange thing to you, my bright-eyed,
rosy-cheeked, plump little well-dressed friends,
but I dare say there are many boys and girls in
the heart of every great city of whom the same
might be told, and it is well that you, my dears,
should sometimes think of this.

"What!" you exclaim, "not a mouthful of
turkey, or custard or jelly on Thanksgiving or
Christmas day?"

Not one. Pete had seen turkeys hanging up
in the market, to be sure, but of custard or
jelly he had no idea whatever. He knew cake.
Oh, yes, he had tasted cookies, and when he
had a nickel to spare he would invest it in
a square of gingerbread. To his experience
there was nothing else in this world so good as
warm gingerbread! Not that he could ever
really afford to buy it, but sometimes a puff of
hot air would rise from the underground
kitchen of a neighboring pastry shop, contain-
ing suggestions of fresh gingerbread and
various delicacies, and then poor Pete would
be tempted to part with his nickel. Most of
his money, however, he saved for his mother
at home. "What a wretched home it was, and
how hard a time he had to keep his mother
alive! She earned a little mite occasionally
from the sale of her flowers—they were paper
flowers, quite as beautiful, Pete declared,
as the real ones, only they had no
fragrance; but she had a cough and was
frequently too ill to exert herself.

Pete kept a peanut stand. At any time of
the day, and often until late in the evening,
he might have been seen there, a thin little figure
with large blue eyes and a pale face, pacing to
and fro before his roasting apparatus, and call-
ing out now and again in a shrill, treble voice,
"Hot roasted peanuts! hot roasted peanuts!"
to the passers-by. It never made much differ-
ence to him about the weather; he was a brave
lad, and when it rained he would move his
"roaster" under the awning of the fruit-stall
and continue his march and his cry just as en-
ergetically and hopefully as he did on sunshiny
days.

Pete had a friend and an enemy, both of whom
are concerned in this story. The first was a
beautiful little girl who lived in the large house
opposite. Many a time when it was damp and
cheerless, he would watch her pretty face smiling
out at him from the window and imagine the
sight of it made him feel warmer and more com-
fortable. Then, when it was pleasant, she was
certain to come over two or three times a week
for peanuts. Pete, to do him justice, cared
more for her than for her money. She would
talk to him so sweetly, and was always kind
and sympathetic. Once he told her about his
mother. How sorry she was! and then she had
wanted to pay him double for her peanuts, but
he would not agree to that, for you see he was
an honest little gentleman at heart, despite

his shabby clothes and his rather queer
English. His little friend said her name was
Angie. Pete did not know, but he thought it
might mean "Angel." "It ort to, anyways,"
he said; "there's no dif'rence, 'cept she ain't
got no wings and is littler." He remembered
to have seen pictures of angels, and he thought
they always smiled as she did.

Tom Sanders was Pete's enemy. He was a
great, rough boy, with a loud laugh, very fond
of practical jokes, and especially delighted
whenever he could victimize Pete, who was not
big enough, nor strong enough, to fight him.
Tom, perhaps, did not intend to be cruel, but
he was selfish—you understand—and thought
only of his fun. He called Pete "Skinny-
bones."

It was the day before Thanksgiving. Pete
had been wishing he could get a turkey for his
mother, but the fruitman said one would cost a
small fortune—from \$3 to \$5! "Turkeys is
high these times," added that authority, as he
arranged some celery in an artistic heap; "but
I'll tell you what I'll do, Pete. Yer a good
chap, and I don't mind losing ten cents on yer
once a year. Yer may take one of them
thick bunches home with yer to-night, if
yer like." Pete was very grateful for the
offer, but Tom Sanders, who had been
listening to the conversation, gave a scornful
laugh, for Tom's father was a poultry dealer,
and of course he would have turkey for his
Thanksgiving dinner, and celery too. But
wouldn't he play a fine joke on Skinny-
bones! It made him die laughing to
think of it. Late in the afternoon the good-
natured fruit-vender called out to Pete:
"Here, young man, just take this box of things
up to No. 421, on the next block, and yer shall
have some apples with yer celery." So Pete,
box under arm, trotted up the street, deposited
his burden at the back door of No. 421, and
hurried back to his accustomed haunt.

Heigh ho! what was that lying on his stand?
Some one had left a turkey for him. There
were the long legs and the long ugly neck and
head. The body was done up in brown paper,
just as he had seen turkeys tied up in the
wagons when there were a lot of them to be de-
livered. Oh! how glad he was for his moth-
er's sake. His face fairly glowed as he thought
of the surprise in store for her. He lifted the
package. It was heavy. He made a hole in
the paper to see what a fat one he had got.
There was nothing inside but a large red brick,
with a quantity of rags stuffed around it.

In a moment he understood that the ingenious
Tom Sanders had duped him. The legs and
neck were fastened to either end of the brick,
and the rags had been put in to shape the whole
something resembling the body of a turkey.
What a bitter disappointment the discovery was
to poor Pete! The tears came into his eyes,
nor could he repress them, even when Tom San-
ders jumped from behind the lamp-post where
he had been hiding, and asked him with a leer
how much he'd sell his turkey for. Pete couldn't
endure it any longer. He put up his thin little
arm and rubbed his ragged sleeve across his
eyes.

"Hello!" shouted his tormentor. "Skinny-
bone's a cry-baby."

"You naughty, mean boy," said a sweet
young voice, and Pete and Tom looked up to
confront the little angel and a tall, kind-looking
gentleman who held her hand in his.

"We saw the whole thing," the small lady
continued, "but you needn't mind at all, Pete,
dear. I told papa about you and your sick
mother, and we have brought you the largest
turkey we can find and a whole basketful of
goodies. We were determined you should have
a Thanksgiving dinner."

"Moreover, my lad," said papa compassion-
ately, for the boy's sad face touched him, "we
shall see if we can't do more than this for you
and your mother."

What a triumph that turkey was to Pete! It
was a monster of a turkey, and in the recesses
of the basket he found jelly, and custard, and
cake, far more delicious than warm gingerbread.

"Tom," said Pete, "you didn't mean to hurt
me; let us be friends. Come and have a bit of
cake." And that was the very best part of it, I
think.

Papa did not forget his promise, and Pete's
Thanksgiving turkey was the beginning of a
great change of fortune for our little hero and
his invalid mother.

CONTAGION IN PUBLIC BATHS.—It is reported
that an inquest was recently held in New York
in the case of a 13-year-old boy who died, it is
charged, from erysipelas contracted in the
public bath at the foot of East One Hundred
and Twelfth street. The medical testimony
showed that erysipelas and other dangerous dis-
eases are frequently contracted at the public
baths, particularly at low tide. The jury
found a verdict in accordance with the evi-
dence, and recommended that a physician be
stationed at each public bath, and that persons
suffering from contagious diseases be prohibited
from using the baths.

WHAT MAKES PAPER TURN YELLOW.—A re-
cent writer has shown that the yellowing of
paper is due to the oxidation of paper by light,
and especially the more refrangible rays. The
discoloration is more marked in wood papers
than in rag papers, and more rapid in moist
than in dry air. Two practical results of this
study are, first, to keep libraries as dry as
possible, and, secondly, that the electric light
is far inferior to gas or oil, as the refrangible
rays form so large a proportion of its light.

DOMESTIC ECONOMY.

The Old Cook Stove.

You are standing there in your place, old stove,
On this pleasant autumn night,
Brightening the gloom of this silent room
With your cheerful rays of light.
You never can know, as you gleam and glow,
What a pleasure you are to me,
As you murmur and sing, like a living thing,
Infusing my bowl of tea.

You had always a cheerful way of your own
For those twenty years and seven,
Since the risky farmer brought you home
To cook for his stout "eleven."
The neighbors told him the trade he'd rue,
And they wished he would, no doubt,
For nothing but a "Galbraith" stove would do
When the winter's frosts were out.

How I envy your record, my worn-out friend,
For the hungry mouths you've fed,
For your pots of soup and your roasts of meat
And your glorious loaves of bread,
And the puddings and pies of festive days,
And the good things the children love,
Send back their fragrance to join in the praise
I am giving to you, old stove.

What varied fortunes have followed those
Who basked in your cheerful light,
And warmed their youthful fingers and toes
In your blaze on a winter's night.
One rears his sons where the pleasant breeze
From the warm Pacific blows,
Another dwells where the cheery bells
Ring over the homestead snows.

Some planted their homes 'mid the Yankee hills,
Some here by Megantic's streams,
One lives in the murmur of Sherbrooke mills,
Where the broad St. Francis teems.
There is one in the West, who's away so long
That her memory alone remains,
And your owner dreams of his wife and weans
On Alberta's prairie plains.

Some draw their gloves over dainty hands,
And others their mitts of wool,
While some recline on their cushions fine,
And some on a wooden stool;
Some brows are wrinkled, once fair to see,
Some smiling with prosperous days;
Why, they'd almost pity both you and me
With our homely looks and ways.

Now there's one thing I've often remarked in life,
Since the days when I went to school,
That those who earned the gloves of silk
Got "left" with the mitts of wool.
But don't be "down on your luck," old friend,
Tho' like me you've passed your prime,
Let us both go cheerily on to the end,
Which will come in its own good time.

Then you'll be refined by the furnace blast,
And modeled with art and skill,
And shine as brightly as in the past,
And work with as good a will.
And I—may this furnace of worldly strife
Refine my soul for Heaven,
There to join the farmer, his good old wife,
And the glorified "eleven."

—Mrs. Geo. Arkley.

PUMPKIN MARMALADE.—Pare, core and cut
into small pieces a medium-sized ripe pumpkin
of rich color; take six pounds of sugar, one pint
of good cider vinegar, a dozen cloves and one
ounce of best root ginger; bruise the ginger and
tie it with the cloves in a spice bag, put it with
the sugar and vinegar in an earthen jar or
porcelain-lined kettle that will hold two gallons;
when it gets warm put in as much pumpkin as
the jar will hold, pressing it down, and boil
it until it is well cooked (it will be transparent
and soft); take it out with a strainer and set it
near the fire while the liquid boils to a thin
syrup, put the pumpkin back into the jar and
let it boil for half an hour, crushing it as much
as possible the while with a wooden spoon.

SWEET PICKLES.—Eight pounds of fruit, four
pounds of best brown sugar, one quart of vine-
gar and one cup of mixed whole spices, stick
cinnamon, cassia buds, allspice and cloves—less
of the latter than of the former. Tie the
spices in a bag and boil them with the vinegar
and sugar. Skim well, then add the fruit.
Cook ten minutes, or till scalded and tender.
Skim out the fruit and put into stone jars.
Boil the syrup five minutes longer and pour
over the fruit. The next day pour off the syrup
and boil down again, and do this for three
mornings. Keep the bag of spices in the syrup.

CHILI SAUCE.—Thirty tomatoes, three large
onions, three peppers, one tablespoonful of all-
spice, cloves, cinnamon, two nutmegs, two
tablespoonfuls of salt, one quart of vinegar,
one cup of sugar; chop the onions and peppers
very fine; cook tomatoes some first. Mix
thoroughly.

BOILED SWEET POTATOES.—Choose potatoes
of uniform size, wash and boil 20 minutes;
drain and lay in the oven, turning them sev-
eral times to prevent burning, until they yield
readily to the touch; serve without paring.

BEEF TEA.—Cut one pound of beef into dice,
put into a glass jar and set in boiling water 12
hours. Add boiling water till of the required
strength and season with pepper and salt.

CHICKEN SOUP.—Save the broth after boiling
a chicken, add to it a sliced onion, two beaten
eggs, six sliced raw potatoes and a thickening
of flour and water.

SPONGE PUDDING.—One cup of sugar, one
cup of flour, three eggs, 1½ teaspoonfuls of bak-
ing powder. Steam one hour.



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The Week.

The two subjects which occasion most talk are the same which have prevailed for weeks—the absence of rain and the superabundant presence of the immigrant. The former is not yet a very great burden, although people who cannot plow dry would like much to have the ground wetted enough to put their teams to work and fear the results of a too short and hurried season in the field. Stockmen would also be pleased to have some fresh feed starting, for the season in this respect is exceptionally late. The delay of the rains also retards the opening of some kinds of business which need soaked ground to give lively times. But there is time enough, and with an old-fashioned, moist, California winter, all will be busy and prosperous.

The incoming tide of winter refugees is unparalleled. Cars and engines are too few, wayside dinner stations are eaten out, engineers and train hands are overworked, and still they come. It is stated that a single train brought 841 people into Los Angeles, and the city is as full as a country village in fair-time. The same condition, though in a less degree, is noticeable in the upper part of the State. It looks now as though there would be plenty of tourists and home-seekers to go around. It is only a matter of time.

A Good Year For a Thanksgiving.

Probably California was never in better humor for sincere thanksgiving than at present. It is true that the thankful spirit is not always produced by prosperity, and that discontent sometimes dims the fairest success. It is also true that, the world over, when thousands rejoice, there are individuals into whose lives grief has come, and darkness and disappointment will not flee away at the approach of a Thanksgiving holiday. For those to whom good things bring not joyful hearts, we can but cherish pity; and for those who bow in sorrow on the day of gladness, the sympathy of true friends goes forth unbidden. But while we pity or extend our sympathy as occasions require, we cannot but enter heartily into the general rejoicings which will mark the approach of Thanksgiving Day, 1887.

The year has been full of good things. Never has there been so general a disposition toward industry on the part of the people, and never, taking the whole field into account, has industry been so well rewarded. There has been a constant increase in the disposition of the people toward the upbuilding of the State, and the result, as has been frequently stated in our columns, a most wonderful activity in nearly all Californian affairs. It is gratifying to one who has full faith in productive effort as the only true basis of prosperity, to see that the whole population are striving to advance the State in that line. It is a signal triumph for industry. It alone would give occasion for a general Thanksgiving.

Passing to the field of production, which is our especial care, one has but to call up the multitude of mortgages which have been lifted this year to testify to the improved condition of our agricultural workers. Next come the train of improvements in homes and in fields, the new residences, new farm buildings, new irrigation facilities, railroads, etc., which are reported from all directions. The sawmills no longer stand with cold boilers, the throng of laborers and artisans have found plenty to do—than which there could be no better evidence of the progress of constructive arts and the abundance of work for those who have proper skill and disposition. This change in the general face of affairs has been in the main produced by the abundant products secured by our farmers, and the fair price which has been obtained for them as a rule. These facts have gone out throughout the country as a fit companion for the charms of our climate, and the result has been an influx of population and capital, so that now the prophets speak of "another 1849"—this time on a better and more enduring basis. Here, again, is a theme for thanksgiving.

While agricultural producers have prospered, while their increased ability to purchase has stimulated trade and manufactures, their success has also been a shining light which has attracted thousands to the investment of their surpluses in land and animals and trees, and has largely increased the number of small farms which are the backbone of a country's prosperity. It is not to be expected that all the amateur efforts at agriculture and rural benefits will satisfy or be successful, and yet it has often been shown that no occupation of men has so small a percentage of failures as agriculture. Some will fail through action suggested by their inexperience, but even those who fail may console themselves with the assurance that they lost in a good cause and were not mulcted of their savings by gamblers' arts. The majority will succeed. They will make many a nook and corner beautiful with their cultures, and their families will grow strong and rejoice in innocent country pleasures. Thus they will advance the State in production, in morals and in population. Let them rejoice and give thanks.

The fact that our State was never better fitted than now to welcome the self-reliant and capable from all lands, should not be overlooked. We have abundant room for hundreds of thousands, and we can show them how to win a livelihood better than ever before. The day of small things is a period of great promise.

Making California a synonym for immensity in all respects, has been a brake upon our progress as a State. California is now becoming better known, and better knows herself. And each new fact in her self-education calls for thanksgiving.

Forestry at the Fruit-Growers' Convention.

The Santa Rosa Convention continued its work after the introduction which we noted in last week's RURAL. The proceedings included a number of interesting essays and discussions, which we shall duly present to our readers in full form as rapidly as we can find space, beginning with our next issue. We note this week one item of the week's work, and that is in regard to forest preservation and extension. The subject was introduced by Hon. Abbot Kinney, president of the Forestry Commission, in an admirable and carefully prepared address, of which we expect to present considerable portions hereafter. At this time we choose but a single paragraph from the address and append thereto the resolutions adopted by the convention, so that our readers can have early information of the measures which the friends of forestry are advocating. Mr. Kinney said:

This State needs very different treatment from a forest point of view in its different sections. Parts of it would be promptly ruined by the removal of even extensive areas of mountain brush, as in the south, while parts would be much benefited by diminishing the forest area in a reasonable manner, as on the North-western Coast. In extensive portions of this State plantations of trees should be made as wind and frost-breaks, and generally for climatic purposes, as well as to give local supplies of fire-wood and timber, while in others there may be an advantage in permanent clearings on the arable lands. The decision in such matters should come under the control of an intelligent State forest management, so also should the commercial outtings in the forest to prevent waste, to use only the ripe timber or judicious thinnings from too close growth to insure reproduction in the forests; to prevent and put out fires, and to secure such fees from the users of forest products as at least to pay the cost of management.

The rapid exhaustion of forests in the United States indicates clearly that the present demands for timber in California must soon be largely increased; the purchase of considerable areas of timber lands by foreign and Eastern capitalists shows that this danger is upon us; now is the time to act. For this reason, if for no other, I recommend the abrogation of the protective tariff on lumber which takes from the whole people for the benefit of the few lumber combinations and sets a price upon the head of every tree in the land. Whatever reasons can be adduced for the protective system which places the taxing power of the Government in the hands of private persons, and at the expense of the masses, enriches the few; none of them can apply to the forests for these; it is our interest to keep and not to destroy; all persons, of whatever tariff views, should unite in demanding the repeal of the timber tariff.

It is with pleasure that I perceive the increasing interest in our forests which is appearing through the country, and especially in California. It is with pleasure that I can report a marked decrease in forest fires where we have been able to send our officers and fire notices. These forest fires are a desolation. Beautiful mountains covered with verdure, the home of the beeman and the settler, the crops of the farmer, the lumber of the woodman, all are ruthlessly swept away by them and a scarred and blackened landscape takes the place of beauty and plenty.

It gives me pleasure beside to say that there is a good prospect for the recovery to the schools of the value of timber taken from school lands. We shall introduce an Act in the next Legislature withdrawing these lands from sale and placing them in the control of the State Board of Forestry.

After Mr. Kinney's address the following resolutions, proposed by James Bettner of Riverside, were adopted:

Resolved, That it is the sense of this convention that all unsold school and other timber lands belonging to the State in the State of California should be withdrawn from entry and sale, and that all such timber lands should be placed by the Legislature under the control and management of the State Board of Forestry, and full powers granted to that board to control the sale, renewal and preservation of the timber upon them;

Provided, That all funds accruing from timber sales or otherwise shall be turned over to the State School fund by said board after the necessary expenses of sale and management shall have been deducted.

Resolved, That the secretary of this convention be, and hereby is, instructed to forward a copy of this resolution to the next Legislature as soon as convened.

A measure which won much favor was the effort to save a fine representative of our redwood forests which still stands in San Mateo county. The following resolutions by R. S. Smith of Redwood were adopted after favoring remarks by Dr. Kimball of Haywards and others:

Whereas, The rapid destruction of the redwood forests of this State will entail permanent loss to the beauty of our coast counties and al-

ready threatens the water supply, and consequently the fruitfulness and healthfulness of those counties; and

Whereas, The perpetuation of a large tract of coast redwood will be of continuous economic value and of continued and increasing interest to science;

Resolved, That the Eighth Convention of California Fruit-Growers hereby indorse the effort of the California State Board of Forestry in seeking to secure the reservation of such a tract of redwood forest, and recommend the project to the earnest consideration of our representatives in Congress.

Since the Santa Rosa convention the Forestry Commission have had a meeting in this city and have set in motion measures for the establishment of forestry stations where promising varieties of forest trees, native and foreign, will be propagated and their growth noted, and from these stations seedlings will be distributed for trial planting throughout the State. Land has been offered the board at Santa Monica and at Pasadena, and other offers of land in the upper part of the State are now under consideration. The Forestry Commission evidently intends to push its work, and we are quite sure that it will be sustained by public sentiment in its beneficent efforts.

BEREAVEMENT.—We announce with a deep feeling of sympathy the death of Mrs. Nellie Yale Vance, daughter of the late Gregory Yale and sister of our esteemed editorial associate, Charles G. Yale. Mrs. Vance has been suffering for many months with pulmonary disease, and though every known means was tried to avert the malady, it was without avail. She sank slowly from day to day, and it was only a few hours before her death that she became the wife of Mr. G. P. Vance, her faithful betrothed, who had hoped and waited until no chance remained for her recovery and then claimed his bride. The funeral was held on Wednesday afternoon at St. Stephen's church in this city, the rector, Rev. E. J. Lion, officiating. There was a large concourse of mourning friends present. We can but express our heartfelt sympathy for the bereaved ones, and this is all that can avail amid such scenes.

AN EARLY OLIVE.—Mr. A. Montpelier, manager of the Grangers' Bank, sends us a twig of an olive tree bearing fully ripened and dried fruit of an olive which ripened at his place in Solano county in September last. It is a good-sized olive, for the dried specimens are an inch to an inch and one-eighth long. It is an early bearing variety, for it is now but 2½ years since the trees were set out, and they were then small, having been imported from France in 1885. Each tree of this variety bore over 500 large olives this year. Its early ripening will also attract much attention. The variety is what Mr. Montpelier calls in English the "Weeping olive." Its name in the dialect of Provence, where the variety originated, is "Corniaon," and in French it is *Olivier Pleureur*. The variety is extensively grown in Provence. We hope to give fuller information about this variety later, as it bids fair to be famous.

THE DRIVEN-WELL PATENT INVALID.—A dispatch from Washington brings the welcome news that the "driven-well patent," which has been several times before the Supreme Court, and always been sustained heretofore, was on the 14th, declared invalid in an opinion by Judge Blatchford, based upon the record in case No. 16, Andrews, Green and others against Geo. Hovey, brought here on appeal from the U. S. Circuit Court for the Southern District of Iowa. The decree of the Court in favor of the alleged infringer, Hovey, is affirmed.

BET SUGAR.—It is reported that Claus Spreckels, in company with W. T. Garratt of San Francisco and George A. Smith of Courtland, two of the owners of the beet-sugar factory of Iseleton, recently visited and made a full examination of the factory, and it is to be hoped that Mr. Spreckels will take hold of the works and start them up during the coming year. The people of Iseleton are much pleased over the prospect of the factory being started up.

COMMISSIONER SPARKS of the General Land Office has resigned, on account of differences between himself and Secretary Lamar as to railroad land-grants, and the President has accepted his resignation.

ARIZONA STOCKMEN are making large sales of beef cattle. They claim that all the ranges are overcrowded, despite the fine pasturage.

Feeding for Fat or Lean.

During the last few years there has been considerable progress made in ascertaining the effect produced upon the animal body by different kinds of food. The Agricultural Experiment Stations of Europe and of this country have given much attention to this work in the interest of the stock-grower. We are glad to have opportunity of illustrating on this page the actual results obtained at the Wisconsin University Agricultural Experiment Station under direction of Professor W. A. Henry, in a set of experiments carefully made to determine the different results which followed a straight corn diet and one in wheat; other materials were also introduced. The following is a description of the experiments from Professor Henry's report recently issued:

Out of a litter of eight pigs, six were selected, which were even in size and form, for the trial, when they were 100 days old. Up to the beginning of the trial, the pigs were all fed alike, from the same trough, a mixture consisting of shorts, cornmeal, skim milk and buttermilk. The pigs were cross-bred Jersey Reds and Poland Chinas. At the beginning of the trial the six were divided into two lots of three each, and to Lot A was fed a ration consisting of one part of dried blood, six parts of shorts and 14 parts of skim milk by weight. To Lot B was fed all the fine-ground cornmeal they could properly consume. Water was freely provided for each lot, and each had the run of a small yard back of the feeding-pen in which exercise could be taken; all went on with remarkable uniformity from first to last, with no accident of any kind to either lot during the whole period of 136 days. The following shows in a condensed form the amount of food consumed by the two lots during the trial of 136 days:

LOT A, FED FOR LEAN.	
Pounds.	
Sweet skim milk consumed.....	3,402
Shorts consumed.....	1,415 1-7
Dried blood consumed.....	235 6-7
LOT B, FED FOR FAT.	
Amount of cornmeal consumed.....	1,690
The digestible matter in the food fed to the two lots was as follows:	
Protein.	Carbohydrates.
Pounds.	Pounds.
Total to Lot A.....	833
Total to Lot B.....	1,193

It will be seen that each lot received about the same number of pounds of actual food, but that the proportions of the protein to the carbohydrates varied greatly. Protein goes to make muscle, though it may be used for heat and fat in the body. The carbohydrates (starch, sugar, etc.,) cannot make muscle in the body of an animal, though they may save it from waste and decay, but are used for maintaining the bodily heat and for making fat. Our corn-fed hogs then were fed a very fattening food, while the other lot were given a large amount of muscle (or lean meat) making material. Here we have our facts so widely different in character that the effect should be very evident in the carcasses of the hogs, if the character of the food affects the composition of the body.

The hogs were slaughtered Nov. 8, 1886, a skilled butcher assisting, every operation being conducted with great care and precision. After taking the live weight of each animal, it was killed by slow bleeding and the blood caught and weighed. The viscera were taken out and each organ weighed and the dressed hogs hung up to cool and stiffen.

Upon being taken to the block, each dressed hog was laid on his back, and first the head was severed, next the body was cut square across between the fifth and sixth ribs, and again at the loin or small of the back. A painter was employed to sketch the appearance and disposition of the fat and lean meat as exposed by the cuts. Fearing the painter was not exact enough, a photographer was employed for the same purpose, and we were thus enabled to preserve for future reference and

study that which would have otherwise soon been lost. The engravings which are herewith presented show the proportion and disposition of the fat and lean in some of the cuts. We present six illustrations, three of each lot. The first two engravings show what we found on severing the heads of the first hog of each lot. The second two show in the same way the cuts made between the fifth and sixth ribs of the hogs, numbered "two" in each lot; while the last two engravings show the loin cut of the hogs

of Lot B. The most remarkable difference, though, is in the small of the back, where it will be noted that Lot A has about twice as much muscle as Lot B.

Accurate Accounts of Results.

Most accurate dissections were made of the different organs and parts of the body, and all were carefully weighed. The following table gives the most important facts in the case, the weights being of three hogs in each lot:

1. That there is an excessive development of fat not only on the outside of the muscles and beneath the skin, but also among the muscles.
2. That the muscles of the body fail to develop to their normal size, especially some of the most important ones, as those along the back.
3. That an abnormally small amount of hair and a thin skin result.
4. That while the brain, heart and lungs do not seem to change in weight, the spleen, liver and kidneys are unusually small.
5. The amount of blood in the body is greatly reduced from the normal.
6. The strength of the bones may be reduced one-half.

It would seem that we may conclude that a system of feeding which robs the hog of half his blood and half the natural strength of his bones, and produces other violent changes, is a most unnatural one, and must, if persisted in, tend in giving us a race of animals which will be unsatisfactory to all concerned. From parents thus weakened must come descendants that will fall easy victims to disease and disaster. Knowing the facts as here set forth, can we any longer wonder that our hogs are weak in constitution and easily break down when attacked by disease? Nor is this all; the meat from such animals can hardly be of flavor and composition satisfactory to the consumer.

How to Improve.

If even a part of what has been set forth is correct, is it not high time we turned our energies toward better methods? To do this calls for higher thought, better care, but I fully believe no extra outlay of money; rather, I believe, we can feed hogs more profitably by rational methods than by the unscientific and shiftless ways now only too common. First of all, we must see to it that breeding sows are fed a proper ration in which protein compounds form a liberal share. The young pigs must likewise have a goodly allowance of protein, while the mature hogs, when fattening, can be fed a large proportion of carbohydrates, especially if we wish to make a large proportion of lard. The food articles at our command which are rich in protein are skim milk, buttermilk, shorts, bran, peas, green clover and the like. No farmer can afford to manage his farm with a minimum of these muscle-making foods; they should be supplied abundantly and at a reasonable cost if we will only study to do so.

Shall we raise less corn, then? Not at all. The corn crop is the best of all we raise, and let the word be "more," rather than less. We need it all, but we must not forget that protein is somewhat lacking in the corn. We may compare our corn to the brick which go into a building, and the protein foods to the mortar which cements the brick together. He who would lay brick without mortar builds foolishly, and his house will tumble. Should he find out his mistake, such a man should not from that date neglect the brick and turn his whole attention to the mortar. Plenty of good strong mortar and an abundance of brick are what he needs. We do not want less corn, but we want more clover, more shorts, more bran, more peas, more skim-milk to bring the highest results.

Rational Rations.

Without attempting to give any exact rules for guidance, the following statements may not be out of place: During gestation, breeding sows should have only a small allowance of

corn, the feed being mainly that which will go to give her young good sound bodies. Such feed would be shorts (middlings or shipstuff), bran, skim-milk, butter-milk and clover. When suckling her young, of course milk is one of the best articles at our command. When weaned, the pigs may get say two parts of milk by weight, one part of shorts and one part of cornmeal.

A run on good clover would go far to make a good frame. When nearing maturity the ration can be changed more and more to the carbonaceous, and for the last two months, when fattening, the feed can be largely corn, if one desires fat pork, but if lean, juicy meat is desired, the muscle-making foods must be continued.



PLATE I.—Cross sections showing the proportional size of the muscles (lean meat) in the necks of hogs No. 1 of each lot. NOTE.—The lean meat is striped black and white; the fat is shown in clear white. The cuts are made from the dressed hogs lying on their backs.



PLATE II.—Cross sections showing the proportional size of the muscles (lean meat) over the heart of hogs No. 2 of each lot.



PLATE III.—Cross sections showing the proportional size of muscles (lean meat) of the hogs No. 3 of each lot cut through the small of the back.

numbered "three" of each lot. In each of the engravings the dark-shaded parts represent lean meat or muscle, while the fat is shown by the white parts. As in cutting across the body at the three places named, we cut square across most of the muscles, the reader can see the relative size of each muscle, in cross section in two hogs of each lot.

The reader is asked to give these illustrations more than a passing glance—to study each. It will be seen in each case the muscles (red or lean meat) of the protein-fed hogs are larger than the same muscles of those fed the ration rich in carbohydrates. Even the muscles of the neck are stronger, as shown in the first two cuts. On the back over the heart, the muscles of Lot A show far less fat between them than

	Lot A.	Lot B.
	Fed for lean.	Fed for fat.
Total live weight.....	669 1/2 lbs.	581 1/2 lbs.
Total dressed weight.....	541 1/2 "	451 "
Total external fat.....	150 "	158 "
Total lean meat.....	244 "	178 1/2 "
Total weight of kidneys.....	27 oz.	19 oz.
Total weight of spleens.....	16 "	12 "
Total weight of livers.....	146 1/2 "	109 1/2 "
Total weight of blood.....	296 "	188 "
Breaking strain 5 thigh bones.....	4,650 lbs.	2,855 lbs.

Thus it appears that the hogs fed for lean gained weight in every item except the one of fat, and gained also strength of bone.

Prof. Henry claims that the experiments show that when we feed to our hogs a ration rich in carbohydrates but lacking in protein, like cornmeal, we will find:

1. That there is an excessive development of fat not

The Fairs.

Watsonville-Pajaro Valley.

Among the many Californian fairs which have been pronounced "a grand success" this fall, few have been more successful (we judge from the chorus of gratulatory accounts) than that held at Watsonville, Oct. 20th to 22d. The Opera-house was packed with admirable exhibits—agricultural, horticultural, floral and industrial—and visitors came in throngs every day and evening. The Pajaro Valley Fair Association, and notably the Watsonville Grange, has reason to be well satisfied with this outcome of its enterprise.

The opening exercises included an original poem, by Mrs. E. O. Smith of San Jose, which was read by Miss Esther Malcome with fine effect, and a neat address by A. N. Judd, president of the Board of Directors.

One of the first objects to catch the eye, on entering the tastefully decorated hall, was a pile of pumpkins—six in number and weighing altogether over half a ton—with the hospitable placard: "Take one"—an invitation of which nobody availed himself! Two sample hills of potatoes were shown, the yield from one of which (Peachblow) was 28 pounds, and from the other, a small, red variety, 26 pounds, and there were sweet potatoes, onions, tomatoes, cabbages, turnips and other vegetables to match the spuds, beets 26 inches in length, eight inches in diameter and of 30 pounds' weight, grown from the seed since May without a drop of water, and a sunflower half a yard across its face.

The exhibit of grain, in sheaves and jars, which Besse & Sill had at the Mechanics' Fair in S. F., was here to be seen again. It included wheat from half a dozen fields in the valley which this season averaged respectively 68, 70, 73½, 78 and 85 bushels to the acre; oats from two which yielded 60 and 70 bushels, and barley from three fields claiming 105, 100 and 119 bushels to the acre. Second-crop oats and barley, headed out nicely, was a novelty to newcomers. They also showed a fine lot of beans, from seven or eight different parties, and pop and sweet corn of extra quality.

In the horticultural division the fruits were disposed on semi-circular shelves several tiers in height. In the large and varied display of apples the eye did not detect a single blemished specimen nor one that showed any sign of pests. They were rich in color, firm-meated, of large size and elegant in form. Among the many fine Bellefleurs, a box of 45, weighing 50 pounds, exhibited by Capelli & Dondoro, were especially admired. (They have since been sent to Massachusetts.)

The pears were free from scale, and the Winter Nellis and Beurre Gris d'Hiver shown were remarkably fine. (The latter is a good shipper, having been sent to Glasgow, Scotland, where it arrived in good condition and sold for \$3 per box.) Thirteen Vicar of Winkfield pears on exhibition weighed 26 pounds. Pajaro berries are so famous it almost goes without saying that the strawberries, raspberries and blackberries were the perfection of their kind; and there were also to be seen pomegranates, persimmons, plums, oranges, limes, olives, almonds, walnuts and peanuts growing on the vines.

The leading exhibit of dried fruits was that made by the Watsonville Drying and Packing Company. In the center of the hall stood a pyramid, entwined with the leafy vines and laden with luscious clusters of Malvoisie grapes. Over the stage was the inscription

"PAJARO VALLEY PRODUCTS"

In letters of apples, divided in halves and artistically arranged in regard to color.

The floral annex, a temporary structure roofed with cloth, was lavishly adorned with hops and held a beautiful array of evergreens, ferns and flowers. Miss Law, botanist, exhibited 125 varieties of roses, all grown in the valley.

In the machinery and implement department were plows and cultivators made by N. McLean, and L. P. Helmer's patent orchard cultivator, as well as a variety of wind-engines, washing-machines, etc.

The various mercantile displays, the samples of work done by pupils in the public schools, the drawings and paintings, the specimens of needlework, of bread, cake, etc., prepared by the ladies and little folks, were very interesting in their way, and won extended notice from local observers; but we must refrain from speaking of them further.

Then there was the stock parade Friday, the baby reception Saturday afternoon—at which no less than four score little cherubs were shown by fond mammae—and pleasing musical and literary entertainments every evening.

Pres. Judd, Mr. and Mrs. Roache, Mrs. Dr. Libby, Mr. and Mrs. Uren, Mrs. Card, and all their zealous and able assistants, were praised without stint and warmly congratulated. The total receipts were \$1700; expenses, about \$800; balance, \$900.

Awards—Live-Stock.

FIRST PREMIUM—J. K. Meyers, short-horn Durham bull. Geo. D. Rodgers, mare and a colts, one family; 2-yr-old stallion. F. Devitt, gelding, horse of all work. J. A. Linscott, span roadsters. S. Rianda, draft mare. L. Hushbeck, mare of all work; colt; also 2d premium mare of all work. J. Curn, colt of all work. A. W. Condit, horse of all work; special mention for colt. McEwen Bros., horse; special mention on span roadsters. D. M. Clough, Southdown buck; pair bronze turkeys; pair Toulouse geese; 2d premium for Southdown ewes

and lambs; special mention for a gelding. J. Wintzen, pair Buff Cochins China chickens. L. Lorenzen, pair Curly chickens. Ruth Radcliff, Game Bantam; trio Seabright Bantams. Anderson Bros., Jap. Game fowls. H. Seigman, pair Bremen geese; Silver Spangled Hamburgs; Cotswold buck; Southdown ewe and lamb. T. Cowles, Trio Wyandotte fowls. Mrs. C. Werner, pair Poland chickens.

SECOND PREMIUM—J. M. Rodgers, draft horse. J. E. Trafton, colt. H. Seigman, mare, roadster. J. Rodriguez, horse of all work. M. Phelan, span of horses. W. S. Neal, mare, 2 yrs old and over, special mention.

Agriculture.

FIRST PREMIUM—W. S. Hunt, Hubbard squash; special mention for Danvers onions and yellow field-corn. D. M. Clough, sweet potatoes and oats. C. D. Trafton, stock bees. J. M. Rodgers, self-bleaching celery. J. T. Porter, Bayo beans, red kidney beans, Lady Washington beans. Mrs. E. Anderson, melons. L. Hushbeck, Jr., barley. Adam Martin, wheat, sheaf wheat. L. Hushbeck, timothy. G. Q. Bush, beardless barley, black oats, N. Y. Marrowfat beans. M. E. Martinelli, okra. W. A. Sanborn, Banana melon. L. & C. Rodgers, dry hops, baled hops. A. F. Richardson, Peerless potatoes. H. F. Haver, carrots. N. A. Uren, Citron melon. W. J. McGowan, Mojave seedling potatoes. Thos. Allen, red potatoes. G. D. Rodgers, sheaf red oats and growth, squashes, Belgian Hubbard squash, Yankee pumpkins. F. Therwacher, sheaf wheat, black Spanish radish. S. Estrada, Spanish peppers. L. Hansen, cabbage, potatoes. H. C. Struve, onions, cucumbers. J. A. Blackburn, popcorn, sweet corn. N. A. J. Dorn, Allison wheat, pink beans, white beans, yellow Dent corn. D. Tuttle, Peerless potatoes. N. Struve, flaxseed. Chas. Porter, Red Rose beans. Antone Rianda, field-corn. L. Castro, Chili peppers. C. Kuhlitz, large yellow corn. E. S. Bockins, lot vegetables, mammoth pumpkins. Besse & Sill, collection of cereals. F. Devitt, Peachblow potatoes. J. Berta, sheaf green barley.

SECOND PREMIUM—N. A. Uren, beardless barley. G. Q. Bush, field-corn. J. A. Blackburn, field-corn. W. H. Rowe, barley. J. R. Kitchen, white Belgian carrots. G. W. Peckham, Hubbard squash. A. McNeely, pumpkins. D. Tuttle, hill of Peerless potatoes. F. Devitt, hill of red potatoes, box Jersey Blue potatoes, jar Bavo beans. N. Dye, Jersey Blue potatoes. H. C. Struve, beets, cabbage. Mrs. M. B. Ercanbrack, tomatoes. J. H. Thompson, water-melons. J. M. Rodgers, Lady Washington beans. J. T. Porter, small white beans. Mrs. N. E. Thompson, beets. A. W. Condit, onions. M. Quick, sweet potatoes. W. J. McGowan, Mojave potatoes. N. Mansfield, flint corn. J. C. Drew, sheaf oats.

SPECIAL MENTION—Chas. Foley, Mrs. Chas. Werner, J. Jensen, wheat sheaves. N. A. Uren, oats. A. F. Richardson, beans on stalk. R. T. Grant, cabbage, carrots and beets. Mrs. G. D. Rodgers, potatoes, tomatoes and beans. T. Pegan, yellow corn. M. Silva, sweet potatoes. Thos. Stratton, sugar beets. Wm. Byrd, table beets and Dutch cabbage. A. T. Swart, mammoth cucumbers. F. Devitt, Peerless potatoes. N. Mansfield, white and early corn. C. Gullett, stock beets. J. A. Blackburn, roasting ears corn. G. D. Rodgers, barley and black oats. E. Scrivani, cabbage and tomatoes. A. W. Condit, cabbage and carrots. A. P. Roache, wheat. W. J. McGowan, wheat. Mrs. N. E. Thompson, carrots. J. M. Rodgers, tomatoes.

Horticultural.

FIRST PREMIUM—S. B. Marcus, green olives, Newtown Pippins. Capelli & Dondoro, box Bellefleur apples. F. Devitt, Smith Cider apples. M. Phelan, Fall Pippins, White Winter Pearmain apples. Chas. Galletly, Bellefleur apples. Mrs. Thos. Leland, Newtown Pippins, R. I. Greenings, Gloria Mundi. T. D. Alexander, W. W. Pearmain apples, Duchesse d'Angouleme pears. Jas. Rich, Alexander apples. G. Q. Bush, R. W. Pearmain, Newtown Pippins, Bellefleurs, W. W. Pearmain, Vandevere, Flushing Spitzenberg, Smith Cider, King of Thompson, Skinner's Seedling, and two other lots of apples. A. P. Roache, Smith Cider apples. L. J. Beckett, R. W. Pearmain. Santa Cruz Exhibit, Jonathan apples. J. Wintzen, Oregon Red apples. W. V. Gaffey, Baldwin apples. J. Waters, Baltimore Red and Red Canada apples, Coe's Late Red Plums; Seckel, Passe Crassane, Beurre Easter, Beurre Diel and Vicar of Winkfield pears. Wm. Palmat, grapes. L. Hushbeck, English walnuts. J. M. Rodgers, American black walnuts. A. W. Condit, drawer raspberries, drawer blackberries. I. Thurber, basket strawberries. Mrs. E. F. Sanborn, quinces. Mrs. J. T. Porter, pomegranates. D. M. Clough, oranges, Beurre Gris d'Hiver pears. Mrs. Mary Gilkey, case sun-dried fruit, case conserves, case sugared fruits. Watsonville Fruit Packing Co., each of following evaporated fruits: Apricots, peaches, plums, apples, French prunes, German prunes, Silver prunes, nectarines. T. C. Pearson, plate dried figs.

SECOND PREMIUM—Santa Cruz Exhibit, Alexander, and Smith Cider apples. Mrs. M. B. Ercanbrack, Crook-neck pears. M. Herbert, English walnuts. J. A. Blackburn, box Smith Cider apples, box Bellefleur apples. L. J. Beckett, Yellow Newtown Pippins. W. S. Hunt, R. I. Greenings. D. Brown, box Pearmain. Mrs. Meyers, six varieties apples. F. King, Muscat grapes. Mrs. J. A. Blackburn, English walnuts. W. N. Wilson, White Muscat grapes. Chas. Craugh, lot pears. Jas. Waters, Gris d'Hiver pears. S. L. Steigleman, sun-dried apples. C. Galletly, raspberries. J. A. McCune, evaporated fruits as follows: French prunes, apricots, peeled peaches, peeled apples.

SPECIAL MENTION—W. V. Gaffey, Smith Cider apples; M. Herbert, almonds; N. Dye, quinces; M. Phelan, strawberries; J. A. McCune, grapes; J. A. Blackburn, Newtown Pippins; L. J. Beckett, yellow Bellefleurs.

Machinery and Agricultural Implements. Best cultivator, L. P. Helmer; sulky cultivator, land plow, riding plow and display farm machinery. N. McLean: washing machine, R. T. Grant; 2d, F. King; wagon jack and seeder, W. T. Easterday; windmill, P. Freimuth.

Miscellaneous.

Best dairy butter, Mrs. J. Meyers; best ranch butter, Mrs. Rodgers; 2d, Miss T. Maxwell; best cheese, C. Silliman; 2d, McGrath Cheese Co.

In the floral department the committee decided to give every exhibit a premium, as it was difficult to

make any distinction where excellence was so general. A curious vegetable bouquet, exhibited at the Grange Booth by Jos. Butcher, received a premium.

Chico—3d District.

The Third District A. A. held its eighth annual fair at Chico, Oct. 11th to 13th. There had been considerable question about holding one at all this year, and doubters feared and unbelievers predicted that without horse-races it would not be a success. But when it came to the final test, farmers, mechanics, and citizens generally went to work with a will, and the result was a display unsurpassed, and some claim unequaled, by any of its foregoers.

Senator Stanford's superb cattle from the Vina ranch were viewed with admiration, and the stock parades were accounted the finest for several years, and second only to those at the State Fair. The line of thoroughbreds, draft horses and roadsters, jacks, jennets, and mules, bulls, cows and heifers, stretched over half a mile. There was a good showing, likewise, of sheep, goats, swine and poultry.

What with the handiwork of the ladies, the works of art and the implements and machines, added to the products of the soil, Armory hall looked beautifully. Among the many notable exhibits, that from the Rancho Chico was pre-eminent. It embraced 70 specimens of grain in sheaf, mammoth pumpkins and squashes, and fruits and vegetables in vast variety, besides a huge pyramid of flour, the foundation of which was 100-pound sacks, and the cap sacks of five pounds only.

The opening address was given by Prof. Richard White, and after him Gen. Bidwell spoke of the exhibition as testifying the goodwill of the people, especially the ladies, who, by their untiring efforts, had made it what it was, a successful fair, without pool-selling, gambling, or racing. The next evening a speech from Rev. E. R. Dille of Oakland was much applauded; and the last day the pavilion was again crowded with people eager to welcome Gov. Waterman, who appeared much pleased with their cordial reception.

The condensed extracts from the

List of Awards

Which we append will aid our readers to form some better notion of the scope and excellence of the exhibition:

Awards—Horses.

THOROUGHBRED—Stallions—Best 3-yr-old, Joe Hamilton, L. L. McDaniel; 2-yr-old, San Luis Obispo, J. H. Stevenson.

GRADED—Stallions—Best 3-yr-old, 1st, Steinmeyer, D. M. Reavis; 2d, Brignolia, P. Garrett; best 1-yr-old, Director; 2d, Monroe Chief; stallion and 5 colts, Blackbird, D. M. Reavis. Mares—All premiums to D. M. Reavis.

HORSES OF ALL WORK—Stallions—Best 3-yr-old, King of the West, M. C. Sessions; 2d, Black Prince, J. Bidwell. Mares—All premiums to M. C. Sessions.

DRAUGHT HORSES—Stallions—Best 3-yr-old, Webster, D. M. Reavis; 2d, Butler, J. Bidwell; 2-yr-old, Blaine, Chas. Fortier; best span draught horses, Joe and Tuck, J. Bidwell. Mares—1-yr-old, Mollie, J. Crouch.

ROADSTERS—Stallions—Best 3-yr-old, Arthur Wilkes, L. H. McIntosh; 2d, Steinman, D. M. Reavis. Gelding and mares, all premiums to D. M. Reavis.

CARRIAGE HORSES—Best 3-yr-old, 1st, Rosa, N. B. Scott; 2d, Vixen, Mrs. S. A. Jones; best matched span, Bulwer and Andy, D. M. Reavis.

SADDLE HORSES—Louis, F. C. Lusk.

All premiums on colts and sweepstakes on stallion Blackbird and mare Ellen Swiger, D. M. Reavis.

JACKS AND JENNETS—All premiums to J. Crouch, except special, J. V. Flint.

Cattle.

HEREFORD—All premiums to D. M. Reavis.

ALDERNEYS, AYRSHIRES AND JERSEYS—Bulls—3-yr-old, Ben Leonard, Mrs. S. A. Jones. Cows—3-yr-old, 1st, Cricket, T. P. Hendricks; 2d, Diana, and 2-yr-old Jersey, Princess of Sacramento, C. V. Hobart.

DEVONS—Cows—3-yr-old Red Cherry, F. W. Miller.

DURHAMS—Bulls—3-yr-old Bob, J. H. Guill; 2-yr-old Kirk Livingston, and 1-yr-old Forest King, J. Bidwell.

HOLSTEIN—Bull—1-yr-old Joe, J. Bidwell; bull calf, Senator and heifer calf, Red Queen, J. H. Guill.

GRADED CATTLE—All premiums to J. H. Guill, SWEEPSTAKES—D. M. Reavis, bull and 4 cows.

Swine.

THOROUGHBRED—All premiums to B. F. Allen, except 2d Berkshire boar, no name, J. H. Guill and 2d Berkshire sow, no name, M. Schwein.

GRADED—Best hog, M. Schwein.

Poultry.

BUFF COCHINS, Black Spanish, Dominique, C. C. Goree; Brown Leghorn, and Bronze turkeys and turkey, J. H. Guill; Black game, game cock under 1 yr; Red game, Black game, J. H. McIntosh; game bantams, Willie Bay; breeding pen—cock and 4 hens—G. W. Turner.

Grain, Vegetables, Etc.

Bushel wheat, sk flour, cornmeal, sk oats, sugar beets, tomatoes, marrow squashes, Hubbard do, pumpkin, muskmelons, pickle peppers, ½ pk white beans, ½ pk kidney bush beans, ½ pk garden peas, ½ pk Lima beans, J. Bidwell; sk barley, ½ bu. red potatoes, ½ bu. any variety green-flesh muskmelon, ½ pk field peas, coll. plants, J. H. Guill; ½ bu. white potatoes, carrots, sweet corn, Jas. Hegon; ½ bushel sweet potatoes, B. F. Allen.

Fruits.

Twelve var. apples, disp. apples, 6 var. pears, display var. pears, gen. display fruit, var. peanuts, 12 var. grapes, display grapes, dried figs, dried apples, do apricots, do nectarines, J. Bidwell; 6 var. apples,

1 var. almonds, 6 var. apples, seedling peaches, 3 var. seedling fruit, S. L. Skillen; 1 var. pomegranates, 1 var. figs, 2 var. quinces, 5 var. tropical fruits, 1 var. English walnuts, cider and wine vinegars, W. V. Groves; 3 var. pears, dried peaches, fruit in jars (160) B. F. Allen; special display and fruit display, Wm. Bonners; 12 var. orange trees, 12 var. tea plants, 1 var. Spanish sweet pepper, W. L. Bradley; peaches, Mrs. J. A. Watson; black walnuts, Mrs. Salmon; blackberry jam and do jelly, Mrs. J. N. E. Bachelor; currant jelly, preserved fruits and canned fruits, Mrs. N. S. Rose; honey, Mrs. J. F. Entler; dried Hungarian prunes and raisins, M. Schwein.

Miscellaneous.

BUTTER, D. Reid; cage animals, J. A. Hall; display flour and canned fruit, J. Bidwell; cut flowers, W. J. N. Page; bouquets, May Benner.

Oceanside.

A fruit, vegetable and flower show was held at Oceanside, San Diego county, October 27th. The Union says that, although the notice was short and the time rather late in the season, the variety and quality of the exhibits were remarkable. The following awards were made: First prize, best general collection of fruits and vegetables, T. Wackerman; second prize, best display of fruits only, Agua Tibia Ranch, F. H. Cunningham; third prize, third-best general collection, Gould & Rainbow.

Diplomas and honorable mention were accorded to numerous displays of single articles, among which we note bananas, date palms and fruit, and pineapples. It is purposed to have a fair on a larger scale another season.

Measure of Land Values.

The Oroville Register, discoursing of land values, maintains that land is worth just what it will pay a fair interest upon, not a cent more, and the amount it will pay depends upon what the land is adapted to. If the rich, deep, black adobe will produce nothing but grain, then it is not worth over \$50 an acre. If river-bottom land won't grow grain on account of the rank growth of weeds, but will produce \$30 net each year in alfalfa hay, then it is worth \$300 an acre, though it may be no richer soil than the black adobe. If the red gravelly loam of the foothills were planted to alfalfa without water, the product would be represented by a cipher, and the value of the land no higher. If planted to wheat the returns would be so slight that the land would not sell for more than \$10 or \$15 an acre. Set to peaches, plums, prunes or grapes, the returns would send the value of the land vastly higher than the wheat-lands of the valley. Set to the olive, orange or fig, the value would be double the \$300 alfalfa land. Hence it is that production and not richness of soil determines the true value of all land.

HOW BEN BUTLER GOT RICH.

Young Men of To-day May do Likewise if They Follow Advice Given.

General B. F. Butler being asked for some suggestions on gaining success, stated that when he was a young lawyer, practicing in Lowell, Mass., a bank president advised him to take his little deposit and buy real estate, from which he could be deriving some revenue. The General said that he had but little money and was uncertain as to his future.

"Never mind," said the bank president; "go to the next public auction of real estate, bid off a lot with a building of some kind on it, pay down what money you have and give your promissory notes for the balance. You will come out all right."

General Butler says this advice was good. When a man has obligated himself, by his notes, to pay money at a certain time, it inclines him to economy. He followed the advice, and in time became the owner of several parcels of valuable real estate in Lowell.

Two classes will not be likely to heed such advice—the improvident and the over-cautious. The latter will be apt to say: "It would be all right but for those dreadful promissory notes. They are always running on, and if a man falls sick they do not wait for him to get well."

There is this danger, of course, but one can make no business venture without some risk, and with the knowledge acquired by recent investigation of the cause of most ordinary ailments, and the means of cure, one runs little risk from that source. It is now known that most of the common ailments have their origin in deranged kidneys. They are the chief blood purifiers of the system and when disordered a breaking down somewhere is soon inevitable, because the poison, which in their healthy condition is eliminated, is carried through the entire system. Put them in order and health returns.

C. D. Dewey, a successful man, president of the Johnston Harvester Co., Batavia, N. Y., gives his experience as follows:

In 1882 my health was failing, my head pained me constantly, my appetite was uncertain, I could not sleep soundly. I attribute this to the extreme pressure of business cares, but I grew worse, and finally was confined to my bed for two months. It seemed as though I would "never recover" my former health. Under the aid of stimulants I gradually gained strength, so that in a few months I was able to attend to business, but I could walk only with the assistance of a cane, and then in a slow and unsteady manner. I continued somewhat in the same condition until February last, when I used Warner's safe cure. It has cured me. I consider it a valuable remedy and can highly recommend it.

Young men have but to use ordinary prudence, and when any derangement occurs if they use the same means as did this successful business man, they may feel a constant assurance of their ability to carry to successful conclusion all ordinary business projects, including the care of their promissory notes when due.

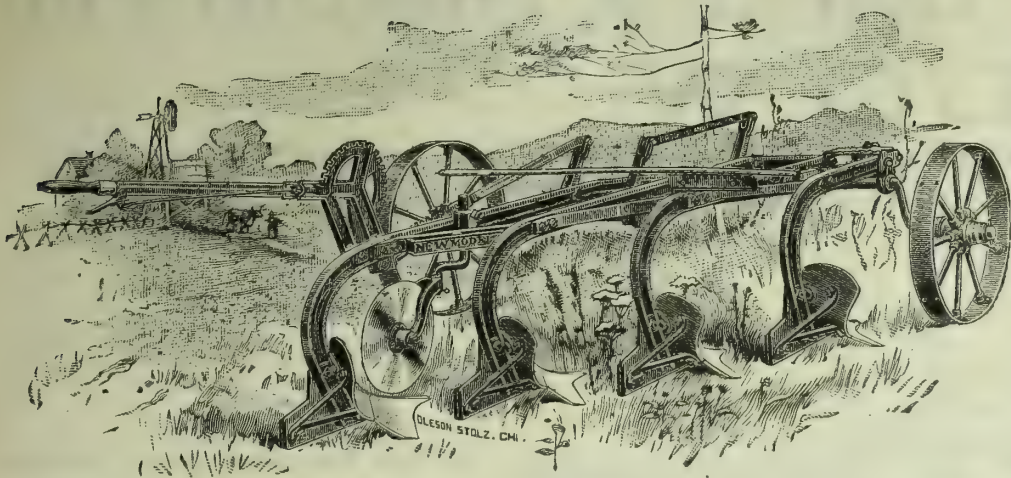
BACK FILES of the PACIFIC RURAL PRESS (unbound) can be had for \$3 per volume of six months. Per year (two volumes) \$5. Inserted in Dewey's patent binder, 50 cents additional per volume.

319 and 321
MARKET STREET,
SAN FRANCISCO.

FRANK BROTHERS,

319 and 321
MARKET STREET,
SAN FRANCISCO.

General Agents for the New Model Gang.



A Plow fully up to the demands of the times, and SURPASSING ANYTHING in the Plow line EVER BROUGHT OUT, in simplicity and neatness of construction, ease of management, lightness of draft, and adaptability to all kinds and conditions of soil.

It is NEW IN DESIGN, neatly and substantially put together, and operated with a single lever, which raises and lowers the Plow and levels it at all depths. The operator walks beside the Plow, on the unplowed land, or behind in the furrow, as preferred, in easy reach and control of both the Plow and the team.

ITS ADVANTAGES are very apparent to every practical farmer; more and better quality of work can be done, a more uniform depth and width of furrow made, with lightness of draft and ease of management under all conditions of soil. Especially when the ground is hard and dry does it show its superiority to the greatest advantage—sticking to its work and turning a 16-inch furrow as deep as may be desired, and with as light, or lighter, draft than any 14-inch hand plow. The harder the ground, the greater difference in its favor.

It is VERY NEAT and substantial in its construction. The beams and wheels are of steel, and all castings of malleable iron, giving at once lightness with great strength and durability.

The shares are so made that they will cut full width until completely worn out. The team is hitched directly to the beams, close to the work, and, having no tongue, it will plow as close to the fence at the end of the furrow as an ordinary Plow, and is turned as easily as a sulky; in fact, it is so easily operated and controlled that a boy can handle it readily.

The McSHERRY GRAIN DRILL,

THE BEST, MOST RELIABLE AND LEADING DRILL.

WITH ITS UNRIVALED FORCE FEED

It sows all kinds of Grain and Grass Seed, Oats and Barley as well as Wheat, and SOWS MORE REGULARLY than any other Drill, whether the grain be large or small-sized. It DOES NOT BUNCH, break or crack the grain.

It CAN BE REGULATED in a moment to sow any desired quantity per acre, with CERTAINTY of getting that quantity in the ground.

It NEVER CHOKES UP in the feeding arrangement, as is the case with Drills regulated by rendering the discharge openings larger or smaller. It sows EQUALLY WELL ON ALL KINDS OF LAND, hilly or level, and it is immaterial whether the horses are driven fast or slow. This Drill must and does sow the same quantity of seed with each revolution of the feed wheels.

It SOWS ALL THE GRAIN OUT OF THE HOPPER, and with the same evenness and regularity when the last grains are going out as when the hopper is full.

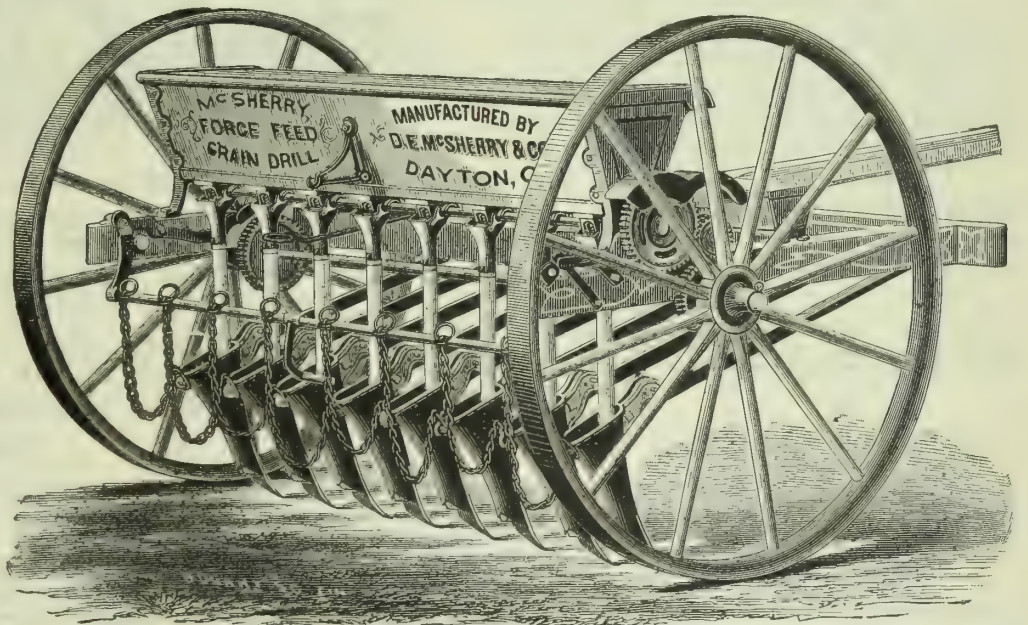
It has High Wheels with Wide Tires, giving great bearing surface on the soil, and enabling the Drill to pass over the loosely pulverized earth lightly.

It has Long Hoes of improved style and shape, with strong, wide, and polished steel points, working well in any soil.

AGRICULTURAL IMPLEMENTS,

BUGGIES, CARTS,

HARNESS, Etc., Etc.



SAN FRANCISCO:
Junction Market, Pine and
Davis Streets.

BAKER & HAMILTON.

SACRAMENTO:
Nos. 9, 11, 13, and 15
J Street.

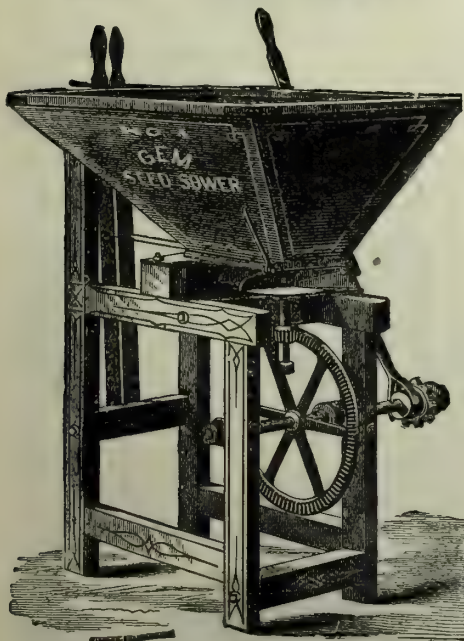
MANUFACTORY: Benicia Agricultural Works, Benicia, Cal.

EASTERN OFFICE: 88 Wall Street, New York.

IMPORTERS, MANUFACTURERS, AND DEALERS IN

HARDWARE and AGRICULTURAL IMPLEMENTS.

GEM SEED SOWERS.

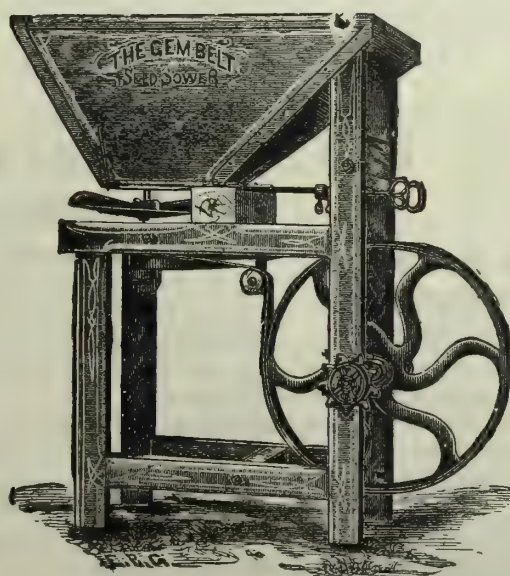


No. 1, Weight, 130 lbs. \$20.

This Machine is run with a Chain and Bevel Gear. It is the one we have sold for years, and has given the best satisfaction of any broadcast seeder yet invented.

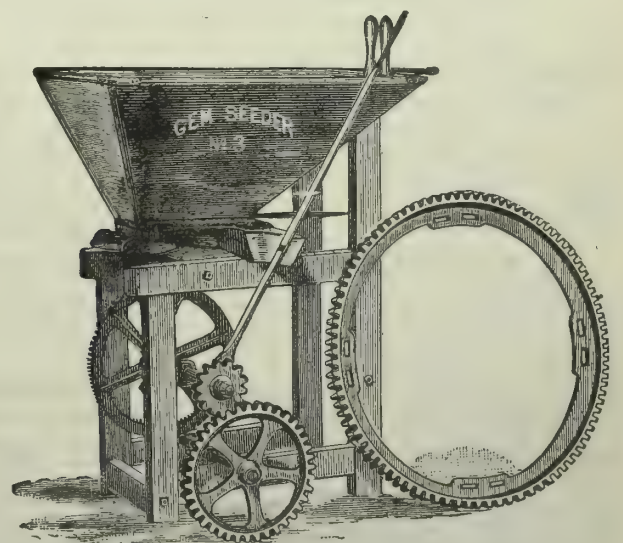
We have manufactured the GEM SEEDERS for a number of years, and they have given better satisfaction than any Broadcast Seeder in the market. They throw the seed horizontally instead of vertically, and thus save a large portion of the grain. Where sold they have never failed to give satisfaction. ARMSTRONG'S PATENT FORCE FEED is attached again this year, and is considered by those who have used it, a great improvement.

THE GENUINE GEM SEEDERS are manufactured exclusively for us at Benicia. SEE THAT OUR NAME IS ON THEM.



No. 2, Weight, 154 lbs. \$22.50.

Runs with Chain and Belt Gear. The advantages gained on the bevel gear are smoothness of movement, noiseless while running, durability of the fast-running parts, and the evenness with which it sows the grain.



No. 3, Weight, 164 lbs. \$25.

Runs with all Gears. This machine is preferred by many to the others which run by Chain. The feed valves and distributor are the same as in the others.

THE LITTLE GIANT SINGLE, DOUBLE, TRIPLE & QUADRUPLE PLOW

Has some points of Superiority over other Plows of its class which should commend it to the intelligent farmer and enterprising dealer.

IT SAVES LABOR.

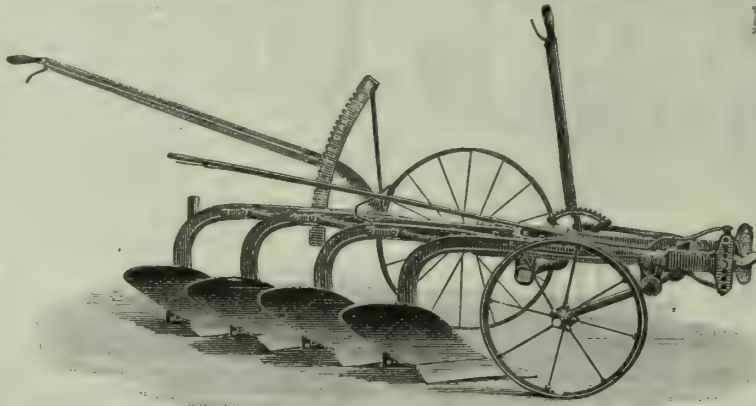
The shape of the share and the turn of the mold-board are such that the ground is turned with the least possible expenditure of power. No such perfect shaped plow was ever put in the hands of the farmer before. The wheels hold it to its work, thus giving it that quiet, steady draft which does not worry the team, and permits the plowman to do more and better work.

IT SAVES TIME.

It can be adjusted while in motion. If in use on uneven ground, it can be leveled by simply moving the front lever as desired. If plowing on hillside, by the use of the landing lever the cross clevis can be moved so as to bring the plow to its work and cut a full-sized furrow. All these adjustments can be made while the plow is in motion. These are important points, and can be found only on this plow.

IT SAVES MONEY.

Most all the valuable points in a Sulky Plow are combined in this implement, and at a much less cost to the farmer. It is simple, compact and durable. Every part is of steel, and easily duplicated.



The Little Giant Single, Double, Triple and Quadruple Plows have Steel Frames, Steel Beams, Steel Wheels, and the best of hardened Plow Steel Bottoms.

THE LITTLE GIANT QUADRUPLE GANG PLOW, with four 10-inch Bottoms.

**BE SURE AND TRY THE LITTLE GIANT BEFORE YOU BUY,
BECAUSE IT PAYS TO BUY THE BEST!**

WRITE FOR PRICES.

BULL & GRANT FARM IMPLEMENT CO., 14 & 16 Main St., San Francisco.

BRANCH HOUSES:

211, 213 and 215 J Street, SACRAMENTO.

233 N. Los Angeles Street, LOS ANGELES.

— WE ARE SOLE IMPORTERS OF —

"Rushford" Tubular Steel Axle Wagons, "Acme" Pulverizing Harrows, "Golden Age" Disk Harrows, "Jay Eye See" Steel Sulkys and Gangs, Complete Assortment of Carriages and Carts.

DESCRIPTIVE PRICE LIST ON APPLICATION.

Lands For Sale and To Let.

FARMS FOR SALE.

One Small Hop and Vegetable Farm. The annual yield of this place will equal 50 to 75 per cent of the purchase price.

One Fruit Farm of 50 acres. This year's crop will amount to nearly half the amount asked for the place.

120 Acres; all first-class Fruit Land; 70 acres planted to Fruit and just beginning to bear.

135 Acres; good Hop and Fruit Land near this city.

Also, several other Good Tracts, and 20 Good City Lots.

All these Tracts are intrinsically worth the money asked for them without the "Boom," and with it a handsome profit.

Terms easy. For further particulars call on or write to

W. R. STRONG & CO.,
SACRAMENTO, CAL.

WEST COAST LAND CO.

TEMPLETON, SAN LUIS OBISPO CO., CAL.

Home of Wheat, Fruit, Wine and Olive; 15,000 acres sold in past 8 months to 220 settlers, representing a population of 1100; 49,000 acres—small subdivisions—average, \$22.50 an acre; 1/3 cash, balance 5 years, 6 per cent. Catalogues and maps free. C. H. PHILLIPS, Manager.

A NEW COLONY

On the new extension of Southern Pacific Railroad, on the lands belonging to R. T. BUELL, Esq., near Los Alamos, Santa Barbara county, Cal. Parties desiring to visit the property now, can go via San Luis Obispo and take the cars from thence to Los Alamos, thence by stage to the Colony. 20,000 acres of the best lands in California, subdivided into 20, 40 and 80-acre farms; \$20 to \$30 per acre. INTERNATIONAL IMMIGRANT UNION, 401 California St., San Francisco.

GOOD CROPS EVERY SEASON WITHOUT IRRIGATION.

Free by mail, specimen number of "The California Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of

SANTA CRUZ COUNTY.

Address, "EXCHANGE AND MART," Santa Cruz, Cal.

Poultry and Stock Book

Niles's new manual and reference book on subjects connected with successful Poultry and Stock Raising on the Pacific Coast. A New Edition, over 100 pages, profusely illustrated with handsome, life-like illustrations of the different varieties of Poultry and Live-Stock. Price, postpaid, 50 cts. Address PACIFIC RURAL PRESS Office, San Francisco, Cal.

WEST COAST LAND COMPANY.

SAN LUIS OBISPO COUNTY FARMING LANDS. 21,000 acres, representing \$600,000, sold in 14 months, to Nov. 1, 1887, to 260 settlers:

From New York.....	6	From San Luis Obispo county.....	34
" Minnesota.....	9	" Santa Clara county.....	34
" Colorado.....	8	" San Francisco.....	41
" Michigan.....	4	" Los Angeles county.....	17
" Texas.....	5	" Monterey county.....	6
" Kansas.....	5	" Other counties.....	48
" Iowa.....	11	Total from California.....	184
" Other States.....	24	Total from other places.....	76
" Canada.....	4		
Total.....	76	Grand total.....	260

43,000 acres of Vine, Fruit, Olive, Fig, and Farming Lands, being the balance of the Company's property, are for sale at \$10 to \$35 an acre, on same terms—1/3 cash, balance in four equal payments on or before 2, 3, 4 and 5 years; interest, 5 per cent per annum.

Parties who have purchased are building, fencing, planting olives, vines for wine and raisins, fruits, figs, wheat, oats, barley and all other products adapted to the soil and climate.

These lands are located in San Luis Obispo county on the Salinas river, and are traversed by the Southern Pacific Railway for 15 miles, affording near market to all parts. All lots have timber for domestic use, and good water at 20 to 40 feet. There is living water in springs and streams on many tracts and sufficient rainfall throughout, requiring no irrigation.

Title U. S. Patent. Maps and catalogues free.

C. H. PHILLIPS, Manager,
Templeton, Cal.

THE GIANT POWDER COMPANY.

PATENT OWNERS OF

**NOBEL'S DYNAMITE,
NOBEL'S EXPLOSIVE GELATINE,
NOBEL'S GELATINE-DYNAMITE,
Best and Strongest Explosives in the World.**

As other makers IMITATE our Giant Powder, so do they Judson, by Manufacturing a second-grade, inferior to Judson.

BANDMANN, NIELSEN & CO, General Agents, San Francisco.

JUDSON POWDER,

The Only Reliable and Efficient Powder For Stump and Bank Blasting. From 5 to 20 pounds blows any Stump, Tree or Root clear out of ground at less cost than grubbing. Railroaders and Farmers use no other.

A FINE HOLIDAY PRESENT.



Price, \$15, with 5 Rollers.

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2513 MISSION ST., SAN FRANCISCO.
GENERAL AGENT FOR PACIFIC COAST

—FOR THE—

Latest Musical Novelties in Self-Playing Automatic Musical Instruments.

—ALSO—

**Pianos and Organs,
Violins, Guitars, Banjos,
STRINGS and SHEET MUSIC.**

Circulars free on application. Agents wanted in every town and county; liberal discounts.

The WHITE IS KING

FOR FAMILY USE,

Dressmaking, Tailoring and General Manufacturing.

IN ITS GREAT RANGE OF WORK IT STANDS WITHOUT AN EQUAL.

THE LIGHTEST RUNNING,

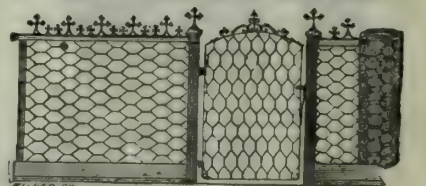
THE MOST DURABLE,

THE FINEST FINISHED,

THE BEST SATISFYING.

WHITE SEWING MACHINE COMPANY,
108 & 110 POST ST., S. F.

SEDGWICK STEEL WIRE FENCE.



The best Farm, Garden, Poultry Yard, Lawn, School Lot, Park and Cemetery Fences and Gates. Perfect Automatic Gate. Cheapest and Neatest Iron Fences. Iron and wire Summer Houses, Lawn Furniture, and other wire work. Best Wire Stretcher and Plier. Ask dealers in hardware, or address, **SEDGWICK BROS., RICHMOND, IND.**



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80-PAGE ILLUSTRATED CATALOGUE of Guns, Pistols, Cartridges, Powder, Shells, Air Guns, Hunting Coats, Leggings, Loading Implements, Base Ball Goods, Lawn Tennis, Boxing, Fencing and Gymnasium Goods, Dumb Bells, Hammocks, etc.

Fine Gun work done by first-class smiths.
GEO. W. SHREVE,
552 Kearny Street, San Francisco, Cal.

SERICULTURE.

Board of Silk Culture.

At the annual meeting of the State Board of Silk Culture, held Saturday, November 5th, the following officers were elected for the ensuing year, viz.: President, G. W. T. Carter; vice-president, W. Z. Price; treasurer, R. H. McDonald, Jr.; sec'y, S. A. Sellers.

The Treasurer's report showed that \$4985.96 had been drawn from the State appropriation of \$5000 for the past fiscal year.

The Filature Committee submitted their annual report as follows:

In January, 1887, the four new reeling machines with automatic batteuse were put in motion and have been working daily ever since. The machines have given great satisfaction, as a better quality of silk can be reeled on these machines, owing to the fact that the automatic batteuse brushes up the ends of the thread from the cocoon in a shorter space of time, and therefore the cocoons are not exposed to the extreme high temperature of water only for a very short time, thereby giving more nerve to the silk fiber.

These machines are so arranged that a competent reeler can reel four skeins of silk simultaneously.

Since January, 1887, 13 pupils have been instructed in the art of silk reeling; of this number, Clelia Hudson, Belle McLoud, Annie Kimball, and Martha Aspdon have been examined as to their proficiency as silk reelers, and were awarded second and third grade certificates, according to the tests made from the silk they reeled at their examination.

There are now five pupils working in the filature. The committee would recommend that more pupils be given instruction in the art of reeling silk, as the reeling machine recently imported and used at the Mechanics' Fair will soon be fitted up and ready to give instructions on.

On recommendation of the Filature Committee samples of the silk reeled in the filature have been sent to several silk manufacturers in New Jersey, Philadelphia and New York, and these manufacturers have written that they were surprised that such a fine quality of raw silk could be raised in the United States. A quantity of raw silk of California production and reeled at the filature of the California State Board of Silk Culture was shipped to the leading silk manufacturers in New Jersey to be manufactured and woven into American flags. It was the object of this board to have these flags woven in time to present them to the houses of the last Legislature, but owing to the strike among the silk-workers the flags were not manufactured and forwarded to this board until the month of July, 1887. A flattering letter accompanied the flags, an abstract from which is as follows: "For the California silk, the material out of which your flags are made, we have this much to say: That nothing better in raw silk exists to our knowledge. In strength, luster and touch it compares favorably with the best products of Europe and Asia. If you have silk of the same quality as that used for the flags to sell, we are open for a contract. As a basis of price we would take that of extra Piedmont and Cevennes."

This letter proves that California can produce as good a quality of raw silk as that raised in European districts where the rearing of worms and reeling of the cocoons has been carried on for many centuries. As the development of the silk industry on the Pacific Coast is only of a few years' growth, and in so short a space of time the silk product has been acknowledged to compare with the best classical raw silk produced in countries where the industry is of many hundred years' growth, what may we expect of the quality of California silk production when it is further advanced and cultivated and the manufacturers become acquainted with its superior qualities? The committee think that the people of the State of California ought to feel proud that among the many States in the Union California can produce raw silk that can stand the test, and it is declared to be equal to any produced in the world. The flags this board had manufactured are very large ones, measuring 12x14 feet, the stripes of red and white silk are 12 inches across, and the white stars in the blue square are sewed in and are nine inches across. A border of three inches of the red material surrounds the whole flag. These flags have been on exhibition at the late Mechanics' Fair held in this city, and were admired by many. This board had quite an interesting display of the silk industry at the Mechanics' Fair held in this city during the month of September, 1887, which attracted much attention. Reeling machines were in operation afternoon and evening, and the pupils of the filature were reeling the cocoons into skeins of raw silk, and practically demonstrating to the many thousands that gathered around the silk booth the method of reeling silk cocoons into marketable raw silk. There were also exhibited samples of cocoons raised in the different counties of California, showing what had been done in Contra Costa, Napa, Fresno, Los Angeles, San Luis Obispo, Sacramento, Amador, Marin, Alameda, San Joaquin, Nevada, Sonoma, Santa Clara, Santa Cruz and other counties; also silkworm eggs, and a case containing specimens of the evolution of the silkworm from the tiny egg to the formation of the silk cocoon. There were

large show-cases containing different shades and specimens of the reeled silk, black-silk stockings, California production of sewing silk and skeins of thrown silk with broad silk of red, white and blue, this being some of the material left from that of which the flags were made. Four thousand pamphlets on general instruction for rearing silkworms were distributed to parties interested in advancing the silk industry on this coast. Exhibits of the silk industry, by request, were forwarded to the Massachusetts Charitable Mechanics' Association, Boston, Mass., and to World's Bazaar to be held at Portland, Oregon, under the auspices of the Young Men's Christian Association. During the months of April, May and June practical demonstration of the method of rearing silkworms was had in the rooms of this board, and information concerning the rearing of the silkworms was disseminated throughout the State. As many as 465 visitors came to see the wonderful workings of and development of the silkworm and the spinning and forming of the cocoon. A good quality of cocoons has been received at the filature of the board this season, showing that the person or families who are rearing silkworms are rearing them with more care and better results, although some of the cocoons received were subjected to too high a temperature when stifling the chrysalis, thereby scorching the silk fiber, making it very difficult to reel the silk, as the thread of the cocoon breaks very often. The Filature Committee has already ordered several qualities of superior silkworm eggs of imported varieties, as, per sample, these eggs will be distributed free to persons wishing to rear them, and having a sufficient quantity of mulberry leaves to feed the silkworms with. Applications for these silkworms will be received from this day, and will be filed in the order received, when the eggs will be distributed at the proper season for rearing them. Respectfully submitted,

LOUISE RIENZI, Ch'n,
R. H. McDONALD, JR.,
G. W. T. CARTER,
Filature Committee.

The board is now well supplied with mulberry trees and cuttings, which will be distributed free (applicants paying their own expressage) to such as purpose engaging in sericulture. The distribution will commence immediately after the rains begin; and those who apply soonest are likely to be soonest served.

Japanese Orange Growing.

EDITORS PRESS:—I have been endeavoring to write you a long letter, but constant traveling has prevented me till now. I have spent the past two months looking up new and old varieties of fruits, etc., suitable for your climate and soil, and have lately returned from a very delightful part of the country, viz., Kishiu (pronounced Keshio), which, with Satsuma province in the Southwest, is where the oranges of Japan grow to perfection. The scenery is not wild, but there are beautiful valleys, and on the slopes of the hills, on terraces cut in the soil, and looking from the distance like steps, grow the "Oonshiu" (pronounced like "oo" in moon, and not like "u" in sun) and other orange trees. They are planted about 10 to 12 feet apart, in fact so close together that frequently the branches intertwine.

They are manured (with liquid) but not irrigated, and are not in large groves, but in small plots owned by farmers of very small means who know no more about cultivating than their grandfathers before them—not making a study of horticulture as we do.

Japanese oranges, as often stated before, mostly grow on large bushes, not over 12 and generally about 10 feet high, but they cover a large space, and I measured one that was 70 feet round. They were full of fruit, and the lower branches, not being strong, were weighted down, lying on the ground and hiding the trunk from sight. The tops are trimmed in the spring to keep them low; and I think that with our soil, which is so much superior to theirs, the advanced cultivation we bestow on our trees, and by pruning away the lower branches which they never touch, we can make a taller tree and give it the shape we prefer. We could, I feel sure, also increase the size of the fruit, which does not often exceed three inches and is flattened at the poles.

By the middle of November or sooner they will be ripe, but already they are picking the green fruit, cutting them in halves and drying in the sun for shipment to China, where the rind is highly esteemed for medicinal purposes.

I have seldom seen anything like the astonishment shown by the country people on looking for the first time in their lives through a microscope. They would not believe the scale to be an insect, but when convinced, they crowded round me, and, in their usual polite way, begged me to "let them see," and delayed me at least two hours, until I had to tear myself away. This scale does not come on any part of the tree except the young shoots and leaves, and on the fruit on which it causes excrescences, which the growers did not know was caused by an insect, and had no idea how to prevent. They know nothing about washing or sprinkling, and I may add I do not think they will ever take the trouble to do it.

The "Oonshiu" is the only seedless orange, but others of the "Mandarin" type (that is, the loose skinned) are also sweet and juicy and worth introducing (especially the *Kino-Kuni* and the *Kawachi*) after the Oonshiu, which every one I ever met in the East, natives as well

PACIFIC COAST WEATHER FOR THE WEEK.

(Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.)

DATE.	Portland.				Red Bluff.				Sacramento.				S. Francisco.				Los Angeles.				San Diego.			
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.
Nov. 10-16.																								
Thursday.....	.08	56	SE	Cy.	.00	60	N	Cy.	.00	64	SW	Cl.	.00	59	NE	Cl.	.00	84	S	Cl.	.00	76	NW	Cl.
Friday.....	.12	54	NW	Cy.	.T	60	S	Cy.	.00	66	S	Cy.	.00	64	SW	Cy.	.00	82	SW	Fr.	.00	72	N	Cl.
Saturday.....	.52	54	S	Cy.	.02	64	N	Cy.	.00	64	NW	Fr.	.T	63	W	Cy.	.00	76	SW	Fr.	.00	64	NW	Cl.
Sunday.....	.00	60	SW	Cy.	.00	70	N	Cl.	.00	62	NW	Cl.	.00	61	E	Cl.	.00	74	SW	Cl.	.00	62	W	Cl.
Monday.....	.80	50	SE	Cy.	.00	68	S	Cl.	.00	64	N	Cl.	.00	68	N	Cl.	.00	84	S	Cl.	.00	66	N	Cl.
Tuesday.....	.36	50	N	Cy.	.00	70	N	Cl.	.00	64	NW	Cl.	.00	66	N	Cl.	.00	74	SW	Cl.	.00	64	NW	Cl.
Wednesday.....	.01	44	NW	Cy.	.00	64	N	Cy.	.00	64	N	Cl.	.00	58	W	Fr.	.00	64	SW	Cl.	.00	60	W	Cl.
Total.....	1.89				.02				.00				.T				.00				.00			

EXPLANATION.—Cl. for clear; Cy., cloudy; Fr., fair; Fy., foggy; — indicates too small to measure. Temperature. Wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

as foreigners (i. e., English and Americans), without exception, consider the best. I have been 26 years in China and Japan and agree with them.

The close-skinned orange called in China the "Coolie," which grows to perfection in the south of China, is the finest of its kind; but the so-called Canton Hybrid, which was introduced into Japan years and years ago, has deteriorated on account of the inferiority of the climate to China and is not sweet.

The principal advantages of the Japanese sour-orange stock for grafting is its non-susceptibility to cold of 24 degrees or lower, and its standing dry weather well. It is a dwarf stock, however.

I forgot to say that I have sent the photographs I took and samples of the green fruit to the office of the Japanese Tree-Importing Co., 120 Sutter street, S. F.

H. E. AMOORE.

Dues Needed.

Thanksgiving is at hand and we want to be very thankful to all of our subscribers for having renewed and remitted their subscriptions. The long winter evenings are upon us all, and as we are finishing up our evening's work on the paper by writing this item (while the clock strikes ten), we hope every good subscriber who owes us a renewal has just ended a pleasant reading of our last issue, and is saying to his mother or his wife's father (to whom he never dares tell a lie) or to his wife (to whom he never ought to tell a lie) that he is going to remit his subscription to-morrow, and better enjoy the reading of this paper ever afterward.

Christmas, taxes, New Year's and annual settlements are coming right along, and old subscribers and new subscribers are wanted to help us hold up our heads before creditors, and strengthen our hands to do our best work for you in 1888. Please double up things by making yourselves and ourselves happy by early remittances.

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Should this paper be received by any subscriber who does not want it, or beyond the time he intends to pay for it, let him not fail to write us direct to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to any one who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

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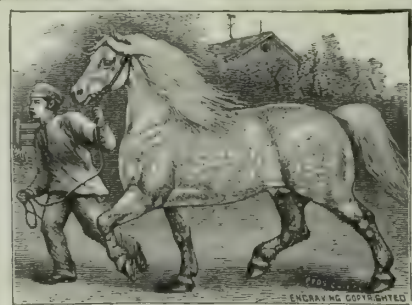
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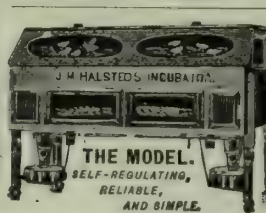
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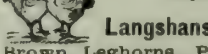
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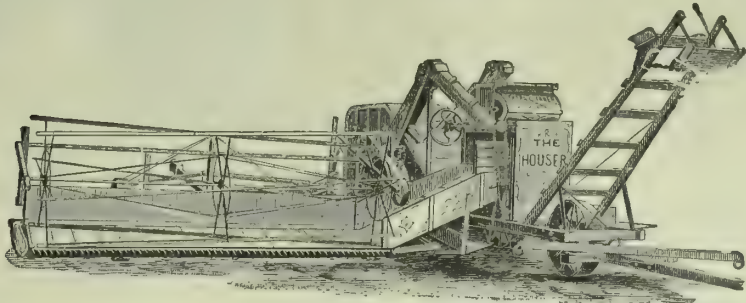
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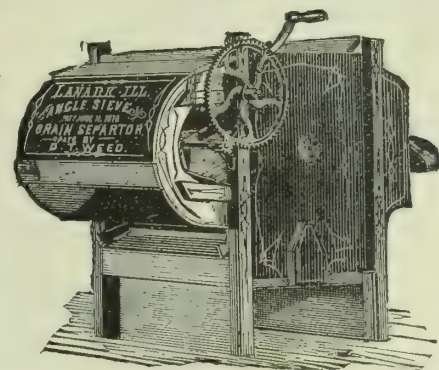
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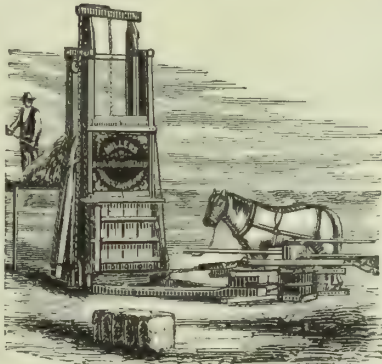
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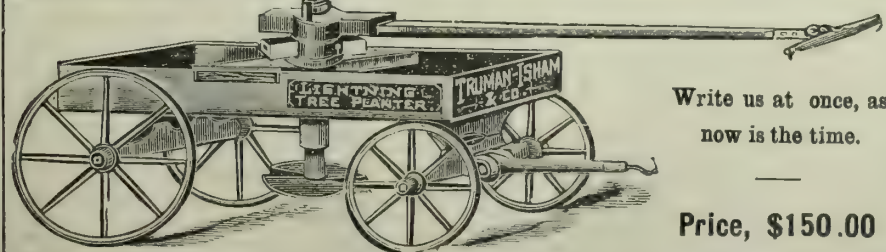
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S. H. MARKET REPORT

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Nov. 16, 1887.

The past week trading in farm products, as a rule, was quite free, with prices generally strengthening. The dry weather contributed no little to the better feeling, but the leading cause, particularly in cereals, is the strong advancing market elsewhere. Throughout the week wheat advanced at the East, and also in Europe. To-day's cable from England is as follows:

LIVERPOOL, Nov. 16.—Wheat, stiff. California spot lots, 6s 6d to 6s 9d; off coast, 3s 9d; just shipped, 3s 4d; nearly due, 3s 6d; cargoes off coast, stronger; on passage, active at full prices and large business doing; wheat on passage to Continent, 19s, 000 qrs.; wheat and flour on passage to U. K., 1,506,000 qrs.; French country markets, stiff; wheat in Paris, firmer; flour, firm; weather in England, frosty.

Foreign Review.

LONDON, Nov. 14.—The *Mark Lane Express*, in its weekly review of the British grain trade, says: There have been larger deliveries of native wheat and increased sales. Quotations are steady. Seedling progresses and the acreage already sown promises an increase in area over 1887. Sales of English wheat during the week were 57,904 quarters at 30s 6d, against 49,771 quarters at 31s during the corresponding period last year. Flour is easy, foreign wheat is dull, and foreign flour is weaker. Corn is steady. The deficiency in the American crop is balanced by ample supplies from the Black Sea and the Argentine Republic. Oats are weak. Linseed has advanced 6d. Six wheat cargoes arrived; three were sold, five were withdrawn and one remains. At to-day's market, although both English and foreign wheat were in small supply, there was no demand. Buyers' offers were low, and sellers would not accept the reduction. Flour and oats are steady. Corn and linseed are firm.

Eastern Grain Markets.

S. S. Floyd & Co.'s private telegraph of the 16th, from their Chicago house, is as follows: Wheat market strong, excited and higher. The local talent think there is only one side to the market and keep selling freely on every bulge. Corn market continues strong and advancing. The "lamb" are catching the old operators in good shape in this cereal. Wheat, Dec., opened, 74½; highest, 75½; lowest, 74½; closed, 75½; May, opened, 80½; highest, 81½; lowest, 80½; closed, 81½. Corn, Dec., opened, 44½; highest, 45½; lowest, 44½; closed, 45½; May, opened, 48½; highest, 49½; lowest, 48½; closed, 49½.

NEW YORK, Nov. 16—12 M.—Wheat, 87½¢ for cash, 85½¢ for Nov., 86½¢ for Dec., 87½¢ for Jan., 88½¢ for Feb., and 92½¢ for May.

California Fruit at the East.

CHICAGO, Nov. 12.—Receipts of California fruit are dropping off, as it is near the end of the season. There is some good fruit on the market, for which pretty good prices are to be had. The market is steady, with no noticeable change in prices. The following are ruling prices for fruit in condition: Pears, \$1.75@2.75 per box; Tokay grapes in double crates, \$3.75@4; Muscat grapes, \$2.75@3.25; quinces, \$1.50@1.75; late red plums, \$1.75@2.20.

Dried Fruits.

CHICAGO, Nov. 12.—The California dried fruit trade in raisins continues good, but for other lines the market is quiet and slow. All descriptions hold steadily at former quotations. Peaches, sun-dried in sacks per lb. 12½@13½¢; do, evaporated, unpeeled, in sacks, per lb. 15½@16½¢; do, do peeled, in sacks, per lb. 25½@27½¢; apricots, sun-dried in sacks, per lb. 13½¢; do, evaporated, in sacks, per lb. 15½@17¢; plums, pitted in sacks, per lb. 13@14¢; nectarines, according to quality, sacks, per lb. 14½@16¢; raisins, loose Muscats, per box, \$1.85@1.95; do, London layers, \$2.20.

Hops.

CHICAGO, Nov. 12.—For lower grades of hops the market is ruling weak and prices are somewhat easier. They are in fair supply and in but limited request. Choice qualities, however, continue steady. For these there is a good export trade, larger than has been looked for, and the home consumptive demand for choice qualities is also very fair. Quotations are: Pacific choice new crop, 20¢@22¢; do, do, medium, 16¢@20¢.

Eastern Wool Markets.

NEW YORK, Nov. 12.—A majority of operators retain about the former views of the situation, and there is really very little to suggest at the moment. Among the sales were: 25,000 lbs. Eastern Oregon at 20¢@24¢; 50,000 lbs. Territory at 18¢@23¢; 32,000 lbs. do, at 20¢; 40,000 lbs. spring California at 22¢; 9,000 lbs. scoured and 4,000 lbs. Territory on private terms.

PHILADELPHIA, Nov. 12.—The market has continued very quiet. Buyers are operating only for actual wants and show no disposition to anticipate requirements, although on desirable wool there is a growing feeling that no further decline is to be expected. Among sales were 10,000 lbs. fine Territory at 14¢; 100,000 lbs. Territory, fine, medium and coarse, at 16¢@22¢; 16,000 lbs. Montana medium at 21½¢.

BOSTON, Nov. 12.—The market has developed a little better tone, owing to the presence of an increased number of buyers, and sales foot up more than last week, but no improvement in prices can be reported. Among sales were 604,000 lbs. Territory at 15¢@23¢; 100,000 lbs. Oregon at 16¢@17¢; 139,000 lbs. California spring at 14¢; 18,000 lbs. California fall at 12½¢.

Mustard Seed.

NEW YORK, Nov. 12.—Mustard seed is in demand, with sales of 300 bags of California at 4½¢.

Miscellaneous.

CHICAGO, Nov. 12.—California beans, according to cleanliness, \$1.50@2.75.
California strained honey, 7¢@8¢.
NEW YORK, Nov. 12.—The market continues

active. California consignors are endeavoring to establish a 10-cent market for strained; Pacifics sell in a moderate way for 14¢@17¢, as to quality.

Local Markets.

BAGS—Futures are steady, at from 7 to 7½¢ for Calcutta June-July delivery.

BARLEY—On Call there have been free transactions, at strengthening prices. The upward movement is due to stocks being better concentrated, dry weather and the crops at the West being light, with the grades not as good as last year. At to-day's Call the sales reported made were as follows:

Morning Session: Buyer season—100 tons, 96¢; 400, 96½¢; 2200, 96½¢. Seller 1887—100 tons, 85¢ @ ctd. Afternoon Session: Buyer season—600 tons, 96¢; 1300, 95½¢; 600, 95¢; 600, 95½¢. Buyer 1887—100 tons, 86½¢ @ ctd.

BUTTER—The market is poorly stocked with pickled. The stock on Nov. 12 was about 1400 barrels, against about 4500 barrels last year at like date. Choice fresh butter is also scarce and readily commands from 42½ to 45¢.

CHEESE—The market is strong, but quiet.

EGGS—The market is weak and lower, under more liberal supplies from the East. Consumers buy sparingly under the impression that prices will go still lower.

FLOUR—The market has a steadier, stronger tone.

WHEAT—There has been more activity the past week in futures on Call, and at gradual advancing prices in sympathy with a higher range of values abroad and also at the East. It is claimed that there is quite a line of shorts on the market, but of this no definite information can be obtained. It looks as if the trading has been of scalping character, and if so there are no shorts of any moment. On to-day's Call, the sales made were as follows:

Morning Session: Buyer season—1000 tons, \$1.47; 1400, \$1.46½; 200, \$1.47½; 700, \$1.46½; 500, \$1.46½. December—100 tons, \$1.33½; 100, \$1.34. Buyer 1887—100 tons, \$1.36½; 100, \$1.36½ @ ctd. Afternoon Session: Buyer season—1000 tons, \$1.47½; 2500, \$1.47½; 700, \$1.47. December—200 tons, \$1.34½. Buyer 1887—400 tons, \$1.36½ @ ctd.

[COMMUNICATED.]

Market Information.

Cereals.

Quantity of wheat on passage to France, Oct. 28, reported at 400,000 bushels, against 1,780,000 bushels same date last year.

Exports of wheat from St. Petersburg from opening of navigation to October 15, 1887, 2,625,792 bushels, against 7,915,696 bushels the corresponding time in 1885, and 9,838,396 bushels the corresponding period in 1885.

Stocks of wheat at Odessa, October 1, were 6,024,000 bushels, against 3,330,000 bushels Oct. 1, 1886. The stock of other cereals there is small. The Azov sea may be expected to close early.

Exports from Russia for seven months ended July 31, as officially reported, have been 24,621,120 bushels of wheat; 25,520,000 bushels of rye; 17,936,000 bushels of barley; 13,920,000 bushels of oats; 13,024,000 bushels Indian corn, and 1,056,000 bushels peas.

The average price of home (British) wheat for the week ending October 29 was 30s. per 480 pounds, against 29s. 9d. the previous week, and 30s. 3d. the corresponding week a year ago, and 31s. 4d. two years ago. The aggregate supply for the nine weeks ending October 29, 1887, was 39,014,999 bushels, equal to a weekly average of 4,334,999 bushels or 334,999 bushels more per week than the average estimated weekly consumption, which in nine weeks would approximately give 3,014,991 bushels to add to the reserves.

Referring to the large deliveries by farmers, the Minneapolis *Market Report* says: "From a completed investigation of the wheat movement in the Northwest it is found that approximately 46 per cent of the marketable crop of this year has already gone from the farm to the railroad elevators. The estimates were obtained from every railroad station in Minnesota and Dakota that ships wheat to any extent, and was figured for November 1. The method followed has been to get the estimate from each station separately for the movement in that vicinity and average the whole. The different elevator companies operating lines of houses were called upon for such information as they were able to furnish in making the estimates as complete as possible. Three of the wheat-carrying roads were asked for their estimates of the per cent out of the hands of farmers. The result was that 42 per cent of the crop, above bread and seed, had then left the farm. To bring the estimate down to date, 4 per cent has been added for the seven days in November, making it now approximately 46 per cent of the whole, moved in the first two months of the crop year. The estimates on the wheat taken to railroad stations, and now in store to the account of farmers, is about 10 per cent, or 90 per cent of the whole moved has been sold, which would still leave farmers the owners of 58 per cent of the marketable crop."

A private circular issued at Chicago says: "At Minneapolis receipts of wheat have been unprecedented, though the elevators do not fill up appreciably, as the great bulk of receipts have been seized upon by millers for grinding. This is not only true of the local millers but obtains also in the country, from which section the demand for grinding has been more than ordinarily heavy."

In this city the market for actual wheat is exceedingly strong, with as high as \$1.32½ paid for standard No. 1 white favorably situated. The urgency of the demand appears to be for stiffening and also topping off. Stiffening is wheat say from 100 to 200 tons put in the vessel when empty, to keep her steady and not roll over. Topping off is say from 50 to 150 tons to put in the vessel after she is loaded and in the bay. The wheat for such purposes must be afloat so it can be delivered alongside of the vessel. Sales of No. 1 wheat can readily be made at \$1.30@1.31½, but holders are not disposed to let go at present, but ask much more money. The dry weather also favorably affects the market. At the East the market has been steadily advancing, as it has abroad.

Oregon mail advices to Nov. 12 report as follows: Wheat receipts for the week were 11,650 tons, of which all but 774 were Eastern Oregon. This is

296 tons better than last week, and 2206 tons more than the corresponding week of last year. The light Valley movement is partly owing to the fact that millers are paying a little better than shippers can afford. Local quotations for shipments remain as last week, \$1.25 being the extreme obtainable for choice Valley, and \$1.10 for Eastern Oregon.

Eastern mail advices report a gradual advancing market for choice grades of barley, under liberal buying and a lighter supply than for several years past. The crop at the West this year was below an average, with the quality generally poor. In the local market there is an increasing speculative movement, due to the large consumption, strong holding and continued dry weather. At the close there is a better inquiry for the better grades, both feed and brewing.

Oats have continued strong throughout the week. Holders are not pressing their stock on the market, which counteracts buyers only purchasing for immediate wants. Receipts are only moderate. Oregon advices report a larger consumption there than obtained last year.

Corn ruled fairly strong the past week for the better grades, which are in slight supply, but ordinary grades being in liberal supply are difficult to place except at concessions. At the close the market was stronger, owing to an advancing market at the West.

In both rye and buckwheat the movements are slow, but as the offerings are light the market has a firm tone.

Dried Fruits.

The most noticeable fact in dried fruit is the gradual hardening tone in peeled peaches, which, it is rumored, have been concentrated. The supplies are very light. They are principally in the hands of one large house that has taken up a dozen lots which have been kicking around the market, and prices have assumed a firmer tone. Dried apricots are in light supply.

Raisins.

Telegraphic advices from New York, just at hand, show a weaker Malaga market. Offerings of loose Muscats in the local market are quite free. There is a great scarcity in the market for London Layers, which are bringing high prices for the local trade. Demand from the Eastern States for London Layers remains very spirited, and the lower prices for loose Muscats have not affected the market value of London Layers.

Feedstuff.

The consumption of bran, middlings and ground barley continues very large, owing to poor pasturage, more milk cows coming in, and also the fattening of cattle for market. The market for ground feed is steady, with a firm tone.

Hay continues to come in sparingly, particularly the better grades. The consumption is large, with the supplies in the interior to draw from quite light. It is very generally conceded that if we should have a hard winter commencing with next month, prices will be advanced to much higher figures.

Vegetables.

Onions have fluctuated some the past week, closing fairly strong, under a good demand for choice and only moderate receipts.

Potatoes, the past week, ruled quite steady. Heavy receipts and good stocks caused a weak tone. The consumption is quite large.

Cabbages are strong, with a good demand ruling for both home and shipping. Tomatoes are a drug, with sales made extremely low. The low prices ruling for canned tomatoes have caused canners to cease packing.

In other summer vegetables the market shows few changes.

Fruits.

Choice apples are in better request to meet the holiday demand. The call is both locally and shipping. Fair to ordinary are also firm. Defective apples are hard to place.

Choice pears are wanted at an advance, causing other qualities to rule firmer.

Quinces are firm, with a strong tone at the close. Table grapes have a stronger tone for the more choice sound and good keepers. Poor and ordinary are slow. Wine grapes are doing better, with a better demand ruling for both Mission and Zinfandel.

Strawberries are in good supply, but keep strong.

Live-Stock.

The market for choice bullocks is stiff, but they must be stall-fed. Choice grass-fed are in lighter supply, but as they are received chiefly from distant points by rail, good prices have to be obtained to net a profit. Ordinary cattle are easy under liberal offers. Mutton sheep are in good supply, but choice, not too fat, are readily placed at top quotations. Veal and small calves are in fair supply. Hogs are offering quite freely, but sellers are not disposed to accept lower prices. Packers are running to full capacity, that is, putting up all the meats they can. In horses, last week's report covers this week's market.

The following are the wholesale rates of slaughterers to butchers:

BEEF—Extra, 7½¢@7¾¢; first grade, grass fed, 6½¢@6¾¢; second grade, 5½¢@6¼¢; third grade, 5¢@5½¢.

MUTTON—Ewes, 5½¢@6¢; wethers, 6¢@6½¢.

LAMB—Spring, 7¢@8¢.

VEAL—Large, 6¢@7¢; small, 6¢@8¢.

PORK—Live hogs, 4½¢@4¾¢ for heavy and medium; hard dressed, 6½¢@7¼¢ per lb; light, 4¢@4¾¢; dressed, 6¢@7¼¢; soft hogs, live, 3½¢@4¢. On foot, one-third less for grain or stall fed, and one-half less for stock running out.

Miscellaneous.

The tonnage movement compares with last year at this date as follows:

	1887.	1886.
On the way.....	331,301	252,780
In port, disengaged.....	85,000	73,000
In port, engaged.....	30,331	66,018
Totals.....	446,632	420,798

To get the carrying capacity, add 60 per cent to the registered tonnage as given above.

Beans are very stiff, under moderate receipts and a good demand from the East. Choice grades are scarce.

In poultry, turkeys are steady, with a strong tone as Thanksgiving approaches. In hens, roosters,

broilers, geese and ducks, the market has ruled steady and strong.

Flaxseed is strong, in sympathy with a strong market at the East.

Wool rules firm for the choice grades, in sympathy with a strong market at the East.

Choice hops are in request, but ordinary grades are slow. The stocks carried by brewers are reported to be light.

San Francisco, Nov. 16, 1887.

Domestic Produce

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

BEANS AND PEAS	WEDNESDAY, Nov. 16, 1887
Bayo, oil.....	2 00 @ 2 35
Butter.....	2 00 @ 2 10
Peas.....	2 25 @ 2 60
Red.....	1 40 @ 1 60
Pink.....	1 50 @ 1 75
Large White.....	2 00 @ 2 55
Small White.....	2 10 @ 2 60
Lima.....	2 10 @ 2 30
Field Peas, blk eye	1 00 @ 1 05
do green.....	1 00 @ 1 12½
do Niles.....	1 25 @ —
BROOM CORN	
Southampton.....	50 00 @ 75 00
Northampton.....	50 00 @ 75 00
CHICKEN	
California.....	6 @ 7
German.....	7 @ 8
DAIRY PRODUCE, ETC.	
Cal. fresh roll, B.	35 @ 40
do Fancy brand	42½ @ 45
Pickle roll.....	30 @ 32½
Firkin, new.....	24 @ 27½
Eastern.....	— @ —
CHEESE	
Cheddar, Cal., B.	13 @ 16
Eastern style.....	14 @ 16
Cal. ranch, doz.	40 @ 42½
do, store.....	35 @ 38
Ducks.....	— @ —
Oregon.....	— @ —
Eastern.....	25 @ 32½
FEED	
Bran, ton.....	16 00 @ 17 50
Commeal.....	28 00 @ —
Gr'd Barley ton.....	20 00 @ 22 00
Hay.....	10 00 @ 15 00
Middlings.....	21 00 @ 22 50
Oil Cake Meal.....	26 50 @ 28 50
Straw, bal.....	35 @ 50
FLOUR	
Extra, City Mills	4 00 @ —
do Country Mills	3 75 @ —
Superfine.....	3 25 @ —
GRAIN	
Barley, feed, ctd.	85 @ 92½
do Brewing.....	1 00 @ 1 15
Chevalier.....	1 15 @ 1 30
do Coast.....	95 @ 1 15
Buckwheat.....	1 00 @ 1 25
Corn, White.....	1 15 @ 1 25
Yellow.....	1 10 @ 1 15
Small Round.....	1 30 @ 1 35
Nebraska.....	1 07½ @ 1 15
Oats, milling.....	1 65 @ 1 60
Choice feed.....	1 42½ @ 1 47½
do good.....	1 37½ @ 1 40
do fair.....	1 20 @ 1 30
do black.....	1 25 @ 1 40
do Oregon.....	1 25 @ 1 40
Rye.....	1 25 @ 1 60
Wheat milling.....	1 42½ @ 1 45
Gilt edging.....	1 40 @ —
do choice.....	1 40 @ —
do fair to good	1 35 @ —
Shipping choice	1 32½ @ 1 33½
do good.....	1 25 @ 1 31½
do fair.....	1 25 @ 1 27½
HIDES	
Dry.....	14 @ 16
Wet salted.....	7½ @ 8½
HONEY, ETC.	
Beeswax, B.....	20 @ 22
Honey in comb.....	12½ @ 15
Honey in comb, fancy.....	16 @ 18
Extracted, light.....	6½ @ 7½
do.....	5½ @ 6½
HOPS	
Oregon.....	17½ @ 22½
California.....	12½ @ 20
ONIONS	
Pickling.....	— @ —
Red.....	— @ —
Silver-skin.....	75 @ 1 00
NUTS—FOREIGN	
Walnuts, Cal., B.	12 @ 14
do Chile.....	8 @ 10
Almonds, bshl.....	5 @ 7
Soft shell.....	15 @ 16

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.	WEDNESDAY, Nov. 16, 1887
Apples, bx com.....	50 @ 60
do choice.....	1 00 @ 1 35
Apricots, B.....	— @ —
Bananas, bunch.....	1 50 @ 4 00
Blackberries, ch.....	— @ —
Blackberries, cr.....	— @ —
Cherries, wht bx	— @ —
do black bx.....	— @ —
do Royal Ann.....	— @ —
Cherry plums.....	— @ —
Crabapples.....	— @ —
Oranberries.....	10 00 @ 11 00
Crabapple ch.....	— @ —
Gooseberries.....	— @ —
Figs, black bx.....	— @ —
do white bx.....	— @ —
Grapes, white.....	40 @ 60
do black.....	40 @ 60
do Rose Peru.....	40 @ 75
do Muscat.....	40 @ 75
do Tokay.....	50 @ 75
Isabel.....	— @ —
Wine, Zinfandel.....	18 00 @ 20 00
do Mission.....	15 00 @ 18 00
Limes, Mex.....	3 00 @ 5 00
do Cal box.....	— @ —
Lemons, Cal box	6 00 @ 7 00
do Sicily box.....	— @ —
do Australian.....	— @ —
Nectarines box.....	— @ —
Oranges, Com bx	— @ —
do choice.....	— @ —
do Navel.....	5 00 @ —
do Panama.....	— @ —
Peaches, bx.....	— @ —
do back.....	— @ —
Crawford, bx.....	— @ —
do bekt.....	— @ —
do choice.....	— @ —
Pears bx.....	50 @ 75
do choice.....	1 00 @ 1 35
do Bartlett, bx	— @ —
Persimmons.....	— @ —
Jap, bx.....	— @ —
Pineapples, doz.....	2 00 @ 4 50
Plums bx.....	— @ —
Pomegranates, b.....	— @ —
Prunes bx.....	— @ —
Quinces bx.....	40 @ 60
Raspberries ch.....	8 00 @ 11 00
Strawberries ch.....	8 00 @ 12 00
Watermelon, 100	8 00 @ 12 00
DRIED FRUIT	
Apples, allied, B.	4½ @ 5½
do evaporated.....	9 @ 10
to quartered.....	12 @ 13
Apricots.....	9 @ 10
do evaporated.....	16 @ 18
Blackberries.....	13 @ 13½
Cherries.....	26 @ 30
Dates.....	9 @ 10
Figs, pressed.....	6 @ 7½
POTATOES	
Barbark.....	60 @

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING NOVEMBER 8, 1887.

372,652.—SECTIONAL HORSESHOE—E. W. Bingham, Portland, Ogn.

372,956.—EXCAVATOR—A. B. Bowers, S. F.

372,893.—CAR-COUPLING—Samuel Byrne, Brown's Valley, Cal.

372,842.—BALING PRESS—W. F. Denlis, Cottonwood, Cal.

372,789.—SAFETY-LOCK FOR GAS BURNERS—Drinkhouse & Ziesche, S. F.

372,922.—AUTOMATIC STEM-PESSARY—Alice O. McCord, Colfax, W. T.

373,026.—CONCENTRATOR—F. E. Monteverde, S. F.

372,707.—EMBROIDERY FRAME—John Sanders, S. F.

372,708.—LUBRICATOR—J. C. Schellenbaum, Portland, Ogn.

372,825.—LINIMENT—J. W. Still, S. F.

372,946.—HEATING PIPE CONNECTION BETWEEN CARS—W. L. Harlingen, Sr. & Jr., S. F.

372,947.—HEATING PIPE CONNECTION BETWEEN CARS—W. L. Harlingen, Sr. & Jr., S. F.

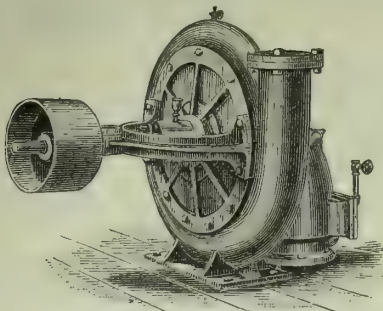
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JARED C. HOAG—California.
G. W. INGLIS—Arizona.
Geo. McDowell—Santa Clara Co.
WILLIAM POOL—Fresno Co.
R. G. HUSTON—Butte, Montana.
E. P. SMITH—Washington Ter.
A. F. JEWETT—Tulare Co.
F. B. LOGAN—San Mateo Co.
E. H. SCHAEFFLE—Calaveras Co.

RANCHO CHICO NURSERY.—We have received a copy of the catalogue for 1887-8 of the Rancho Chico Nursery, owned by Gen. John Bidwell. Gen. Bidwell, as is generally known, has been growing trees in orchard and nursery for over 36 years. The past year, owing to demand for his trees, the nursery department of Rancho Chico has been increased over one-half. The catalogue shows a full assortment of tested varieties of fruits, shade trees and shrubs in large variety and a fine collection of roses.



Jackson Centrifugal Pumps.

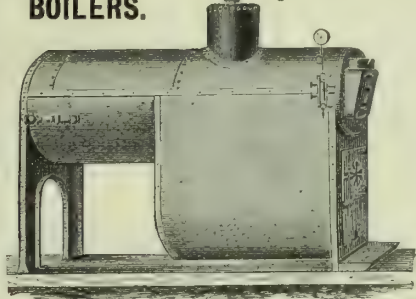
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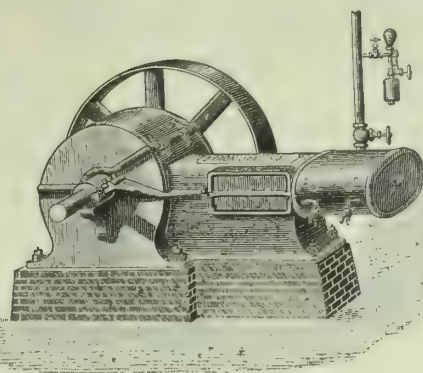
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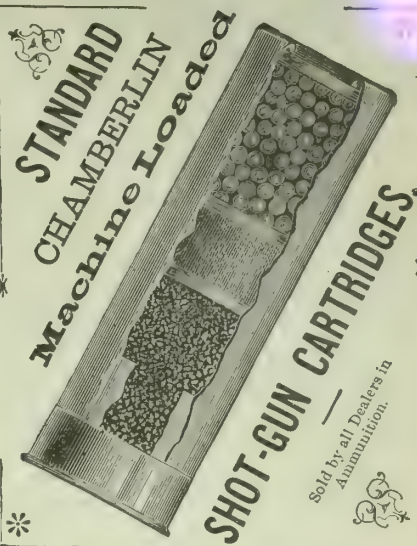
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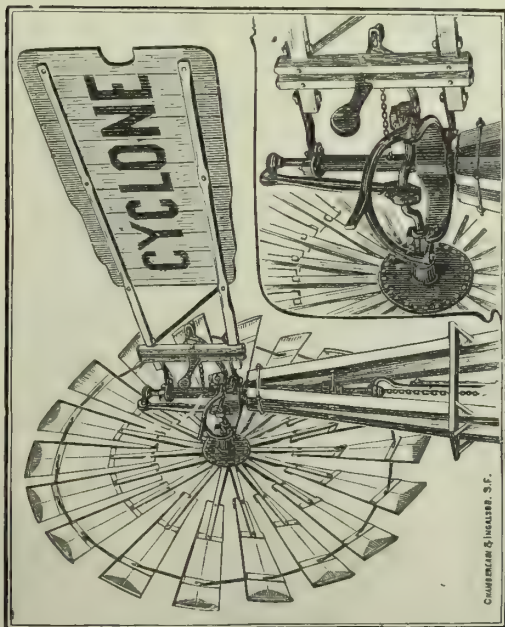
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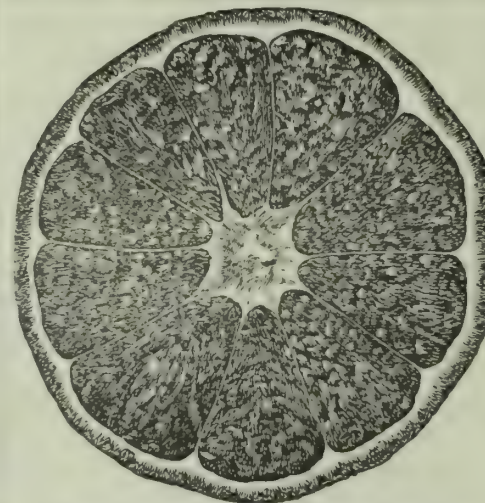
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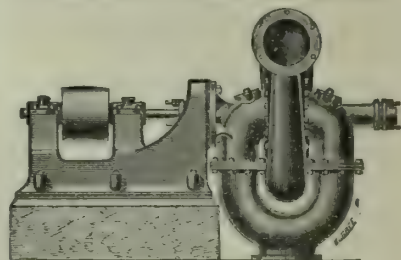
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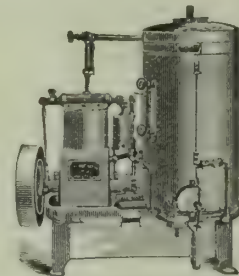
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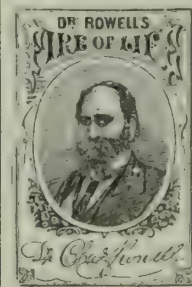
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Under date of January 26, 1887, Messrs. SCHRODER & MICHAELSON, alluding to letters acknowledged, write as follows to H. M. NEWHALL & CO.:

"They referred partly to the quantity of Mexican Guano which we may expect to receive in the course of the present year, in regard to which our repeated inquiries addressed to the Company had so far brought no reply. We are glad to note from your telegram that Mr. Halsey has now written us on the subject, but we are, on the other hand, somewhat disappointed at the SMALLNESS of the figure you name (8000 to 10,000 tons) which we hope is exclusive of the 'Tranmere' and 'Saigon' cargoes. We have, in fact, in consequence of the numerous inquiries for this guano, been placed in an awkward position, through not being able to give any reliable information to our buyers in regard to the quantity of Mexican Guano forthcoming during the present year."

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TWENTY-PAGE EDITION.

Vol. XXXIV.—No. 22.

SAN FRANCISCO, SATURDAY, NOVEMBER 26, 1887.

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A Rodent Roundup.

In the matter of dealing with the devouring jackrabbits, last week witnessed a new departure.

On the plains of Tulare county, near the town of Pixley, a V-shaped fence had been built with a corral at the apex. Monday morning, November 14th, several hundred people, mostly farmers and their families, assembled to engage in the rabbit-drive. No fire-arms nor dogs were permitted in this hunt; but men, women and children, in vehicles and on horseback, marshaled by J. R. Priest, with Mr. Doran and M. F. Pixley as his aids, formed a semi-circular procession about three miles in length, and then began closing in toward the opening of the V.

As the line of drivers neared the outer ends of the fence, it became apparent that they were herding the hares not by hundreds but by thousands, and those who saw the bounding drove of *leporas*, as it swept over the stubble and short alfalfa where there was no dust, say it was indeed a memorable sight. Great excitement prevailed, and as a rabbit would now and then turn about, bolt through the ranks of yelling enemies and gallop off upon the plain, the wisdom of having barred out guns and pistols began to be evident. As the terrified animals ran down the inside of the fence on the south side, they encountered a little inclosure made for a garden. This obstacle occasioned a stampede. "Away went hundreds of them back through the cordon of drivers, and though many were killed, it is estimated that 500 or 600 escaped. The main body, however, ran around the projecting fence and kept on down the side of the V to the corral at the apex."

When the doomed creatures had been forced into the corral and the gate closed, the hunters entered with clubs and about 2000 of the pests were knocked in the head. Enough rabbits were taken alive for shipment, however, to pay all expenses incurred.

The drive was so successful that the managers are already planning another, and such organized campaigns may become quite popular in the most afflicted sections. While they would not wholly exterminate the mischievous gnawers, they might be made the means of thinning them prodigiously; and as one of the

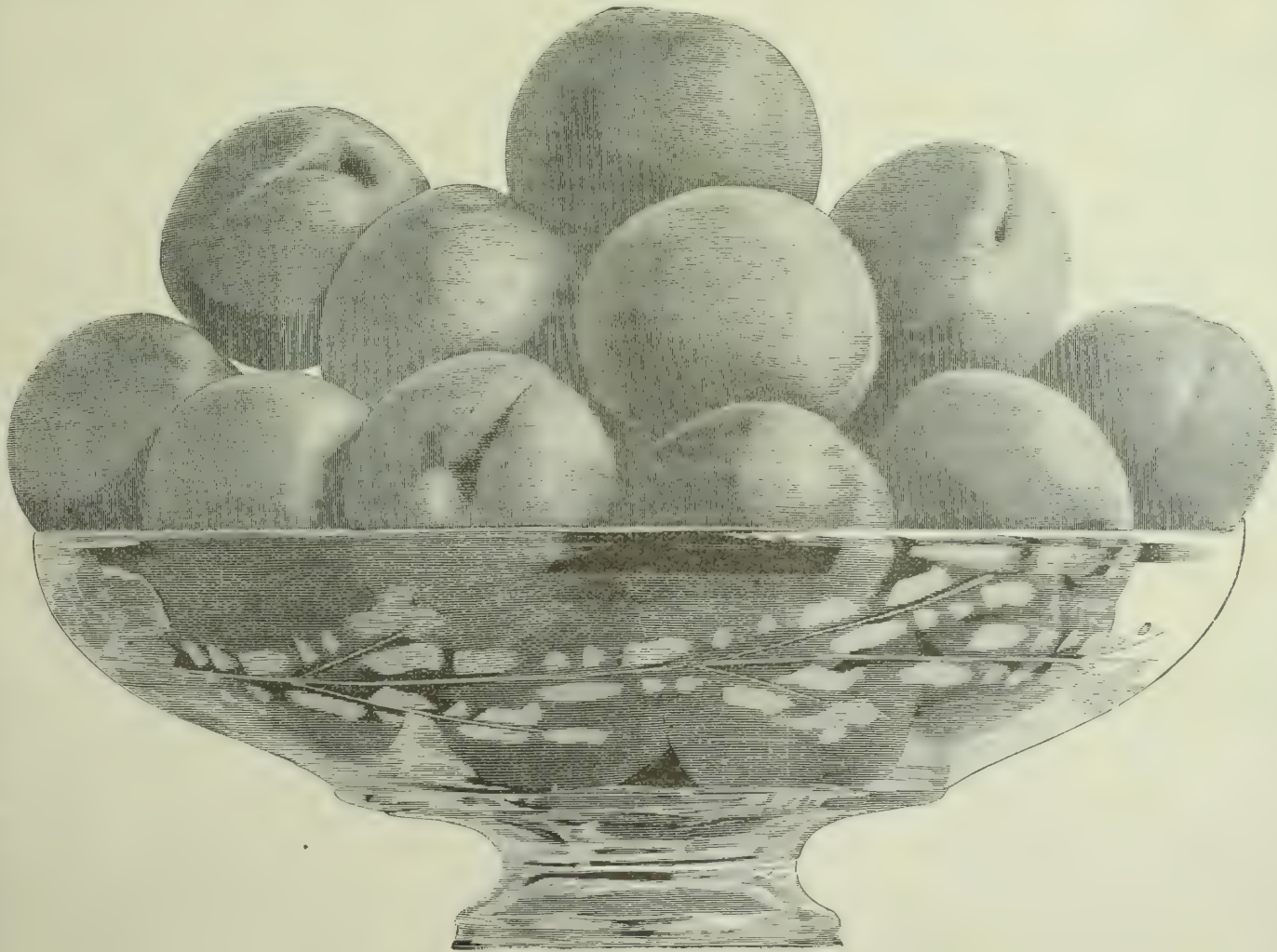
Visalia papers remarks, "two miles of portable fence for wings and a few rods for corrals would be all that is required; the cost would be slight when divided among those who would be directly benefited; and it could be sold when no longer needed for at least half what it cost."

SUIT OVER A FRUIT DRIER.—Our fruit interest bids fair to furnish its share of business for

HOP AS A FIBER-PLANT.—A Sacramento gentleman, said to be perfectly conversant with fiber-plants, is the *Record-Union's* authority for stating that hopvines, which have been considered of no value, are worth far more for textile fabrics than the jute imported from India. He claims that burlaps made from hopvines would be of great strength and durability, and for grain-bags would almost be indestructi-

The Newcastle Apricot.

We give herewith a dish of the Newcastle apricot, a California seedling which originated in the orchard of C. M. Silva & Son of Newcastle, Placer county. It was first noticed in 1881 on account of its combining extra earliness with size and quality, which do not exist in our extra early varieties now. In their catalogue of 1883-4, Silva & Son speak of this variety as follows: "We believe it to be the earliest of all apricots; ripens here with Wood's Early, and is every way superior in size and quality; size, full medium, round; rich, golden yellow, with brilliant red cheek in the sun; freestone; flavor, sweet and rich; tree a heavy bearer and healthy; has fruited with us three seasons, and this past season we had fruit on fully 20 trees in the nursery." No trees were then offered for sale, but the originators have kept the variety under trial until the present year, when fully convinced of its value, they offer it to the public. They assure us that since their first announcement of it four years ago, it has fruited regularly every season and has fully sustained their original judgment of it. The tree has proved a regular and good bearer and very vigorous—more so than any of the large



THE NEWCASTLE APRICOT—A CALIFORNIA SEEDLING.

the lawyers. We have in mind a number of suits which have arisen under contracts by different parties in the fruit interest. The latest is in the form of a suit for damages by D. O. Vestal of San Jose against Fink & Evarts, proprietors of the Pneumatic Drier. The contract was that the drier should be set up and do satisfactory work before August 1st, the test to be made before any money was to be paid by Mr. Vestal.

Mr. Vestal now alleges that the test was made, preparatory to which he expended \$800 in construction and fitting up the machine; that defendants were present, and that the drier proved an utter and complete failure, and not only would not dry fruit in quality and quantity, as provided in said contract, but also that it burnt, destroyed, and ruined the fruit; that having 30 acres of orchard, wholly dependent upon said drier, the breach of contract has resulted to his damage in the sum of \$10,000. Judgment for that sum and costs is asked. We do not hear what answer is made to Mr. Vestal's claim.

The hopyards of Sacramento county alone can furnish material enough to supply the entire demand of the State for grain-bags, and as each acre will turn off at least three tons, which could be readily sold, say at half a cent per pound, it would be a source of profit to the grower, while at present it costs considerable to get rid of them.

NAPA WINES.—A gentleman from St. Helena was speaking to us on Tuesday with regard to the wine interests of Napa county this season. The combination on the part of city wine merchants last year had so injurious an effect in lowering the price of wine that the makers generally were very cautious this season as to buying and beginning to press. So the grapes hung upon the vines too long, and the extremely hot weather, which came just as they were ripe, caused them to sugar excessively; consequently, instead of making 150 or 160 gallons per ton, they yielded but 110 or 120, which of itself would make the crop short. The wine is now through in good shape.

number of varieties which they have in their collection. This year it ripened before the Pringle in the same orchard. It ships well, and has been sent this year to Chicago and other distant points in good condition. In quantity it has shown itself to be better than other varieties, and seems likely to prove a popular sort both for home use and market.

We saw the Newcastle apricot for the first time on June 1st of the present year, when a box of ripe fruit was sent us by the growers. The engraving is made from a photograph of a dish of the fruit from that box. What especially impressed us in the fruit, aside from its size and color, was its exquisite richness of flavor. We are always glad to bring to notice a promising California seedling fruit, and the Newcastle certainly belongs to that class. We hope it will be widely distributed this year, so that its behavior in all regions may be soon made known.

MOST of the Humboldt county sawmills have logs enough to run them all winter.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Through San Mateo County.

EDITORS PRESS:—On the morning of the 11th instant we found ourselves, with horse hitched to a light buggy, starting out for a jaunt through San Mateo county. A dense fog hung over San Francisco, and a chill pervaded the air. To one but little acquainted with our peculiar climate, a heavy rain seemed imminent, but we gave ourselves no uneasiness on that score, as we know that "all signs fail in dry time," especially in California. Following the Mission-street road for two hours of gentle driving amid an undulating landscape diversified with gardens and orchards, whose verdure contrasted vividly with the brown hills that lay to right and left, we reached the imaginary line that divides San Francisco county from her sister, San Mateo. The fog had by this time vanished and the sun shone forth if not with tropical splendor, at least in happy contrast with the gloomy appearance of the horizon that had preceded. A short distance beyond, we ascended a slight eminence and a magnificent view burst upon our vision. Prior to this time our mind had been engaged contemplating the quiet scenes incident to the rural and suburban homes we passed, little thinking that just at our feet, so to speak, rolled the foaming billows of the grand Pacific ocean. We halted for a moment to gaze, then drove on. Our thoughts turned to the great discoverer of these waters, and we saw there was some excuse for the seemingly inordinate pride he felt, and the cruel sacrifices he made to behold it for the first time in the history of our race.

A few miles further on we reached Colma, formerly called School-house Station, and still known to most people by the latter name. It is a mere village of perhaps 100 inhabitants, but important as containing some public-spirited men, among whom we heard mentioned R. S. Thornton, the first settler of the place. We were particularly indebted to Mr. Andrew Passalacqua, manager of the general store of M. Belli & Co., for information and other favors.

A mile and a half further south we halted at the public house of Mr. O. McMahon, a resident since 1852, from whom we gained a number of ideas regarding the country and its early history. This place is also a railway station, and directly opposite, looking north, lies Holy Cross Cemetery, comprising over 200 acres, established this year and now being beautified, about 25 men being constantly employed in making improvements. It is the intention ultimately to run daily trains especially for funeral accommodations. Ten burials a day were noted in the past week, which makes it seem probable that the space set apart for the purpose will be occupied before the lapse of the present century. Mr. Brady, the contractor for the \$410,000 courthouse at Los Angeles, is about to establish marble works in this locality in behalf of his sons. A good quality of blue granite is said to exist here, from which the Starr King church in San Francisco is to be constructed. The rock took a premium at the last Mechanics' Fair.

The principal industry of the people hereabout is gardening and dairying, for which, on account of its close proximity to San Francisco, the district appears specially adapted. But aside from the local market, the gardening business does not seem to be dependent upon San Francisco or any other market of this coast. Last year about 40 carloads of cabbages alone were shipped to Omaha and Kansas City, while this year the crop is represented as greater than ever before.

We spent the night with Robert Ashburner, Baden, who, as most readers of the RURAL PRESS are well aware, is engaged in the breeding and rearing of fine stock. His present herd of cattle consists of about 200 head, many being exceptionally fine specimens of the Short-horn family. Here we had an opportunity of sampling milk from this stock, and candor compels us to say that either we had not tasted any genuine milk for a year or two, or else our condition for making the test has been out of order during the time. There may not be so much difference in the quality of the lacteal fluid that flows from the udder of a Short-horn and that which is extracted from common stock as we are led to believe, yet we are convinced that the percentage in favor of the former is considerable and quite justifies an exchange of the latter for the former, even at considerable cost. Mr. Ashburner also keeps some good horses.

After taking leave of our host and his excellent wife, whom we shall gratefully remember for their hospitable courtesies, we again started southward.

A more inviting retreat can hardly be imagined than Milbrae, the country-seat of D. O. Mills, the millionaire banker. What nature has omitted to make the place attractive has been lavishly supplied by art. The environments are picturesque, the sparkling waters of San Francisco bay lying on one side, and slopes sparsely wooded with live-oak and other timber on the other, and lanes stretching out in all directions lined with various evergreens and shade trees.

Four miles further brings us to San Mateo, where we intend remaining over Sunday. Of this place we may have something to say in our next.

T. B. L.

Notes from Contra Costa County.

EDITORS PRESS:—Perhaps there is no other county in the central portion of the State so little understood by the outside world as Contra Costa. Encircled as it is on all sides by railroads, nevertheless the interior of the great county of Contra Costa is a veritable *terra incognita* to a large majority of the people of California.

During the past month I made a 20-days' canvass in the interests of the RURAL among the mountain fastnesses of this part of the State, and every day's journey brought new surprises and pleasing disappointments at the vast amount of level land and the wonderful fertility of this remarkable hill region.

Instead of a barren, mountainous tract, as Contra Costa appears from the border, her territory consists of an almost unbroken chain of beautiful valleys, penetrating the county in every direction, and amounting in the aggregate to a great many thousand acres of the very richest grain and fruit land in the State, while the hills are also well suited to the cultivation of the grape and other fruits.

Among these valleys San Ramon is the most extensive, running completely through the county from Martinez on the north to Livermore on the south. For rich soil, thorough cultivation and fine farm buildings this beautiful valley compares very favorably with any agricultural section on the coast.

Among the more prominent ranches in this section may be mentioned those of August Hemme, Cook's, or the "Railroad Ranch," Capt. Harrison's, Glass, several of the Stone family, and many others, on all of which the barns, dwelling-houses and other farming appurtenances are of the very highest order, either for stock or grain-raising.

The yield of grain is frequently immense, and the herds of fine horses and cattle to be seen in this valley are well worth the cost of the trip. We stopped one night at the pleasant home of Mrs. M. J. Harlan, near San Ramon village. She is quite extensively engaged in stock-raising, and from all appearances is making it pay. On the ranch of E. P. Smith of Alamo we were shown a barley-field from which Mr. S. harvested 100 bushels of barley per acre, and this is not an uncommon yield on this land, either.

Ignacio valley is another fine tract of level land, dotted with several thriving villages. Passing these, we next went over to Antioch, by way of the "used to be" noted coal mines of the Mount Diablo district. Here we found the most desolate-looking region that my gaze ever rested upon. The mines are almost deserted now, and I hurried away as soon as possible, down into the San Joaquin valley, in the eastern portion of the county—a section quite familiar to the traveling public, as it is directly on the line of the S. P. R. R. and also bordering on the San Joaquin river.

I next went to Brentwood, and from there to that somewhat notable resort for invalids, called Byron Springs. There are in this place about a baker's dozen of the springs, each warranted to cure some particular disease, and the water of each separate spring tasting, if possible, more villainous than the others. However, the hotel here seems to be well patronized, and the managers are very pleasant gentlemen who have built up a very beautiful and convenient resort for all who wish to try the virtues of the water.

On my return trip to Oakland, I stopped awhile at the splendid mansion and grounds of Judge Robinson, situated on the river, a little below Antioch. If there is another spot in California that can surpass this, as a work of art, we have yet to see it. "A perfect paradise!" was my first and last exclamation at this lovely homestead. This is a portion of the great Robinson grant, containing over 30,000 acres.

From here I went through Willow pass via Concord and Pacheco, to Martinez, the county-seat, a large and thriving town situated on the Straits of Carquinez, and also on the S. P. R. R. This is a beautiful place and contains many fine residences, and as it is the main shipping point for a large farming country in the rear, the trade of the town is increasing very rapidly. In the immediate vicinity of Martinez are some of the best small vineyards in the State, among which we notice those of Dr. Strentzel, J. Muir, John Swelt, E. B. Smith, H. Raap, L. Eddy and many others, all of which produce the very finest varieties of both table and wine-grapes—the former growing on the flats, and the latter on the hill-land.

From this point we took the road again for Oakland, but lingered a short time in Alhambra valley, to inspect the vineyard of John Swelt. Here is a good illustration of what pluck and perseverance, aided by a little capital and a good deal of common sense, can do in creating a little garden of Eden out of what was but a few years ago nothing but a waste. Standing at the head of the valley near the school-house above Mr. Swelt's place, I recalled some of Irving's magnificent descriptions of Andalusian scenery, and came to the conclusion that this valley was happily named the Alhambra.

Hurrying on, I next reach the more than half Portuguese village of San Pablo, noted for being the home of the ancient Castros, "one of the early Spanish families," who still claim a very extensive tract of land in this valley.

Here we turn back to take in the Selby Smelting Works, and from thence down the bay shore, halting at all the powder-mills and

other factories which line the coast from Port Costa to West Berkeley. Night overtook me at the ranch of one of the old subscribers to the RURAL, Benj. Boorman, near Stege's station, Contra Costa county. I gladly accepted his kind invitation to stay over night with him, and while there had the pleasure of inspecting some of the finest specimens of horseflesh to be found on the coast. Mr. B. is very enthusiastic on the subject of thoroughbred stock, and has on the ranch at the present time three very handsome gray stallions of the noted Percheron-Norman breed, one four, one six and the other seven years of age, ranging in weight from 1400 to 1800 pounds. These animals are high-spirited, holding their heads well up, clean-limbed, with good action, and all lovers of fine draft horses would do well to examine Mr. Boorman's stock. Mr. B.'s ranch is also well stocked with a fine lot of colts and mares of the same or similar breeds, and taken altogether, shows very plainly that Contra Costa can hold her own in the way of raising fine horses with any county in the State.

From this place we drove into Oakland by the way of the University grounds and arrived at home travel-stained and weary but well pleased on the whole with our trip, and feeling that we had acquired some new ideas about Contra Costa county.

W. W.

From Modoc County.

EDITORS PRESS:—Your papers come to me regularly, and I assure you I particularly enjoy the RURAL. Occasionally I see some little mention made of this county, but not nearly as much as she should have or would have were her resources known. Modoc county has been to a large extent controlled by stockmen, who have in every way discouraged settlers coming in; but as the central and southern parts of the State have filled up, home-seekers have turned northward, and while this portion of the county is the extreme northeastern corner, many immigrants have arrived within the past two years, settled upon government land, and are now making themselves homes. The county has a different aspect now from what it had when I came here two years and a half ago. The time is not far distant when there will be a railroad through these valleys, and then you will see a rush to the North equaling what there has been the past year or so to the South.

This (Goose Lake valley) and a number of others—Fall River, Big Round, Hot Spring and Surprise valleys—are of considerable extent, and have a soil as productive as is to be found in any part of California. Goose lake is a fine body of water, 45 miles long with an average width of 12 miles. On the eastern shore, the whole length, are to be found many fine farms.

This has been a poor grain season; but notwithstanding that, many of the farmers have produced from 30 to 45 bushels of wheat, 50 to 70 bushels of oats and about 40 bushels of barley per acre. Prices have been good; wheat from 1½ to 1¾; oats, 1¼, and barley, 1¼ per pound. There was over an average crop of hay, and as fine Timothy and Red Top as ever grew.

Many of the farmers have put out small orchards, which they did as experiments, for many thought fruit would not do well here. A few of the trees have come into bearing, and proved that the climate is particularly adapted to apples, of which I think I have seen as fine grown in my immediate neighborhood as I have ever seen in any part of California. Knowing you to be a better judge of such things than I am, I have sent you per to-day's express, via Reno, a small box containing samples of 11 varieties of apples grown here.

Our altitude is 4679 feet above sea-level; nevertheless, we raise as good vegetables as the San Francisco market affords. Owing to the fact that they grow very rapidly, they are tender, juicy and of fine flavor. I put in the box two of our "Modoc lemons," alias spuds, alias potatoes, than which no county in the State raises better, as I think you will say when you come to eat them.

I wish you could take a trip up here. You would enjoy it very much, I am sure—good hunting and fishing, fine climate, best of water, and plenty of it. All we lack is a boat on the lake to give us an opportunity for any kind of enjoyment. Hoping this may find you and family in good health, and that the box will reach you in due time and the contents be acceptable, I remain truly yours,

GRANT I. TAGGART.

Willow Ranch, Modoc Co., Nov. 5, 1887.

[The box came safely, and the contents proved excellent. We thank our correspondent and should be pleased to have him write again.—EDS. PRESS.]

AMERICAN FOR THE BEST.—In the new yacht which won the race on the occasion of Queen Victoria's jubilee, and now supposed to be the fastest in the world, the masts are of Oregon fir. The fine woods from Australia, Norway, and all other countries where mast timber is secured, were tested thoroughly and rejected as not equal to our fir.

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THE VINEYARD.

Difficult Fermentations.

University Experiment Station Bulletin, No. 75.

Complaints of difficult fermentations have been very general during the vintage just past, and a great deal of red wine especially has refused to "go dry" within the usual or any reasonable limit of time. It has long been my conviction that in the vast majority of cases the difficulties complained of arise from excessive heat during and particularly at the beginning of fermentation. At the end of last year's vintage, a number of comparative fermentations were made at the University Viticultural Laboratory, partly with a view to testing this question; but it being late in the season, the only grapes available for the purpose, viz., second-crop Zinfandel, were not of a character to test the point, having high acid (.65) and low sugar (21.6); and the high temperature attained seemed to accelerate, rather than retard, the fermenting process. This season, 16 fermentation experiments, parallel with those of last year, have been made, and the results of some of these throw so much light upon the causes of "difficult fermentations" that it seems proper to give publicity to them in advance of any detailed report on the whole series.

Equal charges of 200 pounds each were fermented in 50-gallon tanks, save that in the hot fermentations 25 pounds more were used, in order that the rise of temperature might be favored by greater mass. In the hot chamber a temperature of between 85 and 90 degrees was maintained; while in the fermenting-room in which the other charges were being treated, the temperature was kept as nearly as possible at 75 degrees. The grape employed was a fine lot of Carignane, courteously donated for the purpose by A. J. Salazar Jr., of Mission San Jose. The must showed 25.75 per cent by spindle, and .53 per cent, or a little over five *pro mille*, of acid.

Of the tanks in the fermenting-room, filled with mash at 63 degrees, three, treated by usual methods, went practically dry and were sent to press on the seventh day; the first to finish being the one with "floating cover and twice-daily stirring," the method adopted in the laboratory for general purposes. The highest temperature reached by any of these was 95 degrees.

On that day (7th) the two tanks in the hot chamber, which had in setting been warmed up to 86 degrees and at first fermented most violently, and in 43 hours attained a maximum temperature of 106 degrees, had come down to very slow movement; the actual solid contents were found to be a little over 12 per cent. It being obvious that they would not "go through" under existing conditions, the two charges were divided into four parts, of which one was left in the hot chamber and treated as before, in order to observe the outcome. The others served for experiments to test the best mode of reviving the fermentation in the lower temperature of the fermenting-room.

One portion received 1½ per cent of pomace, freshly pressed from one of the other tanks, and well stirred in; floating cover put on and well stirred three times daily. Fermentation soon revived, and went on slowly, but steadily, until the seventh day, when the charge was sent to press, practically dry.

One, a double portion of 19½ gallons, was mixed with 2½ gallons of condensed Zinfandel must set at 21 per cent with distilled water, and having been allowed to pass into active fermentation before mixing with the "stuck" mash. Fermentation soon set in, and slowly but steadily carried it to dryness on the 17th day, being eight days from the time the fresh must was added.

The fourth portion was left without any addition, but was from the time it left the hot chamber vigorously aerated, by means of an air pump, three times a day. Fermentation soon revived, and the charge went dry and was sent to press at the end of the sixth day from the time it was removed from the hot chamber, being nearly two days in advance of the other tanks treated with pomace and must respectively, but aerated only by ordinary "foulage" with a cross-per stirrer.

It thus appears that simple aeration, without the addition of any new yeast, was at that stage of the mash that had "stuck" in consequence of overheating, the most effectual mode of reviving and completing the fermentation. The pressed wine had the same acid-percentage as the original must, and is free from acetic taint.

As for the portion that remained in the hot chamber, it continued a feeble action for some time, but on the 14th day from the setting of the mash it had practically stopped. It was then removed to the fermenting-room, and after cooling down to 75 degrees and aerating by the pump, a faint revival of fermentation took place for 36 hours. Then the cap sank and the tank was "dead." The day after, the odor and taste of milk-sourness became so patent that the mess was sent to press with over nine per cent of solids, as a dead failure, on the 17th day; a woful, but in practice but too familiar example of the results of hot fermentations.

I reserve for the future a detailed discussion of the subject, in connection with other experi-

ments, but the main points illustrated may be briefly thus stated:

1. While musts of low sugar contents and high acid may be successfully rushed through to dryness at a high temperature and make a sound wine, the same is not true of those having high sugar and low acid; the margin of difference between the two cases is a very narrow one, both as to temperature, acid and sugar, and hence a few days of hot "norther" may easily turn the scale.

2. When the temperature has not been excessively high, and not maintained too long, simple aeration by means of a pump or blower may revive it at a lower temperature. Sound pomace, or fresh fermenting must, are additions to be used when available or necessary.

While these facts and principles are not new to experts, I have thought it worth while to re-establish them by facts and figures, and to offer them as a substitute for the supposed mysteries of "difficult fermentations" that have so vexed our winemakers. The vatting of hot and overripe grapes and the omission of proper aeration of the mass, while allowing the surface to acetify, are responsible for nine-tenths of all unsoundness in California wines.

E. W. HILGARD.

Berkeley, Nov. 17, 1887.

The Condensed Must Establishment.

So many allusions have been made to the Springmuhl condensed must establishment which has been put in operation this year at Geyserville, Sonoma county, that no doubt many readers will be interested in the following description which we find in the Healdsburg Enterprise:

It is of general interest to the State at large to learn of the complete success of Dr. Springmuhl Von Weissenfeld's condensing machinery now in operation at Geyserville, Sonoma county. Its first use is in condensing grape must to one-third its original density, thus preventing any fermentation, and preparing it for shipment to London to be made into wine.

The capacity of the condensing machinery is four tons of grapes per hour, though it is only being run to half its capacity this year. Thirty men are employed in the works, some engaged in making barrels, while others are handling the grapes in their different manipulations. The machinery is kept in operation day and night. A. S. Howard is superintendent, C. A. Morrill, foreman, and Walter Lawson, chief engineer.

On an elevation are two large chambers which are called the condensing pans. In the bottom of the pans are pipes running crosswise similar to the tubes in a steam boiler, through which steam passes. The steam is generated in an immense boiler, heated from a furnace of four sections. Pumps are used to exhaust the air from these condensing pans, making a complete vacuum. The grapes are received from the wagons into an elevator and carried to a crusher which is on an elevation of about 30 feet. The stems are removed, while the grapes are crushed and thrown aside as refuse. The juice or must is separated from the pomace and run into a large tank which is below the ground floor. The pomace is carried to a hydraulic press, where it is given the heaviest pressure possible. Herein is the greatest obstacle of the process. The power of the press is insufficient to expel the entire quantity of juice and leave the pomace entirely dry, which is absolutely necessary and an essential part, for no juice should remain in the pomace.

To overcome this difficulty the pomace is pressed for the second time in a screw press, worked with a lever and by hand-power, making it a very slow process. To this part of the operation the inventor gave the least consideration, having confidence in the presses now in use, and consequently the must-condensing machinery has been delayed in its operation on account of its being impossible to have the pomace pressed with the same speed as the condenser does its work. When the condensing pan is made a complete vacuum the must is received into it by opening a valve, which is connected by a pipe with the tank of must, and according to hydraulic principles, the pan is filled to the desired depth. The steam is then introduced into the pipes at the bottom of the pan, and in a very few minutes the must is boiling at a furious rate. The temperature of the must during boiling in vacuum varies from 104° to 112° F. It is by the low temperature in boiling that the aroma, commonly called bouquet, and natural flavor is retained in the must, as well as preventing it from burning. The evaporation that takes place is entirely of water, the sugar remaining in the must. Large quantities of cold water are used to condense this steam, and pumps are used to remove it without allowing air in the vacuum. For four hours this boiling continues until the must is reduced to one-third its former bulk; that is, the must, composed of 23 to 28 per cent sugar before entering the condensing pans, is reduced until the sugar is increased to 75 per cent, when it is finished. A valve is now opened and the boiling at once ceases, the steam is shut off and the condensed must is ready to be drawn off. The dry skins and seeds, or the pomace proper, is saved, and as the condensed must is run into a trough the skins and seeds are thoroughly mixed with it, after which it passes into the 50-gallon barrels for shipment.

Thus it will be seen that no property of the grape has been removed that is essential in

making wine. All the sugar is retained with the bouquet and natural flavor, and the seeds and skins contain the desired tannin. The must thus condensed will keep from fermenting for years, and will improve with age as well as wine, so that after two years wine can be made from the condensed must of as good a quality as wine that was aged to that time. The converting of the must into wine is a simple process. Distilled water is added to the must until the proportion of sugar has been reduced to its former state—that is, to 23 to 28 per cent—and having the temperature favorable, fermentation will commence just the same as though it were fresh from the grape.

Fifty gallons of condensed must will make 150 gallons of wine. Thus it is seen that 50 gallons of must is equivalent to one ton of grapes.

Dr. Weissenfeld's invention is of more importance than is at first supposed. In the first place, the must is shipped to London free of duty, for it is not a spirit, but merely a fruit juice, and is not liable to any duty. A new market is also opened, which, comparatively speaking, is so large that it is impossible to supply the demand. The wine made from this must can be sold at a figure far below the present price of wine in that country and still allow a per cent for dividends.

The same plant can be used in making an extract of tanbark, and 10,000 cords, which can be readily had in Mendocino county, will be wanted in all probability as soon as the grape season is over. The plant can also be used to condense milk, and an effort will be made to induce the ranchers of the vicinity to keep more cows and supply milk, which, when condensed, will be taken to the San Francisco market. Only water would be extracted from the milk, which can then be kept for 30 days, and when the same quantity of water is added, it is as pure as the fresh milk and more healthy than the milk commonly used in cities.

A new town has been laid out, and a railroad station called Springmuhl has just been erected. Mr. Shorb and Dr. Von Weissenfeld have bought a tract of land around Springmuhl station, and a number of houses and cottages will be built for the employees of the firm. The whole land bought, except the part reserved for the town, will be planted with vines and will be cultivated by employees of the must company.

ENTOMOLOGICAL.

Spray and Band Treatments for the Codlin Moth.

University Experiment Station Bulletin, No. 75.

During the summer of 1887 careful observations have been made of the efficacy of spraying with arsenical compounds and of the band treatment for the reduction of the codlin moth, *Carpocapsa pomonella*. This insect appeared in the University orchard a few years ago, and during last year was quite abundant. The success reported by Prof. S. A. Forbes, State Entomologist of Illinois, in spraying with Paris green for the destruction of the larvæ as soon as it begins to feed in the calyx of the apple, and similarly good results reported by several California apple-growers, suggested that a set of experiments with arsenic and its compounds should be made in the University orchard, where more time could be given to an accurate account of results than a busy fruit grower could devote to such work. As it was known that W. G. Klee, State Inspector of Fruit Pests, was conducting similar experiments on his own farm and was keeping accounts of experiments by others, it was thought best that the University experiment should be given a direction similar to his, that the results of all experiments could finally be brought together and serve for purposes of a wide generalization. For this purpose Mr. Klee was invited to prescribe the applications to be made. He did so, and assisted personally in the preparation and application of the poisons—a service for which we make due acknowledgment.

Application was made of three substances, white arsenic, Paris green and London purple, and each in different strengths, as will be specified in the tables which will be given below. The white arsenic was dissolved in hot water; the Paris green and London purple were kept as thoroughly stirred as possible while being drawn up by the pump. The drenching of the trees was quite complete, the spray being especially directed upon the clusters of fruit which in most cases were still upright, so that the drops of the liquid were caught and held in the calyx end. There was, of course, much difference in the size of the fruit, as the orchard comprises a large collection of summer, fall and winter fruit. Trees were selected, however, as carefully as possible, which had the fruit of the best stage of growth, say from the size of a pea to that of a small marble, at the time of the first spraying.

The tables will show that in most cases three applications were given, all within 30 days from May 3d. During that period the records of the University meteorological observatory show that rain was measured but once, and then but one-twentieth of an inch, and in the month of June there was but a sprinkle, even less in

amount, so that the weather was perfect for the retention of the poison on the fruit.

The University orchard is planted with two trees of each variety, and in these experiments one was sprayed and the other reserved without treatment, so that a comparison, each tree with one of its own variety and age, could be made. The orchard was guarded in such a way that no outside interference could be had with the fruit. Twice a week all the fruit which fell from the sprayed trees and from the check trees, unsprayed, was examined and careful entry made in a book prepared for the purpose, of all worms found in the fruit, of all fruit from which the worms had escaped, and the number of worms found under the bands of sack-cloth, which were placed upon all the trees. This plan of procedure was faithfully carried out until November 1st, when all the fruit remaining at that time was removed from the trees, examined for worms and the experiment closed.

The following tables show a summary of results. The full report, with details of procedure and deductions therefrom, is reserved for our next annual report.

was secured by a string tied around near the center so as to furnish crevices at both the upper and lower edges, to accommodate worms coming from either direction. All these bands were removed on a certain day each week, the larvæ counted and killed and the bands replaced. At the same time all the fallen fruit was gathered, examined for worms, or to see if worms had escaped, and records of these facts kept separately. The full statement of this investigation is not yet ready, but a brief summary of leading results may be given as follows:

Row No.	Larvæ under bands.	Larvæ in fruit.	Other damaged fruit.	No. trees in row.
Pears 9.....	31	27	71	22
10.....	42	58	142	35
11.....	73	42	127	37
12.....	125	34	180	38
13.....	56	34	115	38
14.....	137	34	226	39
15.....	83	54	226	38
16.....	45	19	95	15
Apples 16.....	4	1	19	17
17.....	91	48	202	32
18.....	57	14	102	25
19.....	89	89	446	24

Paris Green—One Pound to 160 Gallons of Water.

Fruit.	Variety.	Dates of Application.	Apparent Effects.	Worms in fruit under bands on untreated tree.	Worms in fruit under bands on treated tree.
Pear....	Nouveau Poiteau.....	May 3d and 19th.....	None.....	10	23
Pear....	Nantais.....	May 3d and 19th, and once later.	None.....	4	4
Apple....	Red Canada.....	May 3d and 19th, and June 1st..	None.....	4	35
Totals.....				18	62
Gain, per cent ..				71	

Paris Green—One Pound to 320 Gallons of Water.

Pear....	Duchesse Precoce.....	May 3d.....	None.....	3	8
Pear....	Dr. Reeder.....	May 3d and 19th.....	None.....	1	27
Pear....	Chaptal.....	May 3d and 19th, and June 1st..	None.....	6	1
Apple....	Duchess Oldenburg.....	May 3d and 19th.....	None.....	0	1
Apple....	Fameuse.....	May 3d and 19th, and June 1st..	None.....	9	4
Totals.....				19	41
Gain, per cent ..				54	

Paris Green—One Pound to 160 Gallons of Water, with Two Pounds of Soap.

Pear....	Beurre Gris d'hiver	May 3d and 19th*.....	None.....	5	2
Apple....	Wells' Sweet.....	May 3d.....	None.....	3	3
Apple....	Duchesse Mignonne.....	May 3d and 19th.....	None.....	1	13
*Considerable settling in can.				9	18
Totals.....				9	18
Gain, per cent ..				50	

London Purple—One Pound to 160 Gallons of Water.

Pear....	DeTongrest.....	May 3d.....	Badly injured.....	13	21
Pear....	St. Michael Archangel..	May 3d.....	Badly injured.....	4	0
Apple....	Disharoon.....	May 3d and 19th, and June 1st..	Little damage.....	9	9
Apple....	Yopps' Favorite.....	May 3d and 19th, and June 1st..	Little damage.....	5	7
†Two and one-half gallons of wash used				31	37
*Strength of second and third sprayings, 1 lb. to 220 galls. water.				16½	

London Purple—One Pound to 80 Gallons of Water.

Pear....	Émile de Hoyet.....	May 3d and 17th,* and June 1st*	Fruit and foliage damaged	19	6
Pear....	Madame Treveye.....	May 3d and May 18th*.....	Fruit and foliage damaged	0	24
Pear....	Augustus Dana.....	May 3d.....	Fruit and foliage damaged	0	4
Apple....	Seck No Further.....	May 3d.....	Badly injured.....	16	51
*Strength of second and third sprayings, 1 lb. to 220 galls. water.				35	85
Totals.....				35	85
Gain, per cent ..				59	

White Arsenic—One Pound to 320 Gallons of Hot Water.

Pear....	Callebasse Monstreuse..	May 3d.....	Foliage little damaged....	4	3
Apple....	Grimes' Golden Pippin..	May 3d and 19th.....		1	0

White Arsenic—One Pound to 480 Gallons of Water.

Pear....	Ott.....	May 3d.....	None.....	0	1
Apple....	Earlv Joe.....	May 3d.....	None.....	0	17

White Arsenic—One Pound to 640 Gallons of Water—with Soap.

Pear....	Napoleon.....	May 3d and 20th, and June 1st..	None.....	1	3
Apple....	Hall.....	May 3d and 19th, and June 1st..	None.....	0	No check.

These applications were all made to effect the first brood of the moth. The figures of infested fruit are all small, for in Berkeley, as in most places along the coast, at least, the first brood of the moth was unusually small this year. This fact would not necessarily interfere with the percentage of gain by the treatment.

In the case of the white arsenic the record of worms is so small and the result so contradictory in that the stronger wash gave a percentage of loss while the weaker gave a percentage of gain, the inference is that the worms were not on hand to be killed. Undoubtedly allowance must be made for chances of this kind in all experiments including only a tree or two. One codlin moth is said to deposit anywhere from 50 to 200 eggs, and so a single moth by presence or absence might produce a great difference in an experiment. When the pest is abundant there is of course less danger of such results.

The experiments with Paris green and London purple are more satisfactory, as more trees are included, and worms are found on all, which shows that the moth visited the trees more freely. The percentages of gain must be considered very satisfactory, and the stronger applications, barring injury to foliage, produce the best results. In the case of Paris green, the application of a wash with one pound of Paris green to 160 gallons of water must be regarded as very satisfactory, giving a gain of over 70 per cent of good apples and pears and not doing any injury to foliage or fruit. The susceptibility of trees to injury seems to vary with the kind of fruit and the variety as well, and may be affected by other conditions. This is a matter which needs full investigation.

Examination of the Band Treatment.

In order to determine some points about the efficacy of banding apple and pear trees for the destruction of the larvæ of the codlin moth, an accurate record has been kept in the University orchard during the past season. The bands were put on early and consisted of strips of old sacks. The strips were five or six inches wide; the ends were allowed to lap well and the band

20.....	163	61	320	26
21.....	83	40	153	25
22.....	32	22	81	21
23.....	74	31	191	16
24.....	3	0	8	9
Totals.....				1188 608 2704 457

This summary shows that while 2704 apples and pears were found from which worms had escaped, there were found under the bands but 1188, or 44 per cent, the remaining 56 per cent includes worms which found nesting-places elsewhere or perished. The assistant, who kept the record of this experiment, assures me that he believes many of these were eaten by birds which were always working over the ground while he was in the orchard. The others must have concealed themselves under cloths to spin their cocoons, for there is no loose bark on the trees, and no rubbish or fences in which they could hide. It would seem from this experiment that the bands catch less than half of the worms which gain access to the fruit, and yet the destruction of this proportion of fully fed and healthy larvæ must be considered very satisfactory. As all the losses by birds or other enemies of the worm by accident and by other agencies which destroy insect life must be taken from the percentage of worms not found under the bands, it will be seen that the old method of treatment is still one of the most effective that can be employed.

E. J. WICKSON.

Berkeley, Nov. 19, 1887.

A DANGEROUS INVENTION.—A Russian lieutenant of engineers has perfected an apparatus for intercepting telegraph and telephone messages in time of war. The apparatus is contained in a small oblong box and weighs rather less than three pounds. The telegraphic receiver is of the recording type, and a battery for returning false messages to the enemy forms part of the equipment. An invention of the nature above described cannot fail to be dangerous in the hands of unscrupulous persons.

PATRONS OF HUSBANDRY

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

The Grange and the Signal Service.

At a meeting of the San Jose Board of Trade last Tuesday week, Bros. Pettit and Sanders were introduced as representatives of the Grange, and the latter proceeded to speak of the U. S. Signal Service. As reported by the *Mercury*, he said that the prognostications are made with great care, and the bulletins issued are reasonably reliable. These bulletins would be sent to any one desiring them from the signal station at S. F. free of charge. Leading papers give them regularly and the results in many instances are valuable. The farmers, however, could not always send for bulletins, nor could they always get their daily papers. The Grange Committee has considered this matter and come to the conclusion that a regular code of signals, exhibited from some salient point, would be of great value to them, as they could see it without coming to the city. They had thought of the courthouse flagstaff and the electric-light tower, and were even on the point of waiting upon the manager of the *Daily Mercury* to ascertain if some arrangements could not be made for the displaying of certain signal ensigns from his building. He thought the Grange would be willing to furnish the flags, etc., if the board could suggest or devise some means of securing the assistance of some one who would pay attention to the matter, and raise or lower flags in accordance with the changes in the bulletin.

President Moody thought perhaps the papers would be loth to assist in an enterprise of this kind, as it would deprive them of a good item and might possibly cut some figure in their subscriptions.

Mr. Sanders thought it would cut no figure at all. He said he was a regular subscriber of the *Mercury*, although he received his mail but two or three times a week. They would all want the papers.

Mr. James moved to appoint a committee of three to investigate the matter and see what could be achieved. Carried. Messrs. James, Oadwallader and Potts were appointed.

State Grange Mention.

The State Grange was organized at Napa City, July 15, 1873, there being 36 Granges then eligible to representation: No. 1, Pilot Hill, El Dorado Co., first organized, several years previously, then being dormant. Of the representatives present at the organization at Napa, there were five charter members in attendance at the recent session in Santa Rosa, viz: G. W. Davis of Santa Rosa Grange, Nelson and Hannah Carr of Bennett Valley, A. T. and S. H. Dewey of Oakland; Past Master S. T. Coulter, also attended that part of the organizing session, held in the fourth degree only. Interested ever in the farmers' cause, he was one of the few good Patrons present outside of the State Grange representatives. Ever since that session, nearly all transactions of the State Grange have been in the fourth or subordinate degree. Some time we hope all the State charter members will hold a reunion, inviting all veteran Patrons to join in a recital of the pleasures and incidents of "long ago."

EXCOMMUNION ON BRO. WEBSTER.—A Creton correspondent of the San Luis Obispo *Tribune* is warm in his admiration of Bro. Webster's achievements. He says: The successful exhibit of the Hon. J. V. Webster at the fair of the various products of this section of country seems to have been a big surprise to croakers on the other side of the mountain. They had proclaimed it to the world, in a manner, that there could be nothing grown over here; the land was no good, climate too hot and dry; all this country was good for was for a stock range. . . . I understand that on his exhibit of grapes he had to compete with the best the vineyardist could raise on the coast side, and in other articles he stood out grandly alone. It is conceded that you can raise on the coast side many of the common and coarser products of the farm, such as squashes, pumpkins, beets and the like, but when it comes to the finer articles, extra grapes and other choice fruits, with sugar-cane added, we are away ahead. The products of our soil on this side of the mountain grace the tables of those who wear purple and fine linen. Such men as Hon. J. V. Webster are going to accomplish all that is claimed for this section. A few such men are of more worth to the development of the country and the actual increase of wealth and population than all the big cattlemen and grain-ranchers combined, for they utilize their land to the best advantage in paying crops, giving employment to many, while the others grasp for a large scope of country, shutting out an increase of population.

PAST MASTER COULTER will speak at Oakland, December 31. Other P. M.'s and State officers are expected to take leading parts.

STOCKTON GRANGE, Secretary Root writes, will celebrate on December 3d. All other San Joaquin Granges are invited to co-operate.

Pomona of State Grange.

Our engraving represents with photographic accuracy Mrs. E. Z. Roache, as she appeared dressed for the Pomona Feast at the late session of the California State Grange, at Santa Rosa. The beautiful form and brilliant, variegated hues of the natural grapes and other fruits, composing the sash, bouquet and head-dress, with her commanding figure and queenly bearing, won the admiration of all beholders.

She was born in 1853 at Aurora, Ill., where in girlhood she attended the public school. At the age of 13 years, she organized and taught a private school, and by teaching from time to time earned money enough to obtain a musical education. Entering the State Normal school at Bloomington, she took the full course of that institution and graduated well up toward the head of a large class.

After nine years' successful teaching in El-

voice she has richly entertained and highly edified them.

Her original recitals and selections have always been such as to stir deeply our love for poor humanity, and animate our hearts with nobler purposes, and nerve our hands to better deeds. Those who have listened to her eloquent appeals for equal rights for her own sex—and all humanity—will never forget Sister Roache, or cease to admire her for her devoted and able efforts.

Brother A. P. Roache, her worthy husband, as a member of the literary and other committees, during the past four sessions of the State Grange, as well as by his original contributions and recitals, has fairly earned the favor of his fellow-Patrons, and was well entitled by his fidelity to the cause and well-trained abilities to the office of Steward to which he was chosen. Laboring unitedly on their farm, near Watsonville, Brother and Sister Roache are happily climbing together the hill of hard-earned success. In favor of woman suffrage and equal



Photo by Piggott, Santa Rosa.

MRS. E. Z. ROACHE, AS POMONA OF STATE GRANGE.

gin, Chicago and other cities, she began to feel an urgent need of rest. Having by this time laid by considerable money, she indulged herself in the tour of some of the principal Eastern cities, visiting the Centennial Exposition at Philadelphia, and going thence to New York, Boston, Niagara Falls, Toledo, Washington and other places.

But California, it appears, was the Mecca of her desires, for which she presently set forth with the courage so characteristic of all her actions, and February, 1877, found her in San Jose, alone and an utter stranger. By the 24th of that month she had secured a school and commenced teaching at Watsonville. A year later she received a life diploma, and on Feb. 22, 1878, married A. P. Roache of Watsonville, where she now resides.

Soon joining the Grange, she was repeatedly chosen Lecturer and is now Overseer. About two years ago she was elected to the Board of the Grangers' Union Co-operative store, and has this year been made Vice-president of the Pajaro Valley Fair Association.

All Patrons may well be proud of their Pomona for the past two years, for by pen and

rights, they practice as they preach, keeping but one purse held in common possession between them. They certainly well deserve a noble success whether accorded them in this selfish era or not.

Both have kindly and intelligently supported the Grange and Agricultural Press, and ardently labored for the establishment of the Agricultural Fair recently held with success at Watsonville.

In common with Patrons of California best acquainted with the sensible, modest and faithful services of Sister Roache, we are proud to bear our testimony to her rare abilities and virtues.

Grange Day Celebrations.

The twentieth anniversary of the Order of Patrons of Husbandry will be duly commemorated at Oakland on Saturday of next week by Eden and Temescal Granges, who invite all Patrons in good standing to join with them on the glad occasion.

Enterprise Grange, Sacramento Co., has decided to commemorate the birth of the Order of

Patrons of Husbandry by calling the Grange together at 10 A. M. December 3d. Will confer the fourth degree on a class, have a Harvest Feast and a general good time.

Rev. Dr. C. C. Stratton, the able and eloquent president of Mills seminary, will address Tulare Grange Dec. 3d, appropriately to P. of H. birthday. We presume all farmers are invited.

Sacramento Grange has invited the other Granges of that county to join in a hearty celebration of Grange birthday. Further particulars next week.

The National Grange at Work.

Telegraphic reports to the S. F. dailies show that the National Grange got down to its work promptly.

LANSING, (Mich.), Nov. 16.—The twenty-fifth annual session of the National Grange was called to order in Representative hall this morning by Worthy Master Put. Darden of Mississippi. The Committee on Credentials reported representatives from 31 States present.

The Worthy Master's annual address shows the Order to be in a very prosperous condition, 174 new Granges having been established since last report and many dormant ones revived. The State Grange of Nebraska has been re-established. With Rhode Island, which has recently fallen into line, the circle of States is now complete. The address commends the Interstate Commerce bill, and recommends having agriculture represented in the Cabinet.

After him short addresses were made by E. A. Giller of Illinois and others, and in the afternoon a public reception was given the National Grange by the local Grange of Lansing and citizens. The address of welcome was given by Michigan's Granger Governor. The prettiest feature of the reception was the exercises of 36 young ladies of the city, who personated Columbia and the sisterhood of States in costume.

William L. Overhiser, Master of the State Grange of California, has brought here a carload of the products of Northern and Central California, which will be placed on exhibition tomorrow. When this meeting is over, Mr. Overhiser says, it is his intention to present this exhibit to Chicago with a promise to enlarge it and keep it replenished.

Nov. 17.—The Grange held a closed session this morning, when the Secretary and Treasurer made their reports. The former showed the satisfactory progress of the Order. Resolutions were introduced and referred favoring the establishment of a postal telegraph system, changing Section 4 in the interstate railroad law, asking for a law prohibiting the adulteration of food and dealing in futures, and asking for representation in the Cabinet.

Reduced Postal Rates for Seeds and Plants.

Nov. 19.—At to-day's session of the National Grange of Patrons, nearly 1000 people were present. It was decided to make the United States Commissioner of Agriculture a member of the National Grange whenever he is a Patron. The Secretary of the National Postage Improvement Company sent a communication. He proposes a plan to reduce the postage on seeds, the use of fractional currency in the mails, the abolition of postal notes, and the issuing of money orders of \$5 or less for a fee of three cents. Lecturer Whitehead reported that he had visited 23 States, delivered 263 lectures, and circulated 6000 tracts and circulars. The afternoon and evening sessions were occupied in conferring the fifth and sixth degrees.

The California Exhibit a Great Center of Attraction.

The California exhibit continues to be the center of attraction. The California grapes probably excel those of any other State, and they are here at their best. A large display of silk, silkworms and cocoons is a very interesting feature. At the close of the meeting these will go to Washington, while the fruit, wines and the balance go to Chicago on permanent exhibition.

Modifications in the Patent Laws.

Nov. 21.—At to-day's session of the National Grange constitutional matters were discussed. It was concluded to allow the sixth degree to be conferred by subordinate Granges. A resolution recommending a reduction of the postage on seeds, the abolition of the system of postal notes and reissuing of fractional currency was adopted.

The Executive Committee recommended the establishment of a permanent bureau in Washington where the secretary can have an office and keep his records. Amendments were also recommended to the patent laws, the Grange believing they were working an injury to the agricultural classes.

Friendly Words From Tulare.

DEAR FRIEND AND BROTHER:—Tulare should feel honored in the choice made for the meeting of the next State Grange, and I have not the least doubt but that she will do her best to prove, and will prove, the wisdom of the Grange in their selection.

We have not many side-shows here, but nevertheless they are all here potentially; and the men and women who will come representing the good sense of the Grange will see be-

neath the surface of things, will perceive, beyond the much that has been done in creating a new country, the greater that can and will be done, when men, muscle, money and mental activity will, as they must, take hold of this long-neglected part of California and develop its reserve resources.

Then it is possible—some say probable—that railroads will be here, before the State Grange, that will convey visitors to the foothills, perhaps into the mountains, where are the largest trees and finest scenery outside of the Yosemite valley, as I am told.

Perhaps a visit to the Kaweah colony would be interesting to the curious and to those who are studying the social problems of the day. This colony, I believe, holds possession of the Giant forest, a fine deposit of marble and other mineral wealth. Then there are the Fresno colonies, all worth seeing. I know how busy you must be. I congratulate the readers of the *Patron* on the great improvement in appearance and matter.

Busy plowing and getting ready for next harvest. Yours sincerely and fraternally,
J. W. MACKIE.

[We hope to hear often from Brother M. and other Tulare Patrons.—EDS.]

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

CITRUS FAIR.—*Mercury*: Let the world take notice that on Tuesday, the 20th day of December, 1887, the first annual citrus fair will commence in Oroville, the county seat of Butte county, and continue until Saturday night, the 24th. Everybody cordially and respectfully invited. About \$2300 have been raised to defray the expenses, and as nearly all the fruit will be donated, there will be funds enough to conduct the fair in grand style. The pavilion is to be 50x150 feet, about 40 feet high, the floor will be of matched lumber, high and dry, and electricity will probably be used for lighting.

RIPE ORANGES.—*Chico Enterprise*: This morning W. L. Bradley brought to this office two fine ripe oranges, and this is only the 12th day of November, so that we are only one week behind Oroville in ripe citrus fruit, and two months ahead of Los Angeles. Mr. Bradley has some 300 or 400 young orange trees now growing.

Contra Costa.

SAN PABLO NOTES.—*Item*, Nov. 16: Spud-digging is progressing in the valley. The farmers have baled all their spare straw and are hauling it to Berkeley, where they get 50 cents a bale for it, about 30 cents of which is clear profit. This means for a man, wagon, and team, \$7.50 per day as long as the straw lasts. Winter apples and pears are exceptionally good this year, the damage done by the codlin moth not being so extensive as in previous years, though no means have been employed for their eradication.

A NATURAL FLAG-POLE.—One of the attractions of our town, and one which probably few other towns can boast of, is a natural growing flag-pole. In the lot of County Clerk Wittenmyer, near the Congregational church, is a eucalyptus tree that in the last few days has been trimmed up straight as a spar a distance of 112 feet from the ground, with a head of foliage left on top. James Stewart furnished the flag and halliards, and Mr. De Pue, one of our 200-pound solid citizens, volunteered to place the national colors at this dizzy height on the swaying, slender mast—which he successfully accomplished. Hereafter the "stars and stripes" will float from the lofty top of a tree of our own growth. Another instance of Martinez home production.

El Dorado.

IRRIGATION ENTERPRISE.—*Placerville Observer*, Nov. 15: It is pretty well understood that the Walker brothers of Salt Lake City have offered the Cal. Water Co. \$400,000 for its ditch property, and have already purchased the Fairchild ditches and water right. This secures to them something over 5000 inches of water. They are already constructing a ditch which will be about 60 miles long, and will supply water to those points not at present reached by the Cal. Water Co.'s system. There is also talk of conducting this water into Placer county for irrigating purposes, but this will probably not be done, since all the water will be required within this county after the next three or four years, if the present rate of increase in acreage of fruit continues.

FRENCH PRUNES.—C. Lent of the El Dorado Fruit Ranch has our thanks for a box of the finest dried French prunes we have ever seen. The ranch, of which Mr. Lent is supt., has demonstrated beyond a doubt that the El Dorado foothill-lands will produce this fruit equal to the best imported from foreign lands, and that it is one of the most profitable crops we can handle.

Fresno.

ALMONDS BY THE CARLOAD.—*Fresno Expositor*, Nov. 15: The Grangers' Business Association shipped a carload of soft-shelled almonds to San Francisco this morning. This is the first shipment of the season, and we believe the first carload ever shipped from the county.

Humboldt.

CHEESE-MAKING.—*Ferndale Enterprise*, Nov. 11: We took occasion last week to visit the

Vedder cheese factory, and were surprised to see the thoroughness with which it has been fitted up. The factory is run on the community principle, the milk being furnished by 22 of the neighboring dairymen. Mr. Vedder receives two cents a pound for manufacturing the cheese. Eleven hundred 50-pound cheeses have been made this year, and Mr. Vedder says he has every reason to feel encouraged in his undertaking. This year's business far exceeds that of the previous year, and he intends building a large addition to his already spacious factory. His curing-room now contains about all the cheeses it will hold, and he has found it inadequate for his use. As to the profit to dairymen in this institution, the milk, which, in the shape of butter, would bring them 20 cents, would return 30 cents if made into cheese. Mr. Vedder says the climate could not be better for cheese-making. No better evidence of this fact can be given than the cheese itself. It is as good as the best in the market, and in S. F. commands the highest price.

BRINGING IN MERINOS.—*Standard*: J. S. Cummings, the enterprising wool-grower whose ranch is on Mad river, brought up on the Chester yesterday a number of thoroughbred Spanish merino bucks. They are a fine-looking lot of sheep, and will be taken at once to his Three Cabin ranch.

Inyo.

STORAGE DAM.—*Independent*, Nov. 12: The project so often mentioned of damming the lakes west of Bishop creek is now in a fair way to be realized. The lakes are about 20 miles from the town. Men are now at work clearing the ground for the foundation for the dam. The money for the work is provided by parties in S. F. Water enough can easily be stored to irrigate at least 8000 acres of land. One mile below the dam the canal will enter the land to be irrigated. When the project was first proposed it met with a good deal of opposition from settlers along Bishop creek. More thorough study of the subject has convinced these parties that the work when completed will benefit them in many ways, and all opposition has ceased.

Lake.

POTATO PROFITS.—*Avalanche*: R. P. Eachus this year on 1½ acres dug 12 tons of potatoes, a profit of about \$250 per acre over all expenses. Who says it doesn't pay to raise potatoes in Lake county?

Los Angeles.

CASTOR PLANT.—A *Pomona Times Courier* reporter has lately seen a 2½-year-old castor plant which is without an equal in the neighborhood. It was planted two years ago last July on the place of Richard Mason on Holt avenue, and now measures 30 inches in circumference at the ground, 34 inches at the first crotch. Its height is about 12 feet, and its branches extend over a circle 30 feet in diameter.

BARN AND HORSES GONE.—*Compton Cor. L. A. Times*, Nov. 11: John Gries' large barn was burned last night. It contained 30 or 40 tons of hay and 15 horses, some of them very valuable blooded stock, among which were two valued at \$1000 each. Entire loss, \$10,000 to \$12,000. Small insurance only on the barn.

WALNUTS.—The walnut crop is being shipped and wagon-loads are passing through Anaheim every day on the way to the depot. Walnuts are priced at from 10 to 12 cents per pound to the producers. R. H. Gilman has sold his to Alison, Gray & Co. for 8½ cents. His crop will bring \$3500. Mr. Gilman shipped a ton of Japanese persimmons to S. F. yesterday.

Marin.

RECLAIMED MARSHES.—*San Rafael Journal*, Nov. 17: Owners of Salt Marsh will be interested in a dredging machine now working on the tract of land lying alongside the Novato creek. She is deepening an old China-cut ditch that was originally two feet deep and 22 feet wide. The ditch is made six feet deep its entire width, and the material placed upon the levee alongside; and the dredger is doing this work at the rate of about 350 feet a day. The ranch on which this work is being done is the "Novato Meadows," owned by John W. Ferris. It has been reclaimed eight or nine years, and gives ample proof of the value of our salt marshes. One of the rented farms upon the property, which has altogether 2200 acres in the reclaimed portion, produced last season an average of 40 bushels of barley and 1½ tons of hay to the acre. The ditch is being cut to promote thorough drainage, rather than to increase the levee.

Merced.

A CANAL PROJECTED.—*Stockton Independent*: A corps of surveyors are now running a line for a canal on the east side of the San Joaquin river, taking water from the San Joaquin river at Firebaugh's, in Fresno county. When completed, it will irrigate about 20,000 acres of the finest land in this valley, passing by Atwater and Livingston, Merced county, and emptying into the Merced river at or near Snelling. The head movers in this enterprise are J. J. Stevenson and J. W. Mitchell of the East Side Canal & Irrigation Co., with J. Boggs as chief engineer, and it will be known as the Grand Central Canal Co.

Napa.

LATE PEACHES.—*Napa Register*, Nov. 15: G. J. Turton places upon our table peaches of the late Baldwin variety, grown on his place near Trabody station. He has 70 or 80 boxes of them to put on the market between this and Thanksgiving.

CHERRY BLOSSOMS.—Cherry trees (Black Tar-

tarian) in blossom November 15th in Mrs. Begelsbacher's dooryard at Napa. What think ye of that, residents of the east country?

Placer.

'SIMMONS.—*Auburn Republican*: In the uncultivated lot owned by Mrs. Dunlap, next to the Putnam house, is a little Japanese persimmon bush not over four feet high which has borne an astonishing quantity of fruit this season. There must be nearly a bushel of persimmons on the bush, or was until the donkey got at it the other morning and ate about half of them.

San Joaquin.

ALMONDS.—*Lodi Sentinel*: O. J. Hemphill brought to this office Nov. 12th a sample of four different varieties of almonds, which were raised this year on his property in this city. Every almond was plump and the flavor was excellent. He said the trees, of which he has about 20, had not been cultivated for two years, neither had they been pruned. Notwithstanding, the trees had produced the last two years a crop averaging over 12 pounds to the tree. "One tree," said Mr. Hemphill, "grows at the corner of the house, and the ground around it is packed as hard as the street; but in the past two years we have picked over 100 pounds of almonds (soft shell) from it."... Sen. Langford tells us he has sold another quarter-section of land in the Langford colony to A. T. Hatch. This makes 640 acres which the Solano fruit-grower has bought on the Langford tract. Mr. Hatch says he will put the entire section into almond trees. He has an orchard in Solano county, from which he sold this year over \$90,000 worth of almonds, and consequently knows what he is doing when he invests in San Joaquin county property.

Santa Barbara.

HORTICULTURAL SOCIETY.—*Independent*: The regular monthly meeting of the Santa Barbara County Horticultural Society was held at Burton Mound the 2d inst. Mr. Cadwell, from the committee on fruits, reported the yield this year very abundant, especially apples and pears, although some varieties of the latter will yield rather a poor crop. He also reported that from his observations fruit in general is free from disease. The walnut and almond crop is abundant and of good quality. Mr. E. Cooper will ship 35 tons this season, and Mr. E. Knapp about 25 tons.

Sonoma.

POTATO DIGGERS.—*Petaluma Argus*, Nov. 19: We saw Louis Vestal going out of town Thursday with a four-horse wagon-load of Chinamen and gunny-sacks. We asked him if white labor was scarce and he replied: "I have been trying my best to get along with white men, but they don't stick, and I have been compelled to come in after these fellows and give them 13½ cents a sack for digging—which is more than I ever paid before. It was either that or let the potatoes rot in the ground! Don't talk to me about being 'ruined with Chinese cheap labor.'" He drove on toward the potato mines apparently happy to think that he would get his crop out at any price. Only a short time ago there were plenty of men around here hunting for work, but they seem to have suddenly disappeared.

Tehama.

ORANGES RIPENING.—*Red Bluff Sentinel*, Nov. 17: There are four orange trees in Chas. R. Mayhew's yard filled with delicious fruit, which is already turning to a bright yellow color. There is also a tree in Mrs. Hearn's yard containing oranges well ripened.

Tulare.

LEMONS AND ORANGES.—*Tulare Register*: Congdon & Spence have some samples of oranges and lemons hanging in their windows, which, although not yet ripe, serve to show what can be done in that line. The tree from which the lemons were taken is 12 years old and 13 inches through the trunk. It will produce this season more than 500 lemons. The orange tree is the same age and heavily laden. A fig tree in the same orchard, 14 years old, is six feet six inches in circumference. These trees grow on John Tuohy's place, east of Tulare, in dry bog soil at the edge of the foothills, and have never had care or irrigation.

TULE RIVER.—The farmers in the Tule river region are busy already. Not a great area of alfalfa will be planted this season, but considerable grain will be sown and quite an addition to the present number of fruit trees will be set out. Among others, R. O. Bailey, who owns the Cramer farm, is putting in 100 acres to wheat and 30 acres to barley. Mrs. E. A. Cramer, who recently purchased the Ford ranch, is putting 160 acres to grain. Roy Bailey is preparing to plant a large olive orchard.

MOUNTAIN APPLES.—*Delta*: H. C. Arnold brought to this office last Monday some splendid samples of the Ben Davis apple grown on his place in the mountains, 15 miles beyond Three Rivers. They are large, highly-colored, and in every way superior to those of the same variety grown in the valley. At the time Mr. Arnold bought his young trees from the nursery, others were secured from the same lot. Some of these were planted in the valley, some in the foothills and the remainder in the mountains. Fruit on all of these is ripe, but the appearance is enough unlike to make them look like different kinds of fruit. Those grown in the valley are pale, those in the foothills better colored, and those produced in the mountains are dark and clean, with thin skin and firm flesh. Apples of this variety grown in the valley will

keep until about the first of April, but the grown by Mr. Arnold last year kept until the last of May. The orchard is within the pine belt.

Ventura.

FLAX.—*Republican*, Nov. 12: The flax crop of Ventura county is yearly increasing, the seed bringing the highest prices. A curious anomaly is the fact that fiber, which is of the very finest quality, is allowed to go to waste.

HONEY.—Amid the rush and bustle of the boom we are apt to overlook the importance of our honey industry. The wild shrubs and flowers with which the mountain and hillsides are covered give a never-failing source of supply for the bees. So far as can be ascertained, there are about 19,500 hives in the county which yield annually 3,200,000 pounds of honey, or enough to load 160 cars.

Siskiyou.

A SCOTT-VALLEY RANCH.—*Red Bluff Cause*: M. J. Frank, who is at present sojourning at Etna, Scott valley, sends this office some mountain potatoes of the Peerless, Late Rose and Utah varieties. A number weigh over four pounds each and measure 16 inches in circumference. He writes as follows concerning them: They were raised in Scott valley, near Etna, on the ranch of the Hon. J. W. McBride, who has shown me a single beet which weighs 27 pounds, carrots weighing seven pounds each and squashes of 150 pounds. He has some superior cattle and horses, and also runs a dairy, making excellent butter. He recently had the misfortune to lose a barn containing 125 tons of hay by fire, but he had the barn replaced by a new one of much larger dimensions.

NEVADA.

AGRICULTURE IN LINCOLN.—From the assessor's report, published in the *Pioche Record*, we make extracts respecting matters in Lincoln county as follows: The agricultural interest is in a fair way of progress, considering the small population. The northern part of the county has a mild climate and the southern part a semi-tropical. There are choice fruits and grapes in this county, inferior to none. Farming at present is unprofitable, as there is no regular home market and no cheap transportation. In some of the valleys, the farmers raise eight tons of potatoes, 20 tons of carrots, 40 to 45 bushels of corn to the acre. Alfalfa hay is cut twice to three times a year in the northern part of the county, and in the southern part five and six times, with an average of one to 1½ tons per cut. Stock-raising is carried on successfully—cattle, horses, sheep and hogs; but then it comes back to the same point, there is no regular home market, and to try to drive them long distances to find a market would be too expensive and chances of heavy loss. There are thousands of acres of land that could be made useful for agricultural and grazing purposes, if the Government would assist in sinking artesian wells or by artificial work extending running creeks on to valleys or sandy flats called deserts. Land inclosed, 10,511 acres; cultivated, 3612 acres; wheat, 398 acres, 9962 bushels; barley, 1040½ acres, 26,012 bushels; oats, 209 acres, 8315 bushels; corn, 302 acres, 7550 bushels; hay, 3342 acres, 6684 tons; cotton, 49 acres, 19,600 pounds; butter, 9800 pounds; cheese, 6000 pounds; wool, 46,800 pounds. Apple trees, 2023; peach trees, 5452; pear trees, 314; plum trees, 1472; cherry trees, 227; apricot trees, 430; fig trees, 245; mulberry trees, 730; almond trees, 3371; grapevines, 32,287.

OREGON.

SPECIMENS.—*Rogue River Courier*: Mr. Geo. Lewis of Applegate brought into our office on Tuesday last a Blood-turnip beet weighing 13 pounds. This is the largest specimen of the kind we have seen.... Mr. T. Murray recently brought into town a sack of potatoes weighing 50 pounds. When counted it was found to be made up of 25 potatoes, the largest weighing five pounds.... Mr. Hyde brought us this week several apples of the Winesap variety which exhibited peculiarities worthy of mention. One had a bunch of well-developed leaves protruding from its blossom end, and the others had two or three blossoms each.

Dues Needed.

[From our last issue.]

Thanksgiving is at hand and we want to be very thankful to all of our subscribers for having renewed and remitted their subscriptions. The long winter evenings are upon us all, and as we are finishing up our evening's work on the paper by writing this item (while the clock strikes ten), we hope every good subscriber who owes us a renewal has just ended a pleasant reading of our last issue, and is saying to his mother or his wife's father (to whom he never dares tell a lie) or to his wife (to whom he never ought to tell a lie) that he is going to remit his subscription to-morrow, and better enjoy the reading of this paper ever afterward.

Christmas, taxes, New Year's and annual settlements are coming right along, and old subscribers and new subscribers are wanted to help us hold up our heads before creditors, and strengthen our hands to do our best work for you in 1888. Please double up things by making yourselves and ourselves happy by early remittances.



(Original)

That Gentle Man From Boston Town.

An Idyl of Oregon.

BY JOAQUIN MILLER.

Two webfoot brothers loved a fair
Young lady, rich and good to see;
And oh, her black abundant hair!
And oh, her wondrous witchery!
Her father kept a cattle-farm,
These brothers kept her safe from harm:

From harm of cattle on the hill;
From thick-necked bulls loud bellowing
The livelong morning, loud and shrill,
And lashing sides like anything!
From roaring bulls that tossed the sand
And pawed the lilies from the land.

There came a third young man. He came
From far and famous Boston town.
He was not handsome, was not "game,"
But he could "cook a goose" as brown
As any man that set foot on
The sunlit shores of Oregon.

This Boston man he taught the school,
Taught gentleness and love away,
Said love and kindness, as a rule,
Would ultimately "make it pay."
He was so gentle, kind, that he
Could make a noun and verb agree.

So when one day the brothers grew
All jealous and did strip to fight,
He gently stood between the two
And meekly told them 'twas not right.

"I have a higher, better plan,"
Outspoke this gentle Boston man.

"My plan is this: Forget this fray
About that lily hand of hers;
Go take your guns and hunt all day
High up yon lofty hill of firs,
And while you hunt, my loving doves,
Why, I will learn which one she loves."

The brothers sat the windy hill,
Their hair shone yellow, like spun gold,
Their rifles crossed their laps, but still
They sat and sighed and shook with cold.
Their hearts lay bleeding far below;
Above them gleamed white peaks of snow.

Their hounds lay couching, slim and neat;
A spotted circle in the grass.
Their valley lay beneath their feet;
They heard the wide-winged eagles pass.
The eagle cleft the clouds above;
Yet what could they but sigh and love?

"If I could die," the elder sighed,
"My dear young brother here might wed."
"Oh, would to heaven I had died!"
The younger sighed with bended head.
Then each looked each full in the face
And each sprang up and stood in place.

"If I could die"—the elder spake,
"Die by your hand, the world would say
'Twas accident—; and for her sake,
Dear brother, be it so, I pray."
"Not that!" the younger nobly said;
Then tossed his gun and turned his head.

And fifty paces back he paced!
And as he paced he drew the ball;
Then sudden stopped and wheeled and faced
His brother to the death and fall!
Two shots rang wild upon the air!
But lo! the two stood harmless there!

The eagle poised high in the air;
Far, far below the bellowing
Of bullocks ceased, and everywhere
Vast silence sat all questioning.
The spotted hounds ran circling round,
Their red, wet noses to the ground.

And now each brother came to know
That each had drawn the deadly ball;
And for that fair girl far below
Had sought in vain to silent fall.
And then the two did gladly "shake"
And thus the elder bravely spake:

"Now let us run right hastily
And tell the kind schoolmaster all!
Yea! yea! and if she choose not me,
But all on you her favors fall,
This valiant scene, till all life ends,
Dear brother, binds us best of friends."

The hounds sped down, a spotted line,
The bulls in tall abundant grass
Shook back their horns from bloom and vine
And trumpeted to see them pass—
They loved so good, they loved so true,
These brothers scarce knew what to do.

They sought the kind schoolmaster out
As swift as sweeps the light of morn—
They could but love, they could not doubt
This man so gentle, "in a horn."
They cried: "Now whose the lily hand—
That lady's of this webfoot land?"

They bowed before that big-nosed man,
That long-nosed man from Boston town;
They talked as only lovers can,
They talked, but he could only frown;
And still they talked and still they plead;
It was as pleading with the dead.

At last this Boston man did speak—
"Her father has a thousand cows,
An hundred bulls, all fat and sleek;
He also had this ample house."
The brothers' eyes stuck out thereat
So far you might have hung your hat.

"I liked the looks of this big house—
My lovely boys, won't you come in?
Her father has a thousand cows,
He also has a heap of tin.
The guirl? Oh yes, the guirl, you see—
The guirl, just neow she married me."

• A B C of Astronomy—No. 4.

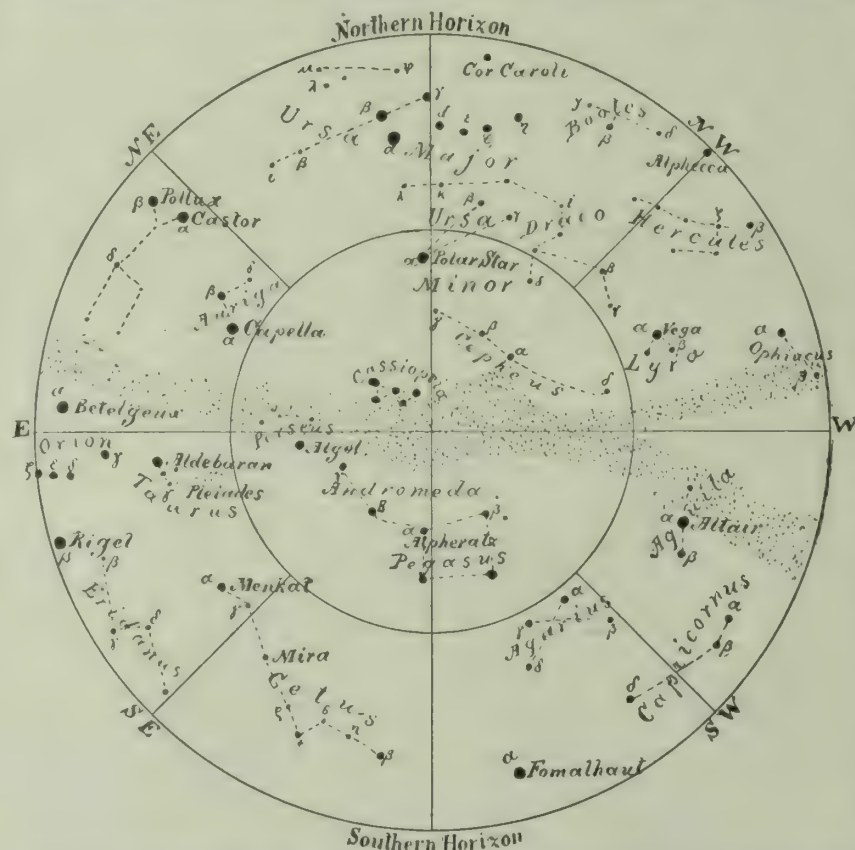
[Written for the RURAL PRESS by ASTRON.]

When Humphrey Davy visited the great astronomer La Place in Paris, and ventured to express the hope that his favorite science, chemistry, would in the near future be brought un-

nearly in contact with the Milky Way or Galaxy—that belt of stars stretching across the sky, which it seems as if nature, in the infinite plentitude of her power, had sifted out and left for humanity to gaze at with wonder and adoration.

Before proceeding further it may be well to make clear a little matter that may have puzzled some of our readers. You are doubtless aware that any given constellation will be seen in the same position in the heavens in one year's time from the date of the observation; or that it will make its appearance say, to-night, four minutes earlier than it did last night. Multiply this four minutes by 365, the number of days in a year, divide this product by 60, and you get the 24 hours, which brings the constellation round again to the same place in the heavens. This is not astronomically exact, but it is near enough for our purpose.

By the assistance of the diagram you have doubtless found The Twins. If you line off from them to a little more than midway between the eastern horizon and the zenith (the point on the sky immediately overhead), you will notice about midway between the two the constellation Auriga with its beautiful star Capella. In our early craze for astronomy it was called the "Twinkler," and we hailed its annual return in the evening as the visit of an old and



[To use the diagram understandingly, consider it to represent the vault of the sky, not a flat surface; and look up at it, instead of down upon it. (The center of the circle represents the zenith, or point directly overhead.) You may, however, find it more convenient, when looking southward, to hold the diagram upright before you; in looking for stars westward, hold it with the "W" downward; looking northward, hold it upside down; looking eastward, hold it with the "E" down.]

der the dominion of those mathematical laws which he (La Place) so ably expounded, he was surprised at the entrance of Lady La Place, demanding of her lord the key of the tea-caddy. Now, if such a master-mind as Napoleon's favorite philosopher could descend to sub-lunary matters so minute as keeping guard of the tea-caddy, it must not surprise the readers of the RURAL PRESS if their humble "Astron" has been diverted from conversing about the stars of heaven to admire the stars of earth at the Mechanics' Fair here, with its luscious fruits, more tempting than were the apples in Eden's garden to our common mother, and its music more enchanting than the strains evoked by Apollo in his palmy days from his flute or lyre, when he gathered so heterogeneous an audience around him; but we will call a halt and resume our work.

It will be our endeavor to give the prominent constellations visible in November at seasonable hours for observation. Beginning with Ursa Major, the Great Bear or Dipper (see RURAL PRESS of May 28th, page 466, and June 25th, page 563), take a small book, or a shingle, or, better than either, a small triangular piece of board or card, and, holding it by one of its corners, look over one of its edges and line off from the two stars in the bottom of the Dipper as per diagram below.

The line, you will see, strikes very near to the two principal stars in the constellation Gemini or The Twins, Castor and Pollux.

These are said to have been named from C. and P., sons of Leda and Tyndareus, king of Lacedæmon, and were brothers to the fair and frail Helen of Troy. Zeus placed them among the stars on account of their love for each other. Castor is generally rated as a star of the first magnitude and Pollux second. Some few astronomers have reversed that, but we leave that to the reader's own judgment.

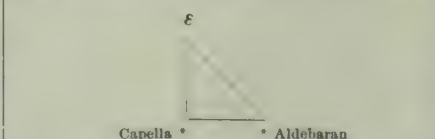
The Twins or Gemini is the third constellation in the Zodiac, which we will explain further on. The reader will also notice that the two last stars of this constellation southward, come

valued friend. This constellation is sometimes called the Wagoner or Charioteer.

With your triangular card in hand, line off from ε, the lower end of Cassiopeia,



to Capella; thence southward so as to form an isosceles triangle (that is, a triangle having two equal sides), with Capella at the apex,



and you will strike a beautiful reddish star, Aldebaran, in the head of Taurus, or the Bull, the second constellation in the Zodiac.

Then look around and a little toward the zenith and you cannot miss that beautiful cluster the Pleiades. With a small telescope or good opera-glass the six or seven stars visible to the naked eye become very interesting with their almost innumerable companions. This group figures in classical and biblical literature. The Pleiades have been considered by Maedler as the center of the Sidereal system. In Greek mythology the Pleiades were the seven daughters of Atlas and Pleione. Their history varies with different mythologists, and as we are writing on the A B C of astronomy, not Greek mythology, we had better not go further into it.

The constellation Aquila, or the Eagle, we have next to engage our attention, as it con-

tains a star of the first magnitude, Altair. It is easily found by lining off from Vega across the milky way toward the southwest, and being a conspicuous object, the observer is not likely to be mistaken.

There is another star of the first magnitude—Fomalhaut—to be seen this month quite near to the southern horizon. It is in line with the two stars which form the western side of the square in the constellation Pegasus. This completes the prominent stars of the first magnitude, with their belonging constellations which are visible in our latitude in November, during the early hours of the night.

We shall soon have a rich treat in the appearance of the most noticeable and brilliant constellation of the heavens—Orion, with its wonderful nebula, and dragging after it the Big Dog, with its gem of the sky, Sirius.

A word or two here on refraction, which plays an important part in the science of astronomy.

You may have noticed that the portion of an oar under clear and smooth water appears bent; also, that in a pond or pool the bottom appears shallower than it really is. If you wish to try an experiment, take the basin from your wash-stand and gum to its inner sides and bottom several bits of colored paper. Get your friends to look on from certain positions and count the number of bits visible; then pour clear water into the basin, when some of the bits of paper unseen before will rise to view. This is due to a law of physics that a beam of light travels in a straight line in a uniform medium, but varies according to any alteration in its density or rarity, chemical composition, etc.

In closing this fourth lesson, we are authorized by the editor to invite any reader of these simple attempts to ask "Astron" any question where he has failed to make himself understood.

And now we recommend again the study of this ennobling science. It lifts man above the petty cares of life, and millionaire and poor man can here meet on neutral ground, and both enjoy the beauties and infinities of nature.

Letter-Writing.

[Written for the RURAL PRESS by "NETTIE."]

Among the few good things in which our forefathers excelled us is to be placed the art of letter-writing. When communication between friends was less frequent, and when more attention was devoted to living, people wrote not so much to keep up friendly feelings or for selfish reasons as to receive mutual benefit and learn others' opinions.

Letter-writing is now said to be a lost art, and that this is almost true there is no doubt. To be a good writer takes more practice and time than many persons feel able to spend, but is not more lost than gained by this selfish feeling? Selfish because if we thought we ourselves would derive as much benefit and pleasure from our painstaking as we give, we would not pay so little attention to it.

All like to receive letters, but few take pleasure in writing them. It comes, of course, more natural to some than to others, but all can cultivate the art, and if real desire for improvement be present, experience will make letter-writing almost a pleasure. By corresponding we have more influence than we have by personal contact. The fact of our having cared enough to write certain sentences in itself insures attention, and the words are rendered still more important, and more thought is bestowed on them from their very appearance on paper.

It will not do to commit to paper all we would say in conversation, as many things convey stronger or at least different impressions when read than when heard. The reverse is also true, that many things can be said in correspondence which would hardly do to say in ordinary conversation, and some other things can be more diplomatically expressed by written than by spoken words. Yet, remember, what is written may not be destroyed at once and may some time be construed to mean otherwise than the writer intended.

One thing I notice in my correspondents is that it is hard for most of them to elaborate on any fact or statement, yet in this elaborating or enlarging lies the interest of not only letter-writing, but all forms of writing. It is the life, the all. This is so evident it would seem hardly necessary to speak of, but, nevertheless, not enough is thought about it. I have received letters from regular correspondents which contained material enough to fill a score of octavo pages, but which was dashed up in a careless want-to-get-through-soon-as-I-can style that was positively nauseating. Then after four or five pages of such heavy food the last ounce will be added by asking to be excused for writing such a poor letter, "as you know I am an uninteresting writer, anyway."

I have no patience with you. Drop acting like a reporter of daily news and make your letters more interesting by conversing on subjects which stimulate inquiry and draw out opinions. When relating an incident, be careful not to generalize freely; branch out into details, explain what may not be perfectly understood, and do not be afraid of becoming tedious, as almost no one ever is in this line. One of the most interesting letters I have lately received was from a friend in San Francisco who took a sea voyage last summer up the coast a few miles on a sailing vessel. He had a very uneventful voyage, nothing occurring to specially notice except a long delay and the necessity of finally

being put ashore in a row-boat, but he so expanded it by particularizing, by commenting, by joking, that it made enjoyable reading. A letter received last January was a model in clearness of language, in topics treated, and in length. It would fill about 2½ columns in the RURAL PRESS, and is treasured not only for the worth of it, but also for the beauty of its penmanship. Coming from a minister and professor well known as a writer and teacher, it is, perhaps, exceptional in its worth, but what that gentleman did—and that letter was but one of many, and I was but one of his correspondents—can be done in a great measure by seven out of ten who write.

Never fail to read over your letters just before closing. Neglect of this precaution, unless you find from experience that you never have to correct anything, is invariably plain, and to permit a mistake to exist is almost an insult. It betrays inexcusable carelessness. Of course I am speaking of letters between friends, who are supposed to have time enough to avoid making such blunders as a business man may in the rush of business sometimes do, although business letters are supposed to be read before being sent.

A word about handwriting. No doubt the systems used by professionals and taught in business colleges are, in their way, pleasing to the eye, but for myself I much prefer to see the small quirks and turns that we naturally fall into the habit of making when not "taking pains." Each person who does not use the copy-book as a model finds himself giving peculiar turns to the pen and adopting in various ways original trifling fashions of shaping letters, crossing t's, etc., that to my mind make a letter interesting in themselves. But oh! never, as you hope to have your letters read, never allow your hand to write such caricatures of letters that your friends have difficulty in deciphering them. Be original. If you do not like things and can find good reasons for changing, then change, but be sure not to be so strongly individual that only yourself can read your writing!

Haywards, Cal.

YOUNG FOLKS' COLUMN.

Babes in the Wood.

[Written for the RURAL PRESS by AUNT SUSIE.]

"Please, mamma, may we go in the woods and have some lunch in the little basket? Oh! do say yes, mamma; it is such a nice day to be out in the woods."

This was eagerly asked by one of three little boys, who were spending their summer vacation in the country on a fruit farm, where there are also lovely woods, with great tall redwood trees, towering up a hundred feet, and even more, toward the blue sky and God who made them, and here and there a madrona tree grows, with its bark peeling off in its own peculiar way, leaving the tree bright red and as smooth as satin; now and then the bark clings in flakes of pale yellow. Close by we find the beautiful bay tree, with its long, pointed, fragrant leaves, and all about such lovely ferns. Beyond the woods is a mountain very steep and rugged.

These woods were a great temptation to the boys. Stuart was so anxious to go, and Herbert and Romney came running in and added their pleading to his.

Their mamma decided that they could go, but said: "It is too warm for you to walk all the way, so you had better take Old John." He was a steady old horse who had done his share of work, and the children were allowed to ride him about the ranch.

At this the boys clapped their hands and shouted, "Oh! that's fine! We can have Old John and take turns riding."

So their mamma put up some lunch for them. She knew boys have a way of getting hungry, whether walking or riding. They kissed her good-by and started off in merry glee.

Old John looked at them with his gentle eyes, as much as to say, "Do you really think this is fun, boys? I had much rather lie down under a big oak tree in the pasture and take a nap until dinner-time." But nevertheless, he went along in his careful way, and as their mamma watched them go down the hill, she caught a glimpse of a hat waved in the air, heard the sound of their last "Good-by, mamma," shouted with the full force of sound lungs, and the echo across the hills caught it, and back it came to her, as she turned away with a glad heart to see her dear boys so happy, and went about her morning duties.

The hours passed without her realizing how long they had been gone, and they did not know how long it was, either. They went to the woods, and, after running about awhile, decided to eat their lunch, and then went up to a spring to get a drink of the clear, cold, sparkling water. They caught it in their tin cup as it trickled down over the rocks and passed through a bed of green ferns that left it clear and cold.

Just as they finished drinking, Stuart said: "Say, boys, let's climb the mountain. I don't think it looks so very steep. We can take turns on Old John."

"All right," answered the others; "but what if Old John can't climb?"

"Oh, I guess he can," said Stuart. So the others got on the horse, and he trudged along beside them.

Old John picked his way very carefully over

the stones and through the brush. After awhile Stuart was so tired the boys got down and he took his turn on Old John, and so they pushed on and up.

At last they reached the top of the mountain. It was very nice to be so high up. They could see the broad Pacific sparkling in the sun. They were tired, but didn't mind, and thought it was fun. Somehow little boys can do so much for fun and play, but get tired very quick when it comes to working. I wonder why it is.

Well, by this time it was after 12, and their mamma began to feel uneasy because they didn't come home; but grandpa said:

"I expect they have found a nice, cool place under a tree, and, being tired, have fallen asleep. They will be home in a little while."

But alas! they were anything but asleep. They now became tired looking about, and watching Old John eat grass and leaves, and all at once found they were very hungry, and tried to find the path they had gone up by, but couldn't find it. They hunted and hunted, and as they looked down the mountain, it seemed so much steeper than when they went up in the fresh morning air, with light hearts. It seemed to them so steep that if they tried to go they would just fall over and roll down and down over the stones, and they didn't like the thought of that. In a little while more they lost all their courage and sat down and cried; then, as they became more and more lonesome and afraid, their cries became screams. At last they were worn out, and so were forced to be quiet for a time.

Old John kept eating in a most contented way. It did not matter to him now whether he was on the mountain or in the pasture, for he found plenty to eat. After a time the sun went down, and it began to grow dark; then the boys broke out crying again. Old John looked at them as if to say: "What is the matter? I'm going to lie down under this big tree. There are lots of dry leaves, and I shall have a nice bed." So he lay down, and stretched out his legs, and made himself very comfortable.

The boys came to the conclusion they would have to stay in the woods all night, so when they had exhausted themselves a second time with crying and shouting, were so sleepy they couldn't keep their eyes open; so they lay down between Old John's legs, and put their aching heads against his body, and pushed their feet down in the warm leaves.

All at once Herbert called out, "Boys, we must say our prayers;" so they got down on their knees, folded their dirty little hands, and with trembling lips said, "Now I lay me." It seemed to comfort them, and telling Romney to lie in the middle because he was the smallest, they nestled up close together and were soon sound asleep, worn out with their long tramp and crying.

Old John, too, fell asleep, unheeding the weight of their heads, which by degrees slipped down to the ground, they were so tired. They tossed about, and each turn made a few more leaves fly up and fall down over them; so they were well covered from the night air.

Well, all this time their mamma had been very sad. Grandpa went away right after dinner, never doubting the boys would be home in a little while.

Just as the big moon came up from behind the very mountain where the boys lay asleep, grandpa and the men drove in the yard. When they found the boys had not come home, they all started out to hunt for them. The moon was so bright they did not need any lanterns. They hunted all through the woods, and then grandpa said, "They must have tried to climb the mountain, and lost their way;" so they all started up, following the trail, but no boys could be found.

At last they reached the top and began to hunt about. All at once they found Old John, lying under the tree fast asleep, but the boys were so covered with leaves they didn't see them. Grandpa was very tired, and said he must rest; while the other men looked about still more; so he sat down by Old John's feet. In a moment something moved under him; he felt about and found a little foot. He started up and called the men. They pushed the leaves away, and much to their delight found the three boys, but they were so sound asleep it was hard to wake them.

At last they opened their eyes and were very glad to see grandpa's kind face. The men each took a tired, sleepy boy in their arms and were soon down the mountain—Old John following, as they had roused him up after finding the boys. At the edge of the woods they found the horses where they had tied them and were soon home.

Mamma took her boys upstairs and put them to bed without a word of reproach; her heart was too full for words other than of thankfulness.

In the morning the boys came to her and Stuart said: "Mamma, we boys have been talking over getting lost yesterday. It was awful, mamma, and we were so tired and scared; but we think now it was very naughty of us to go up the mountain alone, and we know we made you feel bad, 'cause you cried when we came home, and we feel very sorry. Will you forgive us, mamma?"

"Yes, my dear boys," she replied; and then they told her all about it, and promised not to wander away again, and they kept their promise. They still had nice rides on Old John, but did not go far away.

One day, after Romney had been riding a good deal, he came to his mamma and said: "I think there is something the matter with

my spine." She was quite startled, and undressed him to see what could be the matter. She had to laugh when she found two big blisters, not exactly on his spine.

He said: "Now, mamma, if you had them you would not laugh, for they hurt awful bad!" She put salve on them and in a day or two they were all well.

One night Old John did not come home from the pasture. The next day the boys went to look for him, and much to their sorrow, found him under a tree cold and dead.

They ran crying to the house. Grandpa comforted them by saying: "Well, boys, I am sorry about Old John because you loved him, and enjoyed riding on him, but he has done good service, and is very old, and I really think we ought to be glad, for he might have been real sick, as he was once, and you wouldn't want him to suffer."

"Oh, no!" said the boys, "but we wish he could have lived and been well. We shan't forget that he helped you to find us when we were lost in the woods on the mountain, and covered with leaves, real 'Babes in the Wood.'"

GOOD HEALTH.

Diphtheria.

EDITORS PRESS:—In answer to "Constant Reader," San Jose, as to a cure for diphtheria, I remember reading an article on the subject in the German *Zeitung* some years ago. The writer, a physician, stated that after long years of practice he found nothing equal to the flour of sulphur for this dread disease.

Get a quill or any small tube and fill with sulphur. Let the patient open his mouth and the attendant blow the contents of the quill into the throat; repeat every two or three hours. It was stated that the sulphur destroyed all the germs of the disease, and prevented the formation of the fatal false membrane. N. J. CLARK.

Butte City, Nov. 14, 1887.

[Mr. Charles Reimers also writes us that the inventor of the mode of treating diphtheria which our correspondent asked about in the RURAL of the 12th inst. is Dr. Weber of San Jose, who lives at Second and Santa Clara streets.—EDS. PRESS.]

Canned Goods.

The *Grocer's Chronicle* insists that the fact that canned goods are cooked goods cannot be too widely known or carefully remembered by users. They are not put up in vessels from which they are to be eaten when convenient to consumers, but are only packed in tins in order to preserve them. No canned goods are guaranteed to keep fresh and remain sound for any number of days after being opened. When opened the contents of the tin should be immediately turned out and eaten as soon as possible. If the food must be kept at all, cover it up and keep in a cool place—always, however, turn out of the original tin. The liquor round lobsters, salmon and all vegetables, excepting tomatoes, it is desirable to strain off and throw away. Lobsters and prawns are improved by being turned out into a sieve and rinsed with clean, cold water. Never on any account add vinegar, sauce or any kind of condiment to tinned foods while they are in the tins, and never leave such mixtures to remain an hour or two, if from forgetfulness it is done.

All tinned goods are put up as fresh as it is possible to be, but unless corned or salted will not keep turned out as freshly cooked goods will, and certainly not longer, as many thoughtlessly suppose or expect they will. Sardines, if preserved in good oil, and if of good quality, will be an exception; as long as the oil is good the fish can be kept in the tins, but seven days is long enough to trust these before eating. Consumers should not buy larger packages of canned goods than they can consume quickly; if they should, most of the fish and meats can be potted after re-cooking, sauces and seasoning being used. If the nose and eyes are properly used, it is as impossible to partake of an unsound tin of canned food of any kind as to partake of bad meat, fish or vegetables from a shop.

LEAD MECHANICALLY MIXED WITH WATER. It has been proven beyond all doubt that waters which circulate or stand in leaden pipes or vessels not only take up particles of lead through mechanical action due to friction, but attack the metal, the result being generally lead carbonate. Minute quantities of lead introduced into, and accumulating in, the system must rank among the causes of anæmia and defective nutrition in large towns.

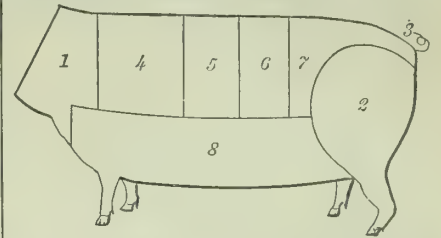
SUPERFLUOUS HAIR.—The removal of superfluous hair from the skin is possible both by means of depilatories and by electricity. The former are mostly preparations of sulphide of barium or sulphide of calcium, and the process by electricity is very slow, each hair root having to be killed separately.

HEALTHFULNESS OF OYSTERS.—A wealthy New York physician declares it as his belief that "the oyster is the most healthful article of food known to man."

DOMESTIC ECONOMY.

Curing Hams and Bacon.

EDITORS PRESS:—In answer to a request from one of your readers, I will describe an English method of curing hams and bacon. The hog is cut as is shown in the diagram.



The shoulder No. 1 is cut as shown. The ham No. 2 is cut through the bone a short distance from hip joint, and this piece of bone is left in the meat. The small piece No. 3 is kept for boiling and is salted; so is No. 7. Nos. 4, 5 and 6 are roasting pieces, eaten fresh, or the ribs are taken out and the whole, including No. 8, may be cured for bacon. Nos. 4, 5 and 6, if you like, may be salted for frying wet out of the pickle; then No. 8 makes the best of breakfast bacon.

Split the head down the face and save for salting and smoking. Boil the rest of the head with the ears and feet and trimmings of the hams and make head cheese.

The next process is the salting. Use an oblong box of 1½-inch pine, of suitable size, or a pork barrel; but the hams and bacon require a tray or box. Rub the hams and bacon with the following salt mixture well before putting it in pickle: Half a pound saltpeter pulverized very fine divided equally—half for two hams and half for two sides. The saltpeter is to be well rubbed into the meat on the flesh sides. The meat is then laid on a bench, skin down, for 12 hours.

Take seven pounds salt and 1½ pounds brown sugar, well mixed, and heated in a frypan, and rubbed while hot upon the two sides of the meat. The meat is then put in the tray and the brine begins to form. Rub and baste the meat every other day (putting the bottom pieces on top) for four weeks, when the meat is hung up to dry, and then smoked.

For the hams, use four pounds salt, 1½ pounds sugar and treat in the same way. The hams should be in the pickle five weeks. This curing is quite important. The meat is not smoked until quite dry, and the salt crystallized upon the surface.

Use for smoking damp wheat straw, corn-cobs or small brush. Smoke a little every day until completely dry, and produce no heat in smoking. Some smoke for two and three months; but when perfectly dry, less time is sufficient.

Procure from your druggist one pint of pyroligneous acid (the acid from an oak tree) and paint your meat with a shaving brush thoroughly with this acid, and hang your meat in as cool a place as you have in this climate, and it will keep sound and be as good as any meat cured in Old England as long as you live—if you are an old man.

The Westphalia hams are made as follows: Well rubbed with dry salt and left to drain 24 hours. Take two quarts of salt; two quarts of bag (rock?) salt; three pounds of brown sugar; one pound saltpeter; four ounces sal-prunelle and four ounces juniper berries, well mixed and boiled in six quarts water. The brine is then cooled and skimmed. The hams are taken from the salt and wiped dry, and the cold pickle poured over them and rubbed in. There should be enough brine to cover the meat. Turn the meat every second day for three weeks, then take them out, wipe dry, and a mixture of ground pepper, salt and bran is thoroughly rubbed in, filling all cracks and openings. They are then smoked a little every day for three months or more, until completely dry, when they will keep and improve in flavor for years. Pyroligneous acid will keep off flies and animalculæ of all kinds and improve the flavor of the meat. ELKHORN RANCH.

Vaca Valley.

NEW MODE OF WASHING.—The ill effects of soda on linen have given rise to a new method of washing, which has been extensively adopted in Germany and introduced into Belgium. The operation consists in dissolving two pounds of soap in about three gallons of water as hot as the hand can bear, and adding to this one tablespoonful of turpentine and three of liquid ammonia. The mixture must then be well stirred, and the linen steeped in it for two or three hours, taking care to cover up the vessel containing them as nearly hermetically as possible. The clothes are afterward washed out and rinsed in the usual way. The soap and water may be reheated and used a second time, but in that case half a tablespoonful of turpentine and a tablespoonful of ammonia must be added. The process is said to cause a great economy of time, labor and fuel. The linen scarcely suffers at all, as there is little necessity for rubbing, and its cleanliness and color are perfect. The ammonia and turpentine, although their detergent action is great, have no injurious effect upon the linen, and while the former evaporates immediately, the smell of the latter is said to disappear entirely during the drying of the clothes.



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SAN FRANCISCO:

Saturday, Nov. 26, 1887.

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The Week.

The RURAL greets its readers one day ahead of time this week, that our large force may have an opportunity to enjoy the recreations and reunions of the welcome Thanksgiving holiday. This early printing may bring us into converse with some of our readers before the festivities of the day are over, and to all such we would add a final word to assure all of our earnest participation with them in the rejoicings peculiar to the day, and our wish that few may find life's trials so severe that much joy may not remain to awaken the spirit of thankfulness.

The clouds are thick as we write, and it is to be hoped that Thanksgiving may bring its own special occasion in the real beginning of the rainy season. People have kept courage well, and have drawn all the comfort which the wet winter signs of the oldest inhabitants could bring forward. Still there have been hardships in the delay, as we have already stated. We need now, to revive all hearts and hopes, ground fit to start the plows and verdure to refresh the stock, which has had an unusually long period of dry feeding. We hope this blessing is at hand.

MR. SPRECKELS AT SALINAS.—Mr. Spreckels held a beet-sugar meeting at Salinas last week. A telegram says Mr. Spreckels said he would invest \$150,000 in a beet-sugar enterprise there if others would put in the same amount.

Interstate Commerce.

This bill, as passed by Congress, has two radical defects:

1st, that it ignores the right of each State to regulate freights and fares within its own lines.
2d, that it operates as a bar to the reduction of rates in certain cases.

The first is a most important consideration to every farmer and to every citizen. The just rights of the States should never be ignored or usurped. We should be reminded all the time of these rights, and never ask Congress for a single thing that the State could, should and might do. It makes a bad precedent which will some day work serious mischief.

Railways, highways, all ways within the lines of a State, all except navigable water open to the sea, are under the control of the State. There is nothing in the Federal Constitution to convey them away. It is no matter from what source their charters, franchises or incorporation may come, whether from Washington or Kentucky, the State is sovereign on its own soil and must control. The General Government may demand that Interstate Commerce shall pass through the State on as reasonable terms as our own. Herein, the provinces of the two are strictly defined and kept apart. We fix the rates within the State, and Congress declares that they shall not be advanced on goods passing through from other States. We hold as to the second, that it is impolitic and injurious to the public to make any law to prevent the reduction of rates at any time. Railroad companies should always be free to reduce rates at their pleasure, so long as there is no element of injurious discrimination in so doing. All persons, corporations included, should at all times be free to do good, and restrained only when they tend to evil. Let us explain ourselves.

Suppose we have a law that three cents a mile shall be the highest rate charged for railroad travel. But on a certain line there is a great excess of travel in one direction. Cars come empty the other way, of course. Now the company would gladly accept two cents a mile in these empty cars, and does so. There being no discrimination, but the saving open to all, it should be allowed. Suppose that three cents a mile be the fare on lines running from here to New York and on all intermediate places, yet if the companies, for any good reason whatever, should find it desirable to make the through fare only two cents a mile, they should be free to do so, just so long as there is no respect of persons.

The long and short-haul clause seems to forbid this. It would seem to compel the reduction of the short haul, or the maintenance of the long haul up to the same rate. It is against public policy, and in derogation of trade.

We can easily suppose a railroad from a town on the seashore, with a steep grade into timbered mountains. Lumber in every shape comes down the grade in long trains, and the cars return empty. The company might be willing to take freight or passengers almost for nothing in those cars. Let them do so. No one can be injured, but all must be benefited, so long as all may enjoy the privilege.

It is not the low fare or freight that is objectionable, but the invidious and injurious partiality to persons and places that may be shown.

The farmer, as a general thing, asks no favors, nothing that is wrong or unreasonable, and is always the sufferer when crooked methods are introduced into business.

RAISIN TRAINS.—The second full train of raisins left Fresno Monday. It was sent by George W. Meade & Co., and consisted of 25 cars destined for New York. This makes 45 cars shipped within five days, with another train of 15 or 20 cars for Chicago to follow in a few days.

LIGHT CRIMINAL BUSINESS.—Justice Elgin of St. Helena reported his bills against Napa county, for criminal business, for the months of June and July last, at \$1.50.

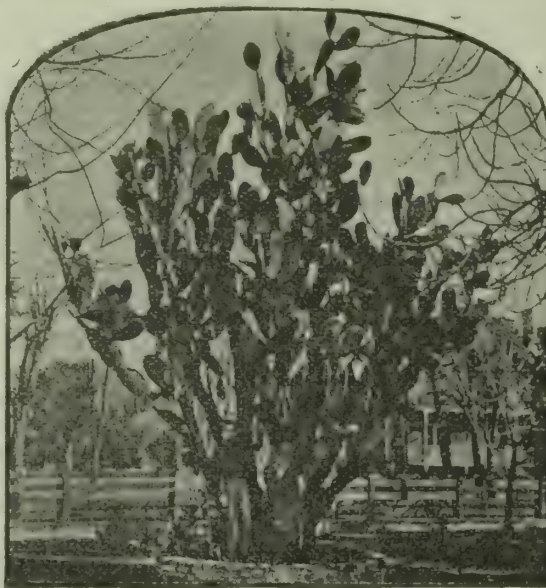
Cactus Fodder.

If our friends who are advocating cactus hedges do not use up all the plants in existence, it may be well to have some local experiments on the value of cactus as an element in the ration for feeding stock. We confess we do not enter upon this theme with any great amount of enthusiasm or confidence, and yet in a country where the tunya cactus or prickly pear flourishes over a vast area from north to south of the State, we should be derelict in our duty if we did not present the news which is going around on the subject.

It seems that the fleshy leaves of the plant have been analyzed at the New York Agricultural Experiment Station, and Professor E. W. Stewart gives in the *Country Gentleman* the statement that the cactus pulp compares favorably in some respects with fodder beets, and is better than pumpkin. The analysis of the dry substance of the leaves, which is nearly all of the plant fed, gives the following:

Ash.....	22.79
Albuminoids.....	6.81
Crude fiber.....	14.99
Other carbohydrates.....	52.92
Fat (other extract).....	2.49
Total.....	100.00

The most notable thing shown is the very large proportion of ash. When this analysis is



GROWTH OF THE TUNYA CACTUS IN CALIFORNIA.

figured with the probable proportion of water in the succulent plant (say 88 per cent) we have the following:

		Probably Digestible.
Water.....	88.00
Ash.....	2.73
Albuminoids.....	0.82	0.65
Crude fiber.....	1.80
Other carbohydrates.....	6.35	6.30
Fat.....	0.30	0.20
Total.....	100.00	7.15

Nutritive ratio, 1 to 10.4, or similar to green corn fodder. The station also made an analysis of the ash, which contained the following:

Phosphoric acid.....	1.10
Potash.....	13.88
Soda.....	10.56
Lime.....	37.28
Magnesia.....	4.21
(By diff.) sand and silica.....	32.98
Total.....	100.00

The ash analysis shows that the cactus contains a considerable proportion of phosphate of lime, potash, soda and magnesia to grow or replace the waste of bone. Its greatest defect as a feeding material is its surplus water, but this is not probably greater than in the turnip, pumpkin, etc. One hundred pounds of this plant would give only 10 to 12 pounds of dry food, but its water might take the place of other water for the cattle.

This statement might indicate that a man could both water and feed his stock from the plant, which would be something of a bonanza in a dry country. There is, however, a point which we should be rather anxious about, and that is the contact of the spines with the interior animal economy. Prof. Stewart provides for that in this way:

The prickles or sharp spines on this plant are objectionable, unless crushed between rollers, and such a crusher and cutter would very decidedly reduce the labor of feeding. For, to

get the full advantage of the other food given in the ration with the leaves of the cactus, it should be well mixed with them, and this could be very easily done after they were crushed and cut, falling as pulp into a large vat, when the other food could be evenly mixed with it, the moisture in the plant being sufficient without any additional water. And after these spines were crushed, the cattle could eat it as well as hay.

We have serious doubt about disposing of these spines by roller crushing, such as might suit for the pulping of the fiber. However, we never tried to treat the stuff, and are willing to be convinced. We should like to hear from any of our readers who have conclusions drawn from a better knowledge of the cactus than we have. It is also quite likely that there are local observations of practical tests of the cactus for stock food which can be furnished for publication. A dry year like that of 1877 must have put cattle-feeders to the test of everything green.

But Prof. Stewart thinks the cactus needs some bolstering up to be considered a perfect cattle food, and he makes the following suggestions:

If raw cottonseed is easily and cheaply obtained there, which may be presumed, then let us make up a ration of cactus, cottonseed, cornmeal and mill feed or bran. The cottonseed should be ground or boiled. I will give an analyzed formula, so that its proportion can be better understood.

	Albuminoids, lbs.	Carbohydrates, lbs.	Fat, lbs.
100 lbs. crushed cactus.....	0.65	6.30	0.20
6 lbs. ground cottonseed.....	1.02	0.87	1.62
4 lbs. cornmeal.....	0.34	2.42	0.19
4 lbs. wheat bran.....	0.40	2.00	0.12
Total.....	2.41	11.59	2.13

This has a nutritive ratio of 1 to 7. This should be a successful cattle ration. But if any cheaper, then to 100 lbs. of cactus add 6 lbs. cornmeal and 8 lbs. of bran. This will be a ratio of 1 to 8, but still will be a successful ration. These ratios are given to show the proportion rather than the precise amount to be fed. If mill feed is cheaper than cornmeal, then use 6 lbs. ground cottonseed and 8 lbs. of bran with the cactus. First-class beets may be fattened upon either of these combinations. The ground feed should be mixed together first, and then mixed with the crushed cactus.

If the cactus is to be enrolled as a fodder plant, we wish to rejoice our readers with an idea of the extent of its possibilities, and this can perhaps be best done with a little engraving, showing how the plant grows in this State—not alone in the southern part, for the engraving is from a photograph of a plant growing in Yuba county. Judging from the height of the man who is leaning against it, the plant must be about 30 feet high, and an ax will be needed to harvest its foliage. The subject is open for comment.

FRUIT SHIPPING.—All in the fruit interest should read the important contribution to knowledge of our fruit-shipping problem conveyed in the essay by Capt. Weinstock on page 428 of this issue. This essay was read at the Santa Rosa Fruit-Growers' Convention, and was received with marked attention. It shows clearly in what direction changes are imperatively needed to facilitate shipment and to place the business upon a good basis. The matter should be discussed in all local horticultural societies and influence amassed to secure the reforms which are necessary. This year's experience has apparently shown conclusively the advantages in the auction system of sale; now it is essential that the fruit shall be placed under the auctioneer's hammer without delay, and with reasonable freight charges.

STATE HORTICULTURAL SOCIETY.—The next meeting will be held Friday, Nov. 25th, at one o'clock P. M., in the rooms of the State Board of Horticulture, No. 220 Sutter street, S. F. The subject will be "California Seedling Fruits," and all are invited to bring forward information on the subject. The secretary desires to make up a collection of California-grown Japanese persimmons to send H. E. Van Deman, U. S. Pomologist at Washington. Please bring to the meeting specimens of all the varieties you have.

THE AMERICAN PUBLIC HEALTH ASSOCIATION held its 15th annual meeting in Memphis, Tenn., the second week of November. The attendance was large, representing most of the States as well as Canada, and numerous interesting papers were read and discussed.

Rev. Charles Dana Barrows, D. D.

The subject of this sketch, though still a young man, is a conspicuous figure in San Francisco, and one of the most distinguished clergymen of the city. He is in many respects a typical American—a thoroughbred New Englander by birth, and a man of broad and liberal views and of progressive and cosmopolitan character.

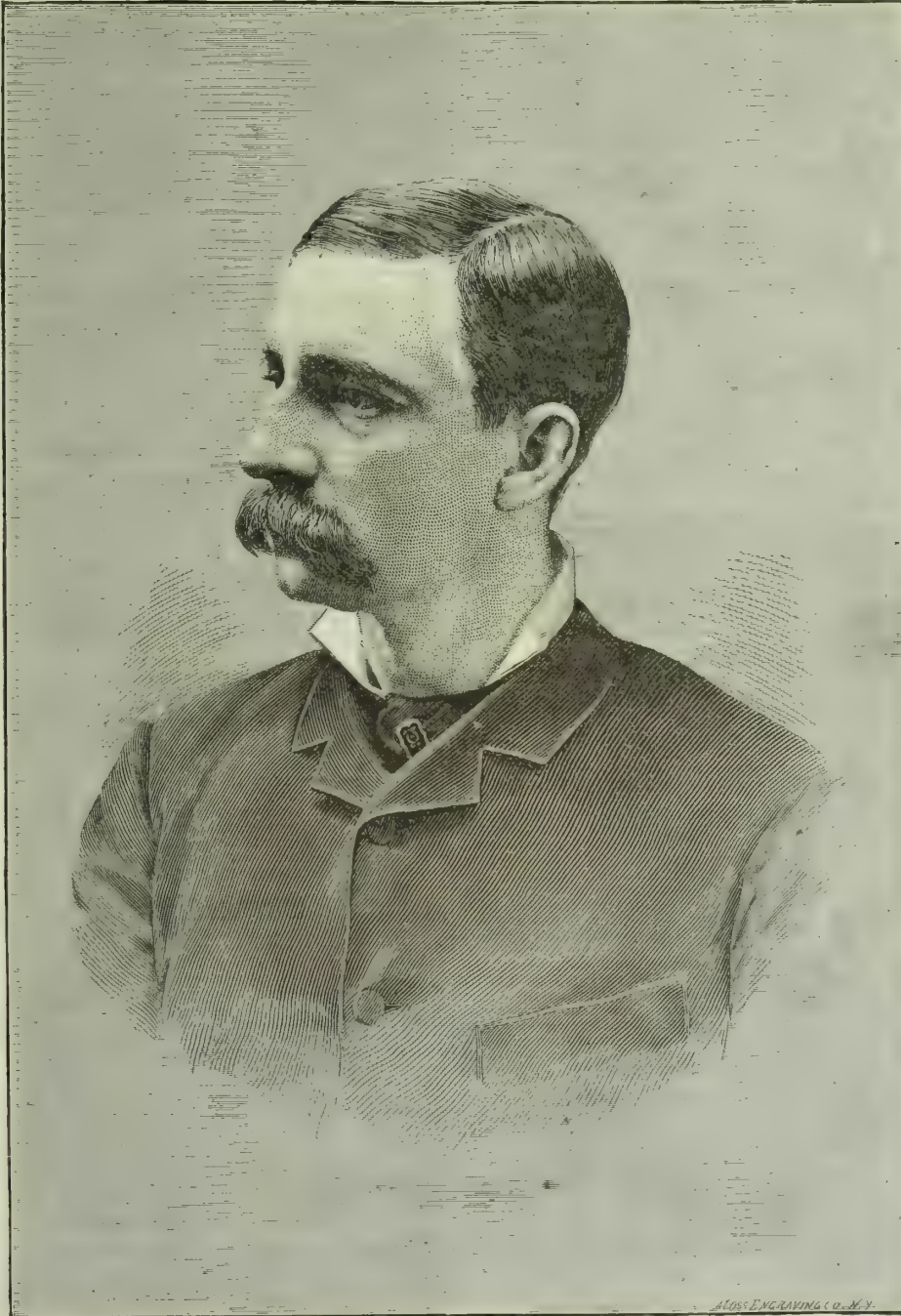
He was born April 21, 1847, in the town of Fryeburg, Maine. When Henry Ward Beecher was asked by a young man how to make a good start in life, he neatly replied: "By first selecting the right sort of parents." Mr. Barrows was fortunate in this matter. His mother, Annie Kimball Dana, was rarely gifted and noted in the literary circles of New England, and it is not strange that her son Charles, at a very early age, should evince a decided taste for literature. He entered Dartmouth college at the age of 14, and soon attracted attention in the classes and halls of debate. Soon after graduating, he became assistant of the High school of Portland, Maine. But the good people of his native town of Fryeburg had their eye upon him, claimed a sort of tutelary interest in him and offered him superior financial inducements in the principalship of Fryeburg academy, his earliest educational home. This appointment placed him in the front of New England educators. While at the head of this academy, which lasted for two years, he won the heart of and married Miss Marion Merrill, daughter of Rev. S. H. Merrill of Portland, Maine, a lady of fine accomplishments and great excellencies of character. Three sons and a daughter are the fruit of this union. During the second year of his principalship of the aforesaid academy, he became deeply interested in spiritual matters and made a profession of religion. This changed the whole course of his life. He had been preparing for the law, in which he would undoubtedly have been a brilliant success. In the fall of 1868 he entered the Andover Theological Seminary, and no one among the seminary students was in more demand in the small churches supplied by this school of the prophets. After his second year at Andover, Kirk-street church of Lowell, Mass., a very wealthy and influential society, gave him a call, but however flattering, Mr. Barrows was not willing to leave the theological school till he had completed his course of instruction. Accordingly that church waited over 12 months for the young student, who then entered on a successful pastorate of 10 years.

At the memorable meeting of the American Board of Commissioners for Foreign Missions, held in Lowell in 1880, Mr. Barrows was appointed by the Prudential Committee of the Board, Chairman of the Committee of Arrangements, and the success of that gathering is largely due to his wise and vigorous plans and efforts. In aiding to secure the Wentworth Fund for Dartmouth College, and other donations, he was conspicuously efficient. His merits were recognized by his *alma mater* in the bestowal of the degree of Doctor of Divinity in the year 1883—one of the youngest graduates of Dartmouth that ever received that honor. He was an influential delegate in the famous Congregational Council, at Brooklyn, New York, in the time of the Beecher controversy. He was one of the nominating committee of seven appointed at St. Louis in November, 1880, to designate 25 learned and judicious clergymen to formulate a new creed of the Congregational denomination.

It is about eight years since he consented to break up the pleasant companionships of the East and take the pastorate of the First Congregational church of San Francisco. The pastorate has been eminently successful, the membership has nearly doubled, the congregation the largest in the city, and the receipts of the society greatly exceed the expenditures. The church edifice is one of the most costly and imposing in San Francisco. As a theologian, Dr. Barrows stands at the front of the liberal movement in orthodox circles of thought, and his congregation fully shares the inspiration of the feeling, as is evidenced by kindly tendering their lecture-room to the uses of the Unitarian Sunday-school during the

building of their new church. Dr. Barrows owned a controlling interest in the *Overland Monthly* for three years, and then arranged for it to go into the hands of a stock company.

His speech at the great Sargent dinner, when the Hon. A. A. Sargent was appointed Minister to Germany, was spoken of by individuals and by the press in the highest terms. As a member of Boards of Trustees of several educational institutions, among them being those of Mills College and Fryeburg Academy, he is wise in counsel and painstaking in his duties. His musical ability has proved of great advantage in his work, it being of high quality. He is greatly beloved by his people and in the great missionary work of the State as pastor



REV. CHAS. DANA BARROWS, D. D.

of the oldest and wealthiest Congregational church in the State, and, as a loved brother among his ministerial brethren, he exerts a leading and helpful influence, being always ready to further plans which will strengthen and relieve the poor and build up the best interests of California. His church nobly seconds all his efforts. As we have said, Dr. Barrows is still young, having hardly yet reached the full maturity of his powers. But he has already accomplished much. Educational institutions from kindergarten to college have felt his beneficent influence, and the charities and churches he has aided have been not a few. His public lectures are inspiring. His addresses are many and instructive. It may reasonably be expected that the greatest achievements of his life are yet in the future, a rich fruitage from the choice culture, the high resolves and the earnest discipline of the past.

"We live in deeds, not years; in actions, not in figures on a dial; he most lives Who thinks the most, feels the noblest, acts the best."

The school-children in Cincinnati now carry bottles of boiled water to drink.

A Great Effort by the Woolmen.

We have received documents from the secretary of the National Wool-Growers' Association, Albert Chapman of Middlebury, Vermont, which show that a strong and well-organized effort will be made before Congress this winter to secure such legislation in the wool interest as is desired by the growers. Hon. Columbus Delano, president of the association, has issued an address in which he announces that the committee appointed by the Ohio wool-growers to ascertain the disposition of the wool-manufacturers toward the effort to restore the tariff of 1867 has discharged its duties, and in doing so has reached the conclusion that the dealers

the National Wool-Growers' Association meet in Washington, on the first Monday in December next, to take into consideration the peril which hangs over the industry, and to consider the best means of correcting existing erroneous rulings of the Treasury Department in regard to the importations of wool and manufactures thereof.

Agriculture and the Geological Survey.

The declaration made by the State Grange concerning the need of carrying on the agricultural work provided for by the law creating the U. S. Geological Survey, is a movement in the right direction. Especially now that actual settlers are disposed to move in such numbers upon the public lands, it is desirable that the agricultural features of the lands should be set forth and classification be made upon them. The earlier surveys under Powell and Hayden did much work in this line, and Prof. Powell's report on the arid lands of the United States is a standard and of great value. When the survey work was reorganized, the classification of public lands was made the leading item of its work. The first report of the Geological Survey alludes to this work and promises a vigorous effort to discharge it. It is hoped now that the execution of the work will not be longer delayed. It is not easy, we acknowledge, to find men competent to prepare such reviews. There are more good geological field men than there are agricultural, and yet probably the latter can be found if provision is made for them by Congress. Though the law calls for the agricultural work, the appropriation bill in specifying the personnel of the survey does not provide for agricultural experts as it should. At the coming session of Congress this matter will probably be prominently brought forward, and the deficiency in the appropriation bill can be supplied. The following is the action taken by our State Grange at its last meeting:

WHEREAS, Agriculture lies at the very foundation of our National prosperity, and is justly entitled to an ample share of the fostering care of the General Government; and

Whereas, In the opinion of this body it is of the highest importance that accurate and reliable information concerning the agricultural features and peculiarities of the country, and particularly of the newer States and Territories yet to be settled, should be within the reach of the intending settler and immigrant; and

Whereas, the law creating the Geological Survey of the public domain of the United States provides for "the classification of the public lands and examination of the geological structure, mineral resources and mineral products of the National domain," but in the actual execution of the work the first provision has thus far remained a dead letter so far as any of the information needed by agriculturists is concerned, while the most elaborate and minute investigation of even the most recondite matters relating to the geological structure and mineral resources have received abundant attention; therefore be it

Resolved, That the State Grange earnestly prays the Honorable, the Senate and House of Representatives, that steps be taken and provision made to the end that the Geological Survey shall discharge the first duty entrusted to it by law, to wit: "The classification of the public lands;" together with such other service to the agricultural development of the country as properly belongs to that effort.

Resolved, That copies hereof be transmitted to the Honorable Representatives of California in Congress, and that their approval and support of such measures as are needed to obtain the result be most earnestly solicited.

There is not, as we understand it, any objection made to the geological work of the survey, which we believe is accepted by experts as excellent. The claim is that while such work is done, the other work in the aid of our leading industries and the industrial development of the country should not be lost sight of. As Prof. Powell is at the head of the survey, and has already rendered the country good service in reference to our arid lands, as we have stated, it is fair to conclude that he will be ready to discharge the other work now asked from his office if Congress should make due provision for it.

LESSENING TIME AND RATES.—Beginning December 1st, the steamers of the Pacific Coast S. S. Co. and the O. R. & N. Co., trading between S. F. and Portland, will not only diminish the time occupied in the passage, but will reduce rates as follows: First-class passage between S. F. and Portland, \$15; round-trip tickets, \$25; steerage-trip tickets, \$7.50.

GOOD LIVE INDIANS.—The Visalia Delta states that among those employed in hauling lumber from the mountains are a few Indians who own the teams they drive and the large wagons used. They are industrious, make their trips regularly and are making money.

Mr. Delano requests all the officers of

FRUIT MARKETING.

Review of Fruit-Shipping of 1887.

[The following paper by Capt. H. Weinstock of Sacramento was read at the Fruit-Growers' Convention at Santa Rosa on Nov. 10, 1887.]

Having been called upon to read an essay before the Fruit Growers' Convention on "Transportation," I deemed it well in treating this question to get Eastern results of this year's fruit business.

With that aim in view, the following letter was sent to a number of fruit men in the large Atlantic cities:

SACRAMENTO, Sept. 27, 1887.

DEAR SIRS:—As the season for California fruits is now nearly over, I should like to get your views concerning the past and present as well as your opinion concerning the future prospects for our green fruits in your market.

I would ask you to point out the mistakes, if any, that have been made in the handling of California fruits during this season, either at your end or ours, and I should like you also to tell us what must be done in order to avoid hereafter any mistakes that may have been made.

Can anything more be done in the way of securing better and cheaper transportation facilities, and, if so, how would you go about it?

Please state the aggregate amount of California fruits handled by you this season, and, if possible, the average price realized per pound. Also, as near as you can estimate, the amount of California fruit received in your market by other parties, and your estimate, as near as possible, of the average price per pound realized by them.

In fact I should like you to give a review of the past season's experience in California fruits in your market, including all the information at your command, together with such hints and suggestions as in your judgment would be of value for our future guidance.

And, finally, I would like you to state whether you consider the auction plan, as applied to California fruits, a success in your market, such as to warrant a continuance of that method of sale for our products.

From among the replies to the foregoing which have been received, I have chosen the following as being of most interest:

From Snow & Co. of Boston.

MR. H. WEINSTOCK, Sacramento, Cal.—Dear Sir: We have this day your esteemed favor of the 27th, and replying so quickly we will not be able to give you an answer to all your questions, but at a later date possibly we may be able to do so.

In the first place, you ask us to point out the mistakes (if any) that have been made in California fruit at either end this season, and also ask our remedy to avoid such mistakes. Second, can anything be done to secure cheaper and better transportation, and how to go about it. Third, regarding present sales and future prospects of California green fruits in our market.

In answer to your first inquiry, we will have to reply in general terms. We do not care to discuss this point in detail as affecting our neighbors or reflecting upon any shippers, but it is our opinion that, for a start, too much fruit was sent here at one time. When you will consider that during your visit here last season you asked the question if we thought two cars a week would be too many, we were not prepared to answer positively, both you and ourselves thinking that possibly two cars per week might be too many, and when you come to consider the fact that on one day six cars were due here, following several cars of a few days previous, and others to come, you will see that the momentum was much stronger than facts warranted.

There is much to be done to make the shipping of California fruits to Eastern markets a success. Intelligence at both ends is a very much-needed quality. Too much care at your end cannot be taken by the packers and shippers, and at this end the best possible judgment must be secured. Parties must be interested in the business and acquainted with it to successfully conduct it, and this will apply to both ends.

As regards securing cheaper and better facilities, we cannot answer you positively, but it seems from our standpoint that something should be done.

Regarding our views concerning the past and present season, and the future prospect of your green fruits in our market and the matter of the auction, the past season has demonstrated that there exists in the East a great demand for California fruit. The output has been very heavy, and the goods have been advertised from the fact that so many came that they had to be sold, and a large trade grew up in consequence of the great quantity. What the result has been financially for the shipper is a matter that can be better determined by you as a director of the California Fruit Union.

We know there have been some ruinously low prices on account of the poor condition of the fruit that was received, and we also know that some very satisfactory profits have been made by the shippers of fruit which has arrived here in good condition.

There is no doubt in our opinion of the success of California fruit in Eastern markets, and the success of the auction system, as viewed in this city, fully meets our most sanguine desires and expectations. We know from actual contact, having sold quite a number of cars ourselves by auction in our own stores, and having them fully under our own management that the shippers have made money, with the exception of the last car, which came to us but a week ago, composed partly of Muscat grapes, which should not have been shipped here and would not have been had our instructions been followed.

All fruits, when getting to the point of deterioration, must be handled without delay, and the only way to successfully do it is to sell them quickly to the highest bidder; also all fruits in fine condition seeking an outlet in large quantities and sought for by buyers, we believe command better prices and more satisfactory results by the auction method. We are fully committed to the auction business and if California fruits can be systematically handled by competent parties knowing the business and interested in the same, we believe the auction system the method of all methods by which to dispose of them.

The experience of shippers from the Union in New York and Boston this season must be against the principles of shipping large quantities of fruit without regard to the wants of the market. The business was an experiment this year, and as such, in our opinion, should have been followed cautiously, and without attempting to do too much the first year, gaining from the experience of this season many facts that would continue the business more successfully the coming season. We do not care to criticize our neighbors either here or in New York. We believe the Union's agent here has done the very best he could. You will understand that when fruit goes into the regular auction-room there is no other resort than to sell it on the spot whether it brings good prices or not.

Should fruit be shipped to this market another season which we trust and hope will be the case, we may be permitted to offer the suggestion that a less number of cars be shipped, or perhaps more evenly

distributed. The market should take two or three cars of California fruit daily, if properly handled at both ends, without creating demoralization on an overstock. Very truly yours,
Snow & Co.
Boston, Oct. 4th.

Harris & Co., Auctioneers of Boston.

Write as follows:

MR. H. WEINSTOCK, Sacramento.—Dear Sir: Your favor of Sept. 27th received and contents noted. Our auction sales of California fruits commenced on the 18th of July, and the first offerings were of pears, peaches and plums. Choice sound Bartlett's were generally in demand at good prices, but, unfortunately, the fruit was too often overripe and only fit for immediate use, consequently the grade who wanted to ship to their out-of-town customers couldn't handle it, and it sold at low prices; but prime Bartlett's laid down here in good order will command good prices up to about the middle of August. Some few lots of pears of other varieties, and particularly the Winter, were received at a time when they were not wanted, and in our judgment it would be best not to send anything but Bartlett's.

Peaches were always in good demand, and choice, sound lots sold readily at full prices until the last few shipments, when the large receipts from Delaware lowered the prices.

Plums and prunes arrived in a more or less waxy condition. Gros prunes, however, were usually in good order and sold quickly and well, some of them being very fine, but care should be used in packing to have fruit as nearly uniform in size as possible; in some boxes it was large and handsome, while in others of the same lot it was small and inferior.

There are always buyers at our sales who want the best that can be had, and are willing to pay well for it.

Grapes—We are satisfied that Muscats can not be sent to this market in large quantities and sold to advantage. All that we have had have been poor and sold at low prices.

Of Tokays we have never had a good lot to offer, but have no doubt that a car of strictly choice grapes would now sell quickly at 10 cents per pound, or 34 cents crate.

A car of 884 packages sold the 3d inst., at 31 cents to 75 cents per half-crate, and 85 cents per crate, but the first was in very waxy condition; owing to an accident it had to be transferred to another car and was five days overdue when it arrived. Had it come through on time with sound fruit, it would have sold at good prices, notwithstanding the market is full of domestic grapes, which are selling at low prices. All that we have received have been wholly inferior to those offered on the market at private sale.

We have handled for the agents of the California Fruit Union about 26,000 packages of fruit, amounting to \$43,290, or six and seventeen one-hundredths cents per pound.

We have means of estimating the amount handled outside of Union or prices of same. We think no serious mistakes have been made at either end of the line. Of course it was understood at the beginning, by all interested, that some time was required in which to learn the business, find out what fruits were wanted, the best time to ship and the proper way to handle and expose fruits for sale, and those things have been learned by the experience of the past three months.

We consider the auction plan, as applied to California fruits, has been a success from the start, not that it has always resulted profitably to the shipper, but it has enabled us to show that large quantities of fruits may be disposed of at a time at good prices, unless they are the kind that are not wanted at any price.

The low prices were due to the poor quality and bad condition and not to any fault in the methods of sale.

We believe a profitable business can be done in this market if the shipper will send only the kind of fruits that are wanted, when they are wanted, and will be careful to pack only that which is in condition to stand the long journey, giving attention to grading and assorting so as to have uniformity in size; and we still feel, as we have always maintained, that the auction plan is the best one by which to market large quantities of California fruit.

Our sales were well attended, and gave general satisfaction to the trade, who were only too glad to be able to buy in this way, and there were many times when the supply of good fruit was not equal to the demand. We think the matter of trying to secure better and cheaper transportation facilities is something that will have to be attended to on your end of the line, but if there is anything we can do here we shall be glad to act.

The agents of the Union have at all times given the business the greatest care and attention, the fruit has been handled in a thoroughly first-class manner, and everything has been done by them and ourselves to make a success, and we sincerely hope the shippers and supporters of the California Fruit Union will not be discouraged at the result of this first season's business, but may be willing to ship next season, and by acting upon suggestions which have been made and valuable information which your agents can give, may be enabled to do a larger and profitable business.

H. HARRIS & CO.
Boston, Oct. 7th.

Powell & Co. of Philadelphia

Write as follows:

DEAR SIR:—Your favor of September 29th received and duly noted. All the fruit we have had from the California Fruit Union sold at an average of a little over 54 cents per pound, but we had to pay so much freight that we did not pay the growers unless they got a rebate from the rate to the companies. But I think the selling at auction is the way to sell this kind of fruit, as I am well satisfied that I got more for it at auction than I could the other way; but this was a very hot season—the warmest we have had for years. I wonder that the fruit kept as well as it did. I can't tell anything about what other parties got for fruit, but of course they got more than we did at auction, for they would not have had 25 to 50 boxes at a time, and that amount would bring more than a carload, but I don't suppose there has been in this market to us and all other parties three cars of fruit, besides the seven cars that we had from the Union.

Philadelphia, Oct. 8th. WM. H. POWELL & CO.

Sgobel & Day of New York

Write as follows:

NEW YORK, October 7, 1887.
DEAR SIR:—We beg to own rec'd of your esteemed favor of the 27th ult., and carefully note all that you tell us. We presume the season for California fruit may be considered as entirely ended, as even the Tokay grapes do not get satisfactory returns when sent by the single carload, as they must be now; therefore we do not expect to receive any more this season, and as we have gained experience, like others, we may consider ourselves in a better position to answer your questions now than we were some time ago.

The mistakes, if we may call them such, that have been made, have been made in California; and the glaring mistake is the sending of common fruit here.

You know well that in the past that this market has been supplied by Dudley, Clapp & Doe almost exclusively.

Mr. Clapp has been stationed in Chicago, has purchased the very cream of the California fruit, and that New Yorkers have never known anything but the most superb quality of fruit from California. Now, we have had some magnificent fruit, too, especially that packed by Messrs. W. R. Strong & Co.; but we tell you we have had a great deal of common fruit. Our people will not pay high prices for this class of fruit. The fact that it is California fruit, or that the boxes are marked "California," has less weight with the actual consumers than some people imagine.

True, a large share of our fruit has come from the growers, who do not know how to pack. Their men mix choice fruit with fairly good fruit, or fairly good fruit with common fruit. At any rate, we have had plenty of common fruit. We tell you that. Now, this costs just as much to get here as the finest quality, and the consequence has been that many of our account sales must have been unsatisfactory.

We have gotten up some statistics, and find that we have received this entire season and sold here the following:

	Pkgs.	Average per lb.
Pears	17,152	5 cts.
Peaches	7,627	5 1/2 cts.
Plums	3,152	9 1/2 cts.
Apricots	4,701	7 1/2 cts.
Grapes	4,574	5 cts.
Nectarines	259	3 1/2 cts.
Quinces	14	10 cts.
Total	37,479	

From this you will see that peaches, pears and grapes have averaged five cents per pound, good and bad, sound and decayed, while apricots and plums did decidedly better.

It is quite impossible for us to tell you, or for anybody here to know, what other people have received in this market; probably about a fourth of what we have received. That is a rough guess, but we have no means of getting at it any closer, and it has all come to D., C. & Co., from Clapp in Chicago, to Salt & Cuneo, from Mr. Reid, either from Chicago or Sacramento, and to Mr. J. H. Cromwell from Earl. We could not possibly tell you what prices these parties have obtained.

Now as to the transportation. Our firm opinion is that you must not rely on \$625, and we must have this brought down.

We want \$400 from Sacramento to New York, and hope the matter will be taken hold of from your end of the line.

The Erie Express only receives \$100 a car, when five cars come from Chicago to New York; consequently the other lines get \$300 from Sacramento to Chicago, which is a high freight under all the circumstances. From Sacramento to Chicago is about 2000 miles, and from Chicago to New York is about 1000 miles; ergo, if the charge is \$100 from Chicago to New York, it ought to be \$200 from you to Chicago. There is no doubt about it, we must have a lower freight than this \$625 business.

Some minor things should be corrected: The delay somewhere on the road when cars so often reach Chicago about evening, several hours after the actual passenger train arrives there, leaving yours a little after our fruit train. The passenger train must pass the fruit train somewhere on the way, and yet we understood that it was guaranteed that the fruit train should keep ahead of the passenger train. There is a screw loose somewhere. If those cars reach Chicago as they should, say about 5 o'clock A. M., they could always catch the 7:45 train over the Erie, and arrive here at such a time that we always could sell at 11:45. This needs investigation.

Now, in conclusion, as to the auction plan. As we wrote to Mr. Blowers yesterday, if we advocated the auction plan strongly when he was here, and before we took hold of California fruit, we advocate it ten times as strongly now. There is no doubt on this point. No commission merchant in New York could begin to handle the fruit we have handled this season, and get any such prices as we have gotten. They simply could not do it. D., C. & D. had a car of Tokays put into the auction room a few days since, and Dudley told me yesterday that while he could sell choice fruit, he could not sell that kind of fruit.

It is immaterial what commission people may tell us, and what other people may say, the fruit must be sold at auction.

It is absolutely impossible for it to be sold in any other way; and if we only had several of your directors here, so that we could show them personally this thing, there never would be any doubt in their minds as to how California fruit ought to be sold. Five cars in a day as we sell it. A large share of it must simply lie over until the next day, or even the day following, and where would apricots, peaches, etc., be under such circumstances?

We cannot put this matter too strongly, and call your attention to the fact that all the Florida people, even, who are hunting around to find some plan by which a part of the crop can be held back from northern markets during the terrible winter weather are forming new plans for auctions, even in Jacksonville.

Of course it is folly, for buyers from the North would not go down to Jacksonville to buy their fruits, but it shows very distinctly that the fruit must go into the auction-room; and the very commission merchants here who receive Florida fruit all acknowledge frankly that the time is not far distant when the entire crop of Florida must be sold at auction.

Maxfield & Co., one of the heaviest commission-houses in Florida oranges, told us a few days since that they intended to auction all of their product next winter, and we hear that others are getting ready to do the same thing.

We tell you in the strongest possible manner that your California fruit must be sold at auction here, and in no other way.
Sgobel & Day.
New York, Oct. 17th.

The Vital Question.

Aside from the question of how to sell our fruits, whether by auction or by private sale, and what fruits to ship and when to ship them, and aside from the question how to increase the Eastern demand, the vital points of interest at this moment are those touched upon in their letter by Sgobel & Day, when they say:

"Our firm opinion is that you must not rely upon \$625 per car, and we must have this brought down. We want \$400 from Sacramento to New York, and hope the matter will be taken hold of from your end of the line. The Erie Express only received \$100 a car, when five cars come from Chicago to New York; consequently the other lines get \$300 from Sacramento to Chicago, which is a high freight under all the circumstances. From Sacramento to Chicago is about 2000 miles, and from Chicago to New York is about 1000 miles, ergo if the charge is \$100 from Chicago to New York, it ought to be \$200 from Sacramento to Chicago. There is no doubt about it, we must have a lower rate than this \$625 business."

The experience of this season has made it very plain that we cannot rely upon \$625 per car to New York. This is a prohibitory rate as far as selling carload lots in the markets of the far East is concerned; \$625 a car means nearly four cents a pound net weight for freight. At this rate how can we ever hope to compete with the grapes from Spain, the freight on which is but one cent per pound? If the Pacific railroads are in earnest when they say that they have the interest of the California fruit-grower at heart, then they must make it more evident by their acts than they thus far have done. It cannot be said that the Eastern railroads are a stumbling-block in the way of low rates. If the Pa-

cific railroads will but give us the same rate charged by the Eastern roads, there will be little left for complaint.

The rate from Chicago to New York in single car lots was \$200 per car. This rate was this season reduced to \$125 per car, a reduction of 37 1/2 cents, whereas the Pacific roads reduced their rate from \$600 per car to Chicago to only \$500, or 16 2/3 per cent, and in train lots while they reduced the number of cars per train they advanced the rate per car just one-third, or from \$300 to \$400 per car.

It is possible that the Pacific railroads may be able to explain these differences in the concessions allowed between the Eastern and Western roads, and to show that they have made their full share of reductions. But to the uninitiated, it seems very plain that the railroads east of Chicago, who frankly tell us that they have little or no interest in our welfare, that our business to them is but as a drop in the bucket and scarcely worthy their notice, are yet liberal enough to give us a reduction of 37 1/2 per cent on former rates in single car lots, and a reduction of one-half of former rates when several cars are forwarded at any one time; whereas the Pacific railroads, who willingly admit that it is to their interest to develop the resources of our State, and who are directly interested in our prosperity, and who have handled more than ten times as many carloads of fruit as were sent east of Chicago, have, in the face of these facts, made a much lesser reduction in rates, and are to-day charging double the rate per mile charged by the roads east of Chicago.

It is true that a \$400-rate was made to Atlantic cities, but the conditions surrounding this rate were such as to place it beyond reach.

In 1886 Boston used on an average about half a carload per week of California fruit, and New York about one carload per week. It was the judgment of the fruitmen of Boston, and especially of Mr. Snow & Co., as stated in his letter, that if the consumption of Boston could be quadrupled and increased to two carloads per week, that for the season of 1887 it would be doing great work.

In the face of these opinions we find that the consumption was increased to an average of over four carloads per week. The shipments to Boston for July, August and September being 39 carloads from the Fruit Union, and about 10 carloads from other sources, and the consumption in New York was increased from one carload per week in 1886 to between five and six carloads in 1887.

This increase might have been more than doubled if the \$400-rate had been made available.

But while wonders were accomplished in increasing the consumption in Atlantic cities from 500 to 800 per cent in one season, it can readily be seen that it is yet impossible to comply with the iron-clad provision laid down by the Pacific railroads, who say that in order to secure the \$400-rate no less than five cars must be sent to any one city.

This could not at present be done east of Chicago under any rate, no matter how low.

It would be ruinous to send a week's supply of highly perishable fruits at any one time. The success of the industry lies in sending daily and not weekly supplies.

Promises not Kept.

What the fruit-growers asked for, and should have been granted, was a \$300 rate to Chicago when 10 cars were started at a time from Sacramento, and a \$400 rate for the one or more cars that would be shipped from such trains beyond Chicago.

The \$300 rate to Chicago in 10-car trains was positively promised the fruit-growers last January by Mr. A. N. Towne, who in the presence of a large committee of fruit-growers said as plainly as language could express it, that a \$300 rate to Chicago would be granted provided the Interstate Commerce Bill did not interfere. The bill, as was afterward shown, did not interfere, and yet that promise was never kept, and the rate, against all the pressure that the growers could bring to bear upon the Pacific railroads, was made \$400 to Chicago. As an apparent concession to the growers the same \$400 rate was fixed for Atlantic cities, provided as already explained that five carloads went to one city. If less than five cars and more than one car was sent beyond Chicago, an additional hundred dollars per car was added by the Pacific railroads. Out of this \$100 extra per car the roads east of Chicago received but \$25 and the Pacific roads retained the remaining \$75 without having rendered any service whatever therefor; as they had already received the full rate of \$400 per car to Chicago, which was all they professed to charge for cars in train loads.

Thus we see the strange anomaly of the roads who should do the most toward enlarging our markets in the East, doing positively the least to further this end—in fact, we see them going so far as to keep from us the advantages in the way of low rates that the roads least interested in us are willing to give. And we see the further anomaly of the Pacific roads placing such conditions in the way as to compel the growers to choose between sending weekly supplies to the Atlantic points in single shipments, which means disaster, or of sending daily supplies at rates that are prohibitory. On the one hand they aid us as much as possible to increase our production, and on the other hand they seriously hamper us in developing our markets.

It is not easy to understand a railroad policy that on the one hand spends millions in build-

ing feeders throughout the State to develop sections adapted to fruit culture, and on the other hand keeps the markets for these very products choked and cramped and limited. If this policy is persisted in it must not alone seriously injure all who are already engaged in fruit culture, but it must result in making the millions now being invested in railroad building far from profitable.

Sgobel & Day write from New York under date of November 2d: "The capacity for receiving fruit was not at all tested by you; some 50 cars came, but 100 could have come just as well as the 50, if you had seen fit to send them."

Had the freight rates and reliable service permitted, it is needless to add that we would most decidedly have seen fit to send them. They further write as follows: "As to New York's capacity for receiving fruit, what do you think of the sales here of Almeria grapes during the past 20 days, i. e., 65,000 barrels? We grant you quite a share of this is sent to different points this side of Chicago, but Boston and Philadelphia also receive these grapes from the other side of the water."

From this it may be seen that we have just begun to tap the vast markets of the Atlantic border, and it now remains for the transportation companies to say whether we shall stop where we are or develop these wonderful markets to their fullest extent.

Ruinous Delays.

Another matter which should receive the attention of the growers, and which is quite as important as low rates, is the question of fast service. A hundred dollars per carload to New York is a high rate, if delays are permitted that brings the fruit to its destination in a rotten condition. The train service from Sacramento to Ogden has, so far as can be learned, been first-class, and the promise made by the Southern Pacific railroad, to keep the fruit trains ahead of passenger trains, has been faithfully observed. But east of Ogden the service has been far from satisfactory.

Out of the 39 cars sent to Boston by the Fruit Union, 16 arrived one day late, three cars two days late and one car four days late.

Out of the 51 cars sent to New York, 17 cars, and possibly a few more, arrived from 5 to 24 hours late, and out of the seven cars sent to Philadelphia five cars arrived late.

Where fruit is sold by auction the delay of five or more hours is often equal to a delay of 24 hours; because, as a rule, the sale must be postponed to the next day.

A delay of 24 hours with such midsummer heat as is found in New York means a depreciation of from 25 to 50 per cent in the value of the fruit and brings a loss where a profit would doubtless have been made. From all that can be learned these delays have been caused chiefly by the Union Pacific road. Every influence should be brought to bear on this road to induce it to remedy this serious evil. The growers have a right to demand first-class service. There is no good reason why the Union Pacific should not render service equal to that of the Southern Pacific. In conclusion I desire to say that the experience of 1887 has made it very plain that we have a boundless market in the far East for our green fruits. As well as we have in one year increased the demand in Boston and New York from one carload to five carloads per week, just so readily can we further increase the demand from five carloads per week to as many carloads per day.

But we cannot hope to bring this about until the transportation companies realize more fully than they now do that it is highly to their interest to make the service to the Atlantic cities equal to first-class passenger time and the rate, in ten-car trains, \$300 to Chicago and \$400 per car for the one or more cars sent beyond that city. To secure these rates, and to secure such first-class service, should be the united aim of all California fruit-shippers and growers, and their efforts should not be relaxed until these changes have been brought about.

H. WEINSTOCK.

Discussion and Action.

The paper of Capt. Weinstock was heard with interest, and discussion followed in which Mr. Hatch, Mr. Buck and others took part. The discussion resulted in a motion that a committee be appointed to act with committees from the State Board of Trade and the California Fruit Union to wait upon the railway managers and claim better and cheaper service for the coming year. The motion was adopted, and President Cooper appointed the following as a committee: James Bettner, Riverside; S. J. Stabler of Oakland and George F. Hooper of Sonoma. This committee will report to the meeting of the stockholders of the Fruit Union in January next.

A RAILROAD MULETED.—At Santa Rosa in the case of Wm. King et al. vs. the N. P. R. R., wherein action was brought to recover \$20,000 damages for injuries received by Mrs. King in alighting from the defendant's cars, which did not stop at the station long enough to allow passengers to alight, the jury last week returned a verdict for the plaintiff in the sum of \$5000.

THE Nipomo News says that a 107-pound beet raised by Mr. A. Forsting on the Los Berros, and shipped to San Diego by Messrs. Beckett and Hardie, was barely four months old.

FERTILIZERS.—Samples of the phosphates advertised in this paper will be mailed free to those desiring them, and applying to H. M. Newhall & Co., 309 Sansome street, S. F.

The Fairs.

San Luis Obispo—16th District.

The inaugural fair of the 16th District Agricultural Association, held at San Luis Obispo October 12th to 15th, proved one of the most brilliant successes of this singularly successful fair season.

The land on which the fair-grounds and track are located had been purchased only a month before, and yet so wisely and efficiently worked President E. W. Steele and Directors L. M. Warden, P. W. Murphy and Geo. Van Gordon—all needful structures were finished in time for the exhibition.

The display of blooded horses and cattle was extensive, and upheld the reputation for fine stock which this county has for some years past been winning, and the parades and races drew to the park throngs of visitors.

For want of a pavilion, the products of the fields and orchards, domestic manufactures and works of art, were marshaled in Pioneer Hall, which, though by no means small, afforded but about half the space desirable. From all parts of the county came admirable exhibits. That of the Arroyo Grande Agricultural Association occupied nearly all one side of the hall. Mr. Lazcano brought a superb output of peaches, grapes and apples from the San Jose valley. M. Gilbert and F. Riley from Morro, and Mr. Elberg of Los Osos, showed what those sections could do in fine potatoes of enormous size. A. M. Hardie made a splendid showing of fruit and vegetables from the Cayucos country; and the Huer-Huero District was well represented by J. V. Webster.

"There were peanuts clustered around the roots of plants that had just been pulled from the rich light soil, grapes and sorghum and sugar cane, flax, millet, vegetables, and fruits, until one was constrained to ask if there was any production of the world that would not thrive in San Luis Obispo county."

Captain W. D. Haley of Templeton gave the principal address, which was fitting, interesting and appreciated by his audience. A baby-show and a promenade concert enhanced the enjoyment of the closing day, and the financial outcome matched the other successes achieved. Every one concerned appears complacent, if not indeed elated, and there is serious talk of building a pavilion before another year rolls round.

An inspection of the subjoined list of awards will give some notion of the comprehensive richness of the exposition.

Awards—Horses.

ROADSTERS—Best team, Cleo and Jessie. E. Graves; stallion, Brelas, 4 yrs old or upward, E. B. Ballard; stallion, Al-Alien, J. H. Orcutt.

YEARLINGS, TROTTERS AND THOROUGHBREDS—1st prize, Elect, E. Cerf; 2d, Dude, and 1st filly, Evelta, Geo. Van Gordon; running yearling, Enterprise, J. Price.

ALL PURPOSE—Stallion, Crown Prince, 4 yrs old and over, mare, 2 yrs old, sucking colt, E. W. Steele; stallion, Chief, 2 yrs old, T. Andrews; Fanny, 3 yrs old and upward, G. Gates.

GELDINGS—Ned, 3 yrs old and upward, L. M. Warden; 2 yrs old, H. M. Warden.

MARES AND COLTS—Lady Tiffany, 4 yrs old and upward, and colt by Antevolo, Brown & Taylor; Stewart mare, 3 yrs old and Altoona colt; mare 1-year-old, 2 mares and 2 sucking colts, E. W. Steele; mare, 2 yrs old and over, sired by Goldsborough, imported from Australia, G. Van Gordon; 4 mares and colts by Gaviota (special), P. W. Murphy; stallion, Bayard, 3 yrs old, P. Kelly; stallion, De-Lesseps (special), J. Wilkinson.

CARRIAGE HORSES—Span, J. Andrews; single carriage horse, J. E. Mosher.

SWEEPSTAKES—Stallion, Altoona and family, G. Steele; stallion, Gaviota with family (special), and stallion, Gaviota, any kind or age, P. W. Murphy; mare, Lady Tiffany, any breed or age, Brown & Taylor; gelding, 3 years old or upward, G. Gates; mare, Princess, with four colts, H. M. Warden; colt any breed or age, W. H. Taylor.

Cattle.

HOLSTEINS—All (10) awards to E. W. Steele.

JERSEY COW—E. W. Steele.

HEREFORD—All (5) awards to G. Van Gordon, representing Sen. Hearst.

DEVON BULL—G. Van Gordon.

DURHAM—All (5) awards, H. M. Warden.

Poultry.

There was not a large exhibit of poultry, although there are many fine fowls in this county, and the only award was to Bushnell Hughston for a coop of Langshans.

Farm Products.

GRAIN, ETC.—Sack barley, W. A. Conrad; sack corn, E. A. Atwood; sack flax, sack hops, collection assorted forage plants, J. V. Webster.

Fruits.

Collection apples, 20 varieties correctly named, W. H. Taylor; collection apples, 12 varieties named, J. F. Beckett; collection not named, E. Atwood; peaches, Lazcano Bros.; plums, J. Gregory; nectarines, Mrs. E. W. Steele; foreign grapes, W. W. Hays; wine grapes, J. V. Webster; nuts, McD. R. Venable; oranges, E. Leedham; lemons, A. M. Hardie; pears, J. H. Orcutt; quinces, H. J. Price; Japanese persimmons, W. H. Findly; crabapples, J. F. Beckett; blackberries, Mrs. J. V. N. Young; strawberries, G. Jaspas; collection various kinds of fruits, J. P. Andrews; dried apples, apricots, nectarines and peaches, Mrs. E. W. Steele.

Garden Products.

Largest general display fruit and vegetables, Arroyo Grande Agricultural Association; Chili Garnet potatoes, Oregon Blue potatoes, Burbank potatoes, M. Gilbert; Peerless potatoes, (40 making 100-lb sack), M. Elberg; sweet potatoes, carrots, onions

(different varieties), cabbage, J. V. N. Young; white beans, O. Root; pink beans, J. G. Stevenson; water-melons, Mrs. Lowther; black Spanish melons, F. Melton; Hubbard squash, Butman squash, coconut squash, S. M. Findley; Kershaw squash, J. V. Webster; Crookneck squash, C. Greib; Yokohama squash, Chili Monarch peas, J. Gregory; six squash, total weight 1224 lbs, one squash, weight 216 lbs, China winter radish, T. B. Records; pumpkins, cucumbers, G. O. Taylor; cauliflower, A. B. Hasbrouck; Danvers onions, W. E. Ahalt; Spanish radish, J. McGlashen; Rutabaga turnips, beets, J. D. Roberts; red peppers, G. Jaspas; peas, J. G. Stevenson; tomatoes, Mrs. Huyck.

Plants and Flowers.

Hot-house plants, Mrs. Robbins; cut roses and dahlias, Mrs. R. E. Jack; fuchsias, Miss Bouldin; lillies, Mrs. Orcutt; leaf plants, Mrs. Bromley; hand bouquet, Mrs. Sinsheimer; parlor bouquet, Miss Leland; vase bouquet, Mrs. Spencer; ornamental evergreens, Mrs. Hogan.

Miscellaneous.

Cheese, E. W. Steele; butter, Mr. Wilhoit; hams, bacon and lard, S. L. O. Packing Co.; pickled olives, D. F. Newson; raw silk and silk cloth, Mrs. Spurgeon.

WORTHY OF SPECIAL MENTION—Three squash, O. Root; one watermelon, 44 lbs, Mrs. R. S. Brown; cucumbers, R. Farmer; carrots, stock beets and table beets, A. M. Hardie; variety peppers, J. V. N. Young; tomatoes, G. Jaspas; cabbage and cauliflower, Jno. Edgar; Keashan squash, J. G. Stevenson; one squash, 190 lbs. carrots, R. Farmer; sunflower, 17 inches in diameter, H. Olmstead; White Elephant potatoes, Jno. Enos; Charal oak potatoes, E. Leedham; Peerless potatoes, E. Jaspers; rhubarb and celery, G. Jaspas.

Ukiah—12th District.

Ukiah was thronged with visitors on occasion of the fifth annual fair of the Twelfth District Association, which came off Oct. 11th to 15th, and from all we gather the Lake and Mendocino people are more than ever confident that just as good cattle and horses, hogs, Angoras and chickens can be raised in those counties as anywhere else, and that their soil will produce anything, from walnuts to squashes, the plumpness of cereals, the finest hops, fruits and vegetables, and that abundantly.

The management was criticised for its tolerance of gambling and tipping on the grounds, and there was plaint as to the scantiness of agricultural products shown, but we have noted none whatever as to the quality of what was exhibited.

G. W. Scudamore of Scott's valley, Lake county, made a particularly attractive display of fruits and vegetables. Mr. Nowdesha, from the redwood belt west of Ukiah, brought in large apples and clusters of grapes.

At the stock pasture Holstein cattle and Norman horses were in the majority.

The receipts amounted to over \$3000, and so far outran the expenses incurred that the directors were able to make good last year's deficiency.

Miss Mary White's prize essay and Anna Morrison Reed's prize ode were read by their authors, Friday evening, and well received.

The awards of special interest to the RURAL's constituency were as follows:

Awards—Live-stock.

CATTLE—Jerseys, bull, J. R. Johnson; cow, T. J. Fine. Holsteins, all awards to J. Mewhinney. Graded bull, A. B. Montgomery; heifer, J. Mewhinney. Sweepstakes, bull and cow, J. Mewhinney.

HORSES—Thoroughbred, stallion, J. Wathen; mare and 5 colts, W. J. Hildreth; mare, special, M. C. Briggs; colt, G. B. Nichols; graded stallion, G. B. Nichols; mare, L. H. Gruell; colt, J. D. Curtis; graded, 2-year-old roadster, H. A. Peabody; graded roadster, mare, L. H. Gruell; graded stallion and colts, W. J. Hildreth; graded mare and family, T. Charlton; 2d roadster, W. A. Hagans; carriage horses, Wm. Isbell; buggy horse, J. D. Curtis; horses of all work, 2 yrs. and over, D. W. Gruell; 1-year old, R. Hayworth; colt, S. Neil; draft stallion, A. Switzer; 2d do, J. D. Ball; span draft horses, J. M. Luce; draft horse, any age, F. M. Burroughs; sweepstakes; draft mare 3 yrs and over, L. F. Long; 2-year-old, do, T. J. Fine; 2-year-old horse, G. B. Nichols; yearling draft horse, F. M. Burroughs; yearling draft mare, J. R. Johnson; sucking mare colt, G. McCowen; sucking stallion colts, Thos. Parsons; mare and family, T. J. Fine.

ANGORA GOATS, J. F. Todd.

BERKSHIRE BOAR, W. J. Hildreth.

POULTRY, exhibit and pedigree cochins, J. L. Burger; silver-spangled Hamburgs, J. R. Johnson.

Fruits, Vegetables, etc.

Dried hops, A. V. Stanfield; Irish potatoes, P. Morrissey; sweet potatoes, Van Cleveland; Mangel Wurtzel, J. R. Johnson; squash, G. W. Busch; corn in ear, cabbage, turnips, A. Garaventi; pumpkins, apples, peaches, pears, plums, table of fruit, G. W. Scudamore; quinces, George McCowen; almonds, Pearl Fine; cut hardy and green-house plants, Mrs. C. P. Smith; cut flowers, Mrs. J. M. Mannon; fruits and jellies, 1st, Mrs. S. J. Chalfant, 2d, Sallie Peabody; wine, L. Peters & Co.; bulbs, C. Purdy.

Miscellaneous.

Cheese, D. W. Rupe; butter, 1st, Mrs. A. O. Carpenter, 2d, Mrs. J. R. Johnson; honey and beeswax, J. H. Schefer; harness of all work, C. H. Whitten; flour, and patent hoe, Wm. Isbell.

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It is the leader in practical progress. Send for price list to J. W. EVANS, 29 Post St., S. F.

WHO WROTE SHAKESPEARE?

How the Element of "Doubt" Leads to Grand Achievements.

The world is agitated again over the question of who was the author of Shakespeare's plays.

The world is full of doubting Thomases. The man who has been successful in exciting the present momentary interest in the subject is, like most successful agitators, an Irishman. He claims to have discovered a cipher running through the Shakespearean plays which proves them to have been written by Lord Bacon. It is also claimed that there is a cipher in the epitaph on the moss-grown tombstone, which, properly interpreted, leads to the same conclusion.

This age shows a decided inclination to pry into mysteries.

It can make no difference to Shakespeare now whether the world believes he wrote the plays that bear his name or not.

The plays are immortal. Ignatius Donnelly cannot rob us of these grand works, even though he should succeed in robbing Shakespeare of his glory.

Were it not for doubting Thomases many of man's great accomplishments would never have been brought to successful issue.

Men have been stricken down without warning. Doubt put in motion the investigation which ascertained the cause. After the discovery of the cause, the world was ignorant of any remedy with which to stay the terrible slaughter of humanity, and medical science said it was impossible. Doubt led the way to the light, and Warner's safe cure solved the seemingly unsolvable problem. Its friends tell us with conclusive proof that the unsuspected kidney disease befalls the blood and causes most of our diseases!

For years the heart was looked upon as the most important organ in the body, but doubt led to further inquiry, which developed the fact that the kidneys are the real blood-purifiers of the system, and these organs now attract the first attention of the careful practitioner. It is now a recognized fact that if they are put in a healthy state by the use of that remedy possessing such wonderful curative and cleansing powers, most of the prevailing diseases of the system will be easily overcome, since their cause will be removed.

How unimportant, in comparison with such problems, is the present discussion as to the authorship of Shakespeare!

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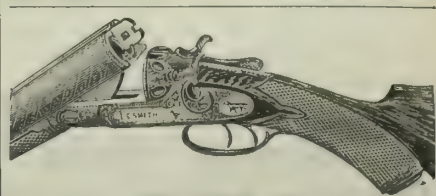
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MEXICAN PHOSPHATE & SULPHUR CO.,

The Best Fertilizer in the World!

IN USE IN ALL PARTS OF THE OLD WORLD AND ACKNOWLEDGED TO BE
THE BEST KNOWN.

We have been shipping this material for years to our Agents, Messrs. SCHRODER & MICHAELSON, HAMBURG, and under date of January 4, 1887, they wrote:

"The demand for your phosphates continues very good, as you will see from our having sold so far ahead as September and October arrival, at full prices, and we could to-day place a much larger quantity if we only had them to offer."

Under date of January 26, 1887, Messrs. SCHRODER & MICHAELSON, alluding to letters acknowledged, write as follows to H. M. NEWHALL & CO.:

"They referred partly to the quantity of Mexican Guano which we may expect to receive in the course of the present year, in regard to which our repeated inquiries addressed to the Company had so far brought no reply. We are glad to note from your telegram that Mr. Halsey has now written us on the subject, but we are, on the other hand, somewhat disappointed at the SMALLNESS of the figure you name (8000 to 10,000 tons) which we hope is exclusive of the 'Tranmere' and 'Saigon' cargoes. We have, in fact, in consequence of the numerous inquiries for this guano, been placed in an awkward position, through not being able to give any reliable information to our buyers in regard to the quantity of Mexican Guano forthcoming during the present year."

Its Introduction into California has been marked with the most gratifying results.

IT IS THE CHEAPEST, BECAUSE THE MOST EFFICACIOUS! THE SAFEST, BECAUSE DIVESTED OF ALL ORGANIC MATTER!
AND IS TOTALLY INOFFENSIVE TO TOUCH OR SMELL!

We invite correspondence with Farmers, Viticulturists and others interested, and are prepared to give the minutest details in regard to this most valuable Fertilizer. For particulars of Analysis see certificate of Dr. Schneider and testimonial of Professor Hilgard in another column.

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Fertilizers lessen the necessity for irrigation, increase the yield, improve the quality of crops, and keep the soil in a strong, healthy condition.

SPECIAL FERTILIZERS FOR ALL CROPS.

THE CALIFORNIA BONE FERTILIZERS ARE CHEAPER THAN BARN-YARD MANURE.

Owing to the gratifying success our product has met with during the past season, we feel greatly encouraged in offering our Fertilizers, and can guarantee our patrons that our former standard of excellence will be fully maintained.

SEND FOR CIRCULARS, WITH PRICE AND FULL INFORMATION TO

CALIFORNIA BONE MEAL and FERTILIZER CO.,

116 California Street,

San Francisco, Cal.

Potatoes at the East.

It seems likely that Eastern people will want more of our potatoes this year, although they have been taking them at a lively rate for some time past. It is reported that the outlook of the Eastern potato crop has held poor all the season, until by November 1st the experts concluded that the end of the growing season left them with the slimmest yield per acre, if not the shortest crop on the whole which has ever been known. With the average crop placed at 100, the reports from growers this year only reached 62½, or only ⅔ of an average crop. Pancoast & Griffiths of Philadelphia, in a review of the season, state that the failure of the crop West is attributed to the long and severe drouth, and the late ruin of the crop in the East to the rot resulting from continued excessive moisture here. In Ohio there will not be dug much over one-quarter of a crop, and in New York State, where the previous indications were more favorable, the crop will not be over one-half. The rot has set in generally, and many fields are not worth the digging. Faulty potatoes are now being crowded upon the markets because they will not keep. This tends to depress the demand for the time, but as soon as such stock is out of the way prices will certainly advance, and there is nothing to prevent sound potatoes from selling higher at the East the coming winter than for many years.

This would indicate that with reasonable freights there is likely to be all the potatoes that we can spare called for by the Eastern markets. Nor is the scarcity there likely to be of short duration unless supplies turn up from some unexpected source. It looks as though there would also be a very profitable business done in early new potatoes for the East, and those who have early land should give attention to the condition of affairs. If we can get our excellent new potatoes there in quantity at reasonable prices there promises to be a quick demand for them.

These facts are simply in accord with what we have always claimed, that there are big things for California in the lowly vegetable as well as in the regal fruits. Let us give attention to all our opportunities, and each choose the crop for which his land and situation are best adapted.

The Educators are Coming.

The National Educational Association will hold its next annual meeting in San Francisco—so much has been decided by the Executive Committee, and they have imparted their decision to Supt. Campbell.

This seems to imply that satisfactory arrangements have been made as to round-trip tickets, and certain other matters which were in question. Those who have read the resolution of the State Grange, urging the several railroad companies to consider the importance of reducing the fares in order to secure the holding of the above convention in California, will be pleased to see that the desires therein expressed have prevailed.

It is proposed to issue a 16-page prospectus, containing a full program of the general and department sessions of the convention, together with information as to rates of fare, routes of travel, accommodations, points of interest, and whatever else the excursionists are likely to want to know about. These will be mailed to about 150,000 of the leading educators in the United States.

The session is to open on the 17th of July, and it is hoped that even more than the 12,000 who attended the Chicago meeting last summer will be glad and able to avail themselves of the opportunity to take a cheap three-months' excursion to California.

POULTRY SHOW.—It is stated that the committee of the California Poultry Association has decided upon San Jose for the grand poultry fair in January, 1888, if favoring local arrangements can be made. This will be an opportunity for San Jose to score another grand success in an industrial display. She has done much in the fruit line and in field and farm products. Similar effort and co-operation will mass one of the grandest poultry displays ever seen in the State. It will do the district much good by drawing the attention of poultry fanciers thereto, and it will also awaken the people generally to the advantage of the high-class poultry. We hope the enterprise will go forward heartily.

HEREFORDS AT SANTA BARBARA.—Thirty-one head of the Hereford cattle, imported by Vaughan & Williams, which attracted so much notice during the State Fair, and have been mentioned repeatedly in our columns, are now at F. T. Underhill's Ontare ranch near Santa Barbara.

Santa Cruz Fair.

The Santa Cruz fair for 1887 was opened on Wednesday, Oct. 12th, and continued throughout the week. One of the first things to catch the eye of one entering the pavilion was a handsome sign at the farther end, "Santa Cruz County Fair." The letters were made of green grapes, with an edging of cranberries; the border of the sign was of grape-leaves and pampas plumes, and the corner pieces of barberries. The committee on decorations was highly complimented for its work as a whole. The exhibits of cereals, of apples, pears and grapes, of evaporated fruits, of flowers and of agricultural implements, were very creditable. Doctor C. L. Anderson made an interesting display of dried grasses from different portions of the Union.

A 48-pound beet, shown by C. Horstman of Boulder, two redwood planks, each 30 feet long, 30 inches wide and four inches thick, by Olive & Co., and a potato-vine trained on poles by Rev. T. M. Merriman to a height of nearly 10 feet, were among the big things on exhibition.

An enormous sea-turtle, lately captured by a Soquel fisherman, and measuring eight feet from the tip of its nose to the end of its tail, was to be seen in a pen by itself.

The South Coast Paper Mills' output of straw paper was remarkably even in texture, tough and proof against dampness.

For the rest, we must content ourselves with publishing the

List of Awards.

Exclusive of jellies, pickles, fancy work and pictures. Where one-half premiums are mentioned, it means that only one-half of the premium was awarded, as there were no competitors in the particular exhibit:

Live-Stock.

Martin Kinsley—One-half first premium for bay mare; 2d premium for draft stallion, Solide; 1st, for Mederic; 2d, for Jersey bull Hermes; also ½ 1st for the following: Southdown ram, ewe, pen lambs, and ½ 2d for Essex boar and sow. Dr. O. L. Gordon—1st Jersey bull; 2d, Jersey cow; ½ 1st for graded heifer calf and T. B. calves, 1st for 2-yr-old colt. A. Noble—½ 1st, for Durham bull; 2d, for 4-yr-old roadster. U. W. Thompson—2d, for stallion; ½ 1st, for ewe and lambs. I. H. Hammond ½ 1st, for 2-yr-old roadster. A. Liliencrantz, 1st, for roadster, and graded yearling mare. F. A. Hihn 2d, for mare; 1st, for suckling colt. J. A. Jackson—2d, for suckling colt. S. Blodgett—½ 1st, for stallion, Jack Frost. L. T. Almstead—1st, for 5-yr-old stallion. J. A. Gilbert—½ 1st, premium for cashmere goat and kids. Irma Scott—½ 1st, for cashmere goat. L. Lemon—½ 1st, for Jersey calf. Mrs. M. J. Rulofson—1st, for Jersey cow, Pert. J. Smith—½ 1st, for cashmere goat.

Poultry.

O. A. Longley—1st, pen light Brahmas; 2d, pen of Wyandottes; 1st and 2d, light Brahmas; do Wyandottes; largest and best collection of poultry. Miss L. Kloss 1st, Rouen ducks and Toulouse geese. M. Kinsley—1st, for silver-spangled Hamburgs; 2d, Toulouse geese. O. L. Gordon—1st for game bantams. Harry Towne—1st, red game bantams. H. F. Kron—1st, Plymouth Rocks.

Dairy Products.

F. D. Baldwin—2d premium for butter. G. M. Shippy—1st premium for butter. G. P. Laird—½ 1st, (?) cheese.

Grain and Vegetables.

Wm. Kropf—1st, potatoes. F. A. Hihn—1st, corn; 2d, barley. M. Kinsley—1st, oats. U. W. Thompson—2d, beets. J. Mattison—2d, wheat. A. Noble—1st, yellow squash. J. Thompson—1st, cabbage. W. H. Talbot & Co.—1st, carrots. P. T. Stribling—1st, watermelons. W. W. Waterman—1st, radishes and cucumbers. C. L. Anderson—2d, ootatoes. E. Bancher—1st, pumpkins. C. Frapwell—1st, beets. F. F. Wilson—2d, melons.

Fruit.

L. H. Comstock—coll. apples. 2d var. peaches, 1 var. prunes, 1 var. figs, cider vinegar, 1st display plums, do dried fruit, 2d sun-dried peaches, display of figs and raisins. J. S. Young, 1st, 10 var. apples. S. Blodgett, 2d do, 2d 3 var. apples. W. J. Dakin, 1st 5 var. apples, do pears. H. Foster, 2, 5 var. apples. Doyle & Harmon, gen. display fruit, 2d display table grapes. P. T. Stribling, 1st, 3 var. apples, evap. pears, dried apples and peaches. Mrs. C. McKenzie, 1st, plate apples, 2d almonds, 2d plate pears, 2d canned fruit. P. Peterson, 2d plate apples, 2d variety figs, sun-dried pears and sun-dried apples. A. Noble, 2d 5 var. pears. A. Noble, 2d do. H. Comstock, 1st 3 var. pears. T. Slaughter, 2d 3 var. pears, 1 var. peaches, 1 var. canned fruit, 1st prunes, sun-dried plums, sun-dried peaches, 2d sun-dried apples. J. H. Dennett, 1st plate pears. M. Clough, 1 var. plums. M. Kinsley, 2d do. T. Newman, 1 var. lemons. F. A. Hihn, 2d do and 1st orange. J. S. Gilbert, 1st almonds, 2d display dried fruit, 1st sun-dried apricots, 2d sun-dried plums, 2d sun-dried pears. C. Steinmetz, 1st walnuts. Mrs. L. Curtis, 2d do. W. W. Waterman, 1st gen. display grapes, 2d plate do. H. Mel, 2d gen. display grapes, 1st plate do, white and red wines, wine vinegar. J. W. Jarvis, display wine grapes. C. Horstman, display table grapes. H. Owen, 1st exhibit canned fruit. Mrs. R. M. Woods, 2d var. canned fruit. L. K. Baldwin, 2d display plums. J. Gray, 2d prunes. The committee said they found the fruit show of such unvarying merit that it was perplexing to decide which was the best. They made honorable mention of several other exhibits besides those named in above list—among them being Cuthbert raspberries from Mrs. McCann, and Cuthbert, Lawton and Kittatiny from W. J. Dakin, and there were also a number not properly entered or not entered at all, which for these reasons did not receive the attention they deserved. The display of dried fruit from Watsonville was an instance of this sort.

Floral Department.

Mrs. R. M. Woods, 1st floral design (white elephant). Mrs. A. Thompson, 2d do. T. Thompson, 1st exhibit plants. Mrs. W. H. Miller, 2d do.

PACIFIC COAST WEATHER FOR THE WEEK.

(Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.)

DATE.	Portland.				Red Bluff.				Sacramento.				S. Francisco.				Los Angeles.				San Diego.			
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.
Nov. 16 22.																								
Thursday.....	.01	44	Nw	Cy.	.00	64	N	Cy.	.00	64	N	Cl.	.00	58	W	Fr.	.00	64	SW	Cl.	.00	60	W	Cl.
Friday.....	.00	38	SE	Cy.	.00	64	N	Cl.	.00	68	Nw	Cl.	.00	59	Nw	Cl.	.00	64	SE	Cy.	.00	64	E	Cy.
Saturday.....	.00	44	Nw	Cy.	.00	70	N	Cl.	.00	70	Nw	Cl.	.00	70	SE	Cl.	.00	64	N	Cl.	.00	64	W	Cl.
Sunday.....	.00	40	Nw	Cy.	.00	74	N	Cl.	.00	64	NE	Cl.	.00	62	NE	Cl.	.00	72	W	Cl.	.00	64	Nw	Cl.
Monday.....	.00	42	S	Cy.	.00	64	N	Cl.	.00	60	N	Cl.	.00	62	N	Fr.	.00	72	S	Fr.	.00	62	Nw	Cy.
Tuesday.....	.00	44	Nw	Cy.	.00	62	N	Cy.	.00	62	N	Cl.	.00	55	W	Fr.	.00	62	S	Cy.	.00	62	S	Cy.
Wednesday.....	.00	41	NE	Cl.	.00	60	N	Fr.	.00	60	W	Cy.	.00	55	N	Cy.	.01	68	SW	Fr.	.18	62	S	Cy.
Total.....	.01				.00				.00				.00				.01				.18			

EXPLANATION.—Cl. for clear; Cy., cloudy; Fr., fair; Fy., foggy; — indicates too small to measure. Temperature. Wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

The Culture of Farm Crops.

The necessity for an accurate knowledge of the principles of Agriculture for the guidance of farmers, presented in a plain and simple manner so that it can be easily understood, has been very apparent to all concerned, both to those whose business is to teach and to those who have to learn. This paramount need has led to the production of a Handbook of Agricultural Science and practice by the well-known author and writer upon Agricultural matters, Mr. Henry Stewart. This work is entitled the "Culture of Farm Crops" and is intended to tell the whole story of farm practice and to explain the principles upon which this practice is based. This is done in such a plain and intelligible manner as to be readily comprehended by any farmer or farmer's boy, in 50 short chapters, all contained in a little more than 300 pages. The subjects treated of comprise the nature and condition of all the elementary matter which enters into the substance of plants; the nature and composition of the soil; the elements and processes of plant growth; plant food; composition of agricultural plants; what crops take from the soil; manures and the elements of them, and their action in and upon the soil; tillage, and its primary importance to the successful growth of crops; and the culture of various crops grown upon the farm. The reputation of the author is a guarantee of the accuracy and excellency of the work, and the book is presented by the publisher in a handsome and attractive form. It has a full table of contents and a copious index, by which reference to any one of the numerous subjects treated is made quite easy. This book should be in every farmer's house and in every student's library; for the farmer it is a library in itself and for the student a most valuable book for reference, because of the very large amount of matter which is condensed in its pages. It is published by Duane H. Nash of Millington, Morris Co., New Jersey.

WISCONSIN FARMERS' INSTITUTES.—We recently published a note concerning these interesting meetings. We now receive from W. H. Morrison of Madison, Wis., the first number of "Wisconsin Farmers' Institute Bulletin." Its publication will be annually, and will be a compendium of practical farm literature; 31,000 copies of this bulletin will be distributed free to the farmers of Wisconsin at the 82 Farmers' Institutes which will be held this winter. The result of this good seed so widely sown will be a grand harvest of intelligent farmers who will read, study, think and exalt their vocation and be proud of it. The work is a good one.

Youthful Indulgence

In pernicious practices pursued in solitude, is a most startling cause of nervous and general debility, lack of self-confidence and will power, impaired memory, despondency, and other attendants of wrecked manhood. Sufferers should address, with 10 cents in stamps, for large illustrated treatise, pointing out unfailing means of perfect cure, World's Dispensary Medical Association, 663 Main Street, Buffalo, N. Y.

Advice to Consumptives.

On the appearance of the first symptoms, as general debility, loss of appetite, pallor, chilly sensations, followed by night-sweats and cough, prompt measures of relief should be taken. Consumption is scrofulous disease of the lungs; therefore use the great anti scrofulous or blood-purifier and strength-restorer, Dr. Pierce's "Golden Medical Discovery," superior to cod liver oil as a nutritive, and unsurpassed as a pectoral. For weak lungs, spitting of blood, and kindred affections, it has no equal. Sold by druggists. For Dr. Pierce's treatise on consumption, send 10 cents in stamps. World's Dispensary Medical Association, 663 Main St., Buffalo, N. Y.

The Billows.

Dyspeptic, constipated, should address, with 10 cents in stamps for treatise, World's Dispensary Medical Association, 663 Main Street, Buffalo, N. Y.

SEED SELLING SWINDLERS.—A gang of sharpers, calling themselves the "Empire Seed Company," have been fleecing farmers in the Willamette valley this fall, selling them seed-wheat at \$15 per bushel, and getting their notes with a promise of giving them back in payment for part of next year's crop. They attempted to negotiate some of the notes at a Portland bank, and one of them, Hogan by name, has been arrested in S. F. and taken to Oregon by the sheriff of Lane county on a charge of obtaining money under false pretenses.

Consumption Surely Cured.

To the Editor:—Please inform your readers that I have a positive remedy for the above named disease. By its timely use, thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy FREE to any of your readers who have consumption, if they will send me their Express and P. O. address. Respectfully,
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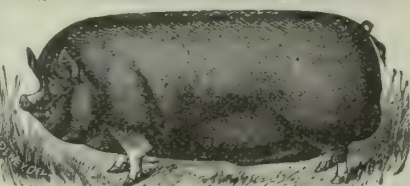
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AGENTS LOOK HERE

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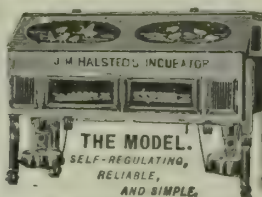
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Of Short Horn Cattle and Dairy Cows.

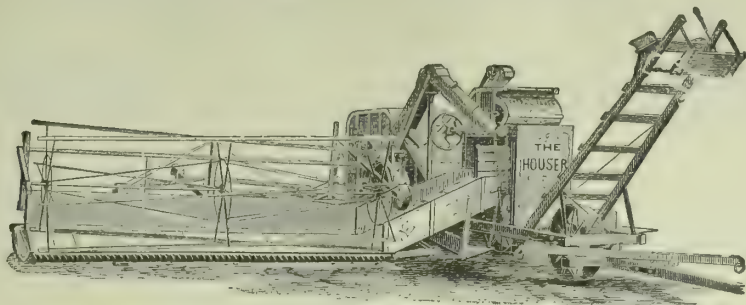
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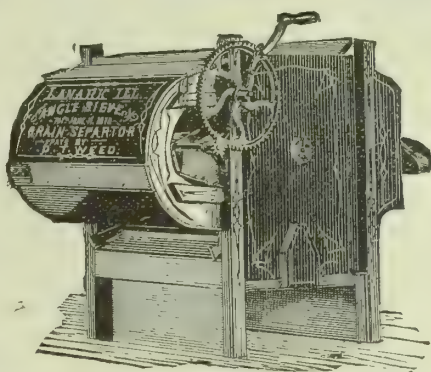
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From Wheat with once putting through, leaving clean seed and no second grade.

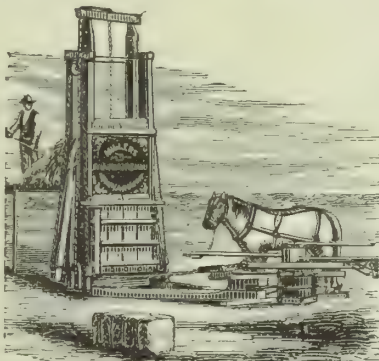
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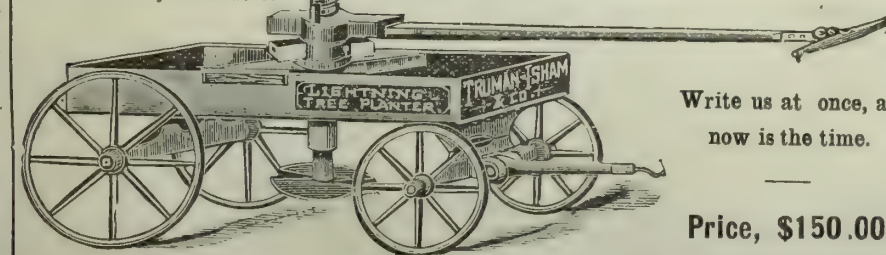
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Bore Holes 36 inches deep and 24 inches in diameter.

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Caustic Soda and Potash, etc., for sale by

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in California having small Apiaries to sell State
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S. F. MARKET REPORT

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Nov. 22, 1887.

Continued dry weather, with colder nights, causes considerable uneasiness, owing to the lateness of the season. All kinds of farm products have been in better demand the past week, with a general improvement in prices noted. Barley and also wheat have been largely dealt in on Call for futures. The Eastern and European markets have exhibited more strength, with a higher range of values telegraphed. To-day's cable is as follows:

LIVERPOOL, Nov. 22.—Wheat firm; California spot lots, 6s 7½d to 6s 10½d; off coast, 34s@34s 3d; just shipped, 34s 9d; nearly due, 34s 9d; cargoes off coast, firmly held; on passage, appears to be a better feeling; French country markets, firm; wheat and flour in Paris, firm; weather in England, cold and wet.

Eastern Grain Markets.

S. S. Floyd & Co.'s telegraph of the 22d, from their Chicago house, is as follows: Wheat market acted toppy all day. Somebody seemed to keep selling freely on all the hard spots; guess the local longs were out of bull argument when they had to resort to war news yesterday. Market closing tame at lowest point of the day. Corn, dull and neglected. Receipts of wheat at 7 primary points to-day, 426,970 bu. Shipments, 413,758 bu. Wheat, Dec., opened, 76½¢; highest, 76½¢; lowest, 76¢; closed, 76½¢; May, opened, 83¼¢; highest, 83¼¢; lowest, 82½¢; closed, 82½¢. Corn, Dec., opened, 44¼¢; highest, 44¼¢; lowest, 43¼¢; closed, 44¼¢; May, opened, 49¢; highest, 49¢; lowest, 48¼¢; closed, 48½¢. Pork, Jan., opened, \$13.90; highest, \$14.05; lowest, \$13.80; closed, \$13.87½.

NEW YORK, Nov. 22.—Wheat, 89¼¢ for cash, 87½¢ for Dec., 88¼¢@88½¢ for Jan., 90¢@90½¢ for Feb., and 93¼¢@93½¢ for May.

NEW YORK, Nov. 21.—Sales of wheat at New York the last week exceeded 123,600,000 bu., and in spite of the setback at the end, which was not unnatural after three times the wheat received here in 10½ months had been sold in six days, prices closed with about 3c advance. Corn and oats advanced more than a cent, but dropped back on Friday and Saturday; sales were 14,251,000 bu. of corn and 2,242,000 of oats.

Eastern Wool Markets.

NEW YORK, Nov. 21.—Desirable wools are kept well in hand and holders demand pretty full prices. Manufacturers have taken samples to a fair extent, but have given a few important orders. Among sales were 5000 lbs. scoured California at 56c, 50,000 lbs. Territory at 18¢@24c and 16,000 Territory on private terms.

BOSTON, Nov. 21.—Market shows little change. Among the sales were 407,000 lbs. Territory at 13¢@24c and 98,000 lbs. California spring and Oregon on private terms.

Fruits.

CHICAGO, Nov. 19.—The supply of California fruits shows considerable reduction. After next week it is not expected that there will be many more grapes received, if any. Pears are also becoming reduced in stock. A firm market is quoted, with a fair demand. The following prices were received for fruit in good condition: Winter pears, \$2.25@2.75 per box, according to quality; quinces, \$1; Muscat grapes, \$3@3.50; Tokays, \$4@4.50; Cor-nichon and Emperors, \$2.50@2.70.

Dried Fruits.

CHICAGO, Nov. 19.—In California dried fruit, the demand for raisins is fair, but all other kinds rule quiet and rather dull. Peaches, sun-dried, in sacks, \$1 lb, 12½¢@13½¢; do, evaporated, unpeeled, in sacks, \$1 lb, 15½¢@16¢; do, do, peeled, in sacks, \$1 lb, 25½¢@27½¢; apricots, sun-dried, in sacks, \$1 lb, 13½¢; do, evaporated, in sacks, \$1 lb, 14½¢@16¢; plums, pitted, in sacks, \$1 lb, 13¢@14¢; nectarines, according to quality, in sacks, \$1 lb, 14½¢@16¢; raisins, loose Muscates, \$1 box, \$1.75@1.95; do, London layers, \$1 box, \$2@2.50. There is said to be quite a wide range in the quality of London layer raisins coming to the market.

NEW YORK, Nov. 21.—California raisins are in fair demand, with sales at \$1.85@2 for two crown; \$2.10@2.25 for three crown and \$2.15@2.50 for London.

Hops.

CHICAGO, Nov. 19.—Choice hops were quoted firmer and slightly higher. The export trade has drawn on stocks until choice grades are becoming a little scarce. Off grades are in ample supply, and rather easy. Pacific's new crop, choice, 18¢; Pacific's new crop, medium, 16¢@19¢; Pacific's new crop, common and low grades, 12¢@15¢; Pacific's, 1886, good, 10¢@12¢; Pacific's 1886, medium, 9¢@10¢.

Beans.

CHICAGO, Nov. 19.—The bean market is steady and firm. The supply is small. There are some California and some foreign beans here which to some extent make up for the shortage in Eastern stock. All good beans are salable, but at the same time there is no urgent demand. California, according to cleanliness, \$1.50@2.25.

Honey.

CHICAGO, Nov. 19.—California strained honey is in moderate demand at 7c.

Raisins.

NEW YORK, Nov. 22.—Raisins have a good selling future, with enlarged offering. The upper grades are about 10c off for wholesale parcels. The recent large train shipment from Fresno is a topic in the trade, and inferior stock is hard to sell. Sultanas have a fair cooking demand, averaging 6½¢@7½¢. The Malaga market is reported to be lower, feeling the absence of an American market.

Dried Fruits.

NEW YORK, Nov. 22.—Sun-dried peaches, also evaporated, are firm. Apricots also are firm and wanted. They are quoted at from 8½¢@9c.

Nuts.

NEW YORK, Nov. 22.—Paper-shell almonds are quoted at 20c; soft, 18c; with small offerings.

Local Markets.

BAGS—The market is quiet. Continued dry weather restricts operations in futures. Calcuttas June-July delivery are held at 7¢@7½¢.

BARLEY—The sample market appears to be hardening. On Call futures have been largely dealt in, with apparently more buyers than sellers, but these buyers do not appear disposed to bid up. To-day's sales on Call are reported as follows:

Morning Session: Buyer season—1000 tons, 94¼¢; 400, 94¼¢; 1700, 94¼¢; 300, 94¼¢. Buyer 1887—100 tons, 85c; 100, 84¼¢; 100, 84¼¢; 100, 84¼¢. Seller season—100 tons, 82½¢; 100, 82½¢; 100, 82½¢. Afternoon Session: Buyer season—1600 tons, 94c; 200, 94¼¢; Buyer 1887—200 tons, 84¼¢.

BUTTER—Market higher. Stocks very light, and as receipts are light, it is claimed that there is not enough to last for four weeks. The demand is only fair.

CHEESE—The market is steady. More Eastern is coming in, but high prices restrict sales.

EGGS—Strictly choice are held strong, but under heavy receipts from the East, all kinds can be bought at shaded prices on last week's quotations.

WHEAT—The sample market is very strong, with buyers reporting it difficult to buy. On Call, transactions have been large. Yesterday morning futures advanced on war rumors, but fell back in the afternoon, with the report discredited. At to-day's Call, the sales reported are as follows:

Morning Session: Buyer season—300 tons, \$1.47½; 2300, \$1.47½. Afternoon Session: Buyer season—1200 tons, \$1.47; 1200, \$1.46½; 700, \$1.46½. Buyer 1887, season's storage paid—100 tons, \$1.37½; 100, \$1.37½.

[COMMUNICATED.]

Market Information.

Receipts of Domestic Produce.

The following are the receipts of the principal items of California produce at San Francisco, from the beginning of the harvest year to date, compared with the corresponding period in the previous harvest year:

	July 1 to Nov. 20, '86.	July 1 to Nov. 10, '87.
Flour, qr. sks.	1,940,732	1,391,308
Wheat, cils.	7,108,334	3,988,924
Barley, cils.	1,555,152	1,386,221
Oats, cils.	98,419	111,771
Potatoes, sks.	416,885	465,289
Corn, sks.	27,297	93,873
Rye, sks.	10,478	10,837
Buckwheat, sks.	3,356	374
Beans, sks.	168,491	255,413
Brans, sks.	201,949	187,074
Hay, tons	52,127	58,399
Wool, bls.	43,846	53,778
Hides, No.	46,600	41,149
Raisins, 20-lb boxes.	76,941	44,406
Hops, bls.	11,617	12,853

The receipts of certain articles of produce from Oregon, Washington Territory and other distant points, for the same period compare as follows:

Flour, sks.	17,221	80,012
Wheat, cils.	109,985	332,444
Barley, cils.	1,198	75
Oats, cils.	130,840	60,040
Corn, cils.	44,228	12,590
Wool, bls.	9,011	6,985
Brans, sks.	26,418	24,132
Hops, bls.	648	106
Hides, No.	13,087	10,516
Potatoes, sks.	18,632	747

Cereals.

The wheat on passage for Europe on Nov. 9 was 13,400,000 bu., comprising 1,608,000 bu. to the continent and 11,792,000 bu. to the British Isles. The quantity on passage a year ago was 20,720,000 bu. The quantity of corn on passage for Europe Nov. 9, 1887, was 2,912,000 bu., against 3,040,000 bu. a year ago. The quantity of wheat was decreased in the week 240,000 bu., and corn 40,000 bu. The quantity of wheat on passage to the British Isles on the 27th ult. was 12,354,000 bu., comprising 8,801,776 bu. from the United States, including 7,160,000 bu. from California, 560,000 bu. from Azov sea, 204,000 bu. from the Danube, 1,440,000 bu. from British India, 800,000 bu. from Chili, 228,000 bu. from the Argentine Republic, and 260,000 bu. from Australia.

French imports of wheat (and flour net) for the 9 months from Jan. 1 to Sept. 30, 1887, have been equal to 27,352,389 bu. of wheat, against 16,945,780 bu. the corresponding time in 1886, and 20,131,158 bu. the corresponding time in 1885.

Wheat crop prospects in Europe and the United States, in April next, will not only have a bearing on the demand for wheat, but also on its price. With exceptionally fine prospects for the wheat crop in Europe and America in April next, and the probable supplies that may be obtained within and without Europe if Australia and India shall usher in the year 1888 with a bountiful wheat crop, there does not seem to be much, if any, encouragement for any marked improvement in values of wheat; but should the prospects for the wheat crop be unpropitious, and should Australia and India have poor wheat harvests, there would seem to be a possible relief from the present abnormally low range of values.

In the United States domestic consumption is disposing weekly of about 6,600,000 bu. of wheat. Nearly one-half of our available export surplus wheat has gone out of the country within 18 weeks. There is some apprehension in regard to the winter wheat. Plowing for the spring wheat crop usually done in autumn is more backward than usual. The export movement from the Pacific Coast is light. The total exports, wheat and flour, have now dropped below 1,500,000 bu. weekly. In Europe the wheat crop was about 1,200,000,000 bu. in 1887. The consumption there is something over 100,000,000 bu. per month, which has, since August 1, disposed of about 300,000,000 bu., with 900,000,000 still remaining. This quantity requires to be supplemented by foreign wheat, which will be taken only as needs shall dictate.

The New York Produce Exchange Reporter of Nov. 12 has the following on the wheat situation: The wheat situation is regarded by the majority of dealers in options as exceedingly strong, hence they express great disappointment that most foreign markets show so little buoyancy and animation, knowing as they do that they must depend so largely on this country for supplies to make good their deficiencies. It is very evident that Russia, India, Chili, Australia and Hungary cannot supply the

enormous wants of Great Britain, France, Italy and Spain; hence the moderate surplus of this country is certain to be called for, and for what we have to spare fair prices should be counted on. Present prices we regard as too low under the circumstances, and there is room for a marked improvement. The serious deficiencies in our corn, rye and barley crops will restrict our exports of wheat and flour, and to a greater extent than the public generally have any idea of. The attentive reader is aware of the position we occupy in regard to the world's supply, the product of grain for the year ending with the 31st of August was below its wants, and we shall have to draw upon the reserves of old grain on hand at the close of August to tide us over the year ending with August, 1888.

The market for wheat on this coast is very strong, with large holders in this State not disposed to enter the market as sellers except at an advance on buyers' bids. Although the dry weather has much to do with the strength of the market, still the statistical situation throughout the world has more to do with it. In this market there has been a steady advance in prompt shipments. In August last cargoes of No. 1 were sold as low as 28s per quarter, but the past week as high as 35s was paid, a difference of about 35c per cental.

Eastern mail advices report maltsters buying sparingly of barley, under the impression that a lower range of values will obtain; but as the crop is all of 20 per cent below an average it is generally conceded that they will have to come in on the market by spring at a much higher range. The stocks of all grades in this city are being rapidly depleted under a good demand from consumers and for shipping. The dry weather is quite a factor in promoting a strong tone, but owing to the fears of rains soon the feeling is not sufficiently pronounced as to cause a large bull movement.

Oats are very strong under a good demand, light stocks and only fair receipts.

Corn is reported easy for ordinary grades, but choice to extra choice is strongly held under light supplies. The demand is slow, as buyers hold off as long as possible, hoping for concessions.

Feedstuff.

Carrots and other feed vegetables are in good demand, but prices are unchanged.

Straw is meeting with larger consumption. It is bought for chopping up with ground barley.

Hay continues to rule very strong. Choice grades are scarce and command from \$17 to \$19 per ton. The dry weather causes holders to sell sparingly.

Bran, middlings, ground barley, oilcake meal, etc., move off freely at full prices.

Fruits.

Grapes are going out, causing the better keeping to fetch good prices. Wine grapes come in sparingly, causing good prices to obtain.

Apples are meeting with a heavier demand from consumers, causing strong prices to rule for the more choice varieties. Sales of high-colored choice have been made in a small way as high as \$1.75. Defective apples are in liberal receipt, but as choice are higher, these in sympathy fetch more money.

Pears are in fair supply, with choice fetching good prices.

Dried fruits continue slow, but the tone of the market is strong, owing to supplies being well held and the general belief that a higher range of values will obtain after the turn of the year, or after present stocks carried by the retail trade are exhausted. The East is drawing on us to some extent.

Raisins are being shipped to the East quite freely, causing stocks in this city to be light. The demand is exceedingly active for the holiday trade. This, of course, applies to the more choice grades, for poor are at all times hard to place.

Vegetables.

Potatoes have a stronger tone for the more choice and well conditioned, but as receipts of all kinds are heavy, it is difficult to advance prices; sweet potatoes are higher.

Onions are in good demand, but receipts being free, prices keep down.

Cold weather, with frosty nights, has lessened the receipts of tomatoes and other vine vegetables, causing a hardening in prices. Cabbages are in good supply.

Marrowfat squash and pumpkins are in fair demand.

Live-Stock.

Beef cattle continue to be received quite freely from distant points, which keeps our market in buyers' favor. There is a better inquiry for stall-fed, but as feed is very high, the supply is as yet light. As the consumption is larger and the weather is cooler, butchers carry larger supplies. Mutton sheep are in good demand. Receipts are only in orders. Hogs are only offering fairly well. This is due to packers bidding down, and also to those running on acorns not being taken off as yet, freely. The dull and easy market for provisions causes buyers to bid down. Milch cows are hard to sell, owing to the high cost of feed. In horses, last week's remarks cover this week's report.

The following are the wholesale rates of slaughterers to butchers:

BEEF—Extra, 7¼¢@7½¢; first grade, grass fed, 6¼¢@6½¢; second grade, 5½¢@6¼¢; third grade, 5¢@5½¢.

MUTTON—Ewes, 5½¢@6c; wethers, 6¢@6½¢.

LAMB—Spring, 7¢@8c.

VEAL—Large, 6¢@7c; small, 6¢@8c.

PORK—Live hogs, 4¼¢@4½¢ for heavy and medium; hard dressed, 6¼¢@7¼¢ per lb; light, 4¢@4½¢; dressed, 6¢@7¼¢; soft hogs, live, 3½¢@4c. On foot, one-third less for grain or stall fed, and one-half less for stock running out.

Miscellaneous.

The tonnage movement compares with last year at this date as follows:

	1887.	1886.
On the way	339,261	252,780
In port, disengaged	75,808	72,000
In port, engaged	29,626	96,018

Totals..... 444,695 420,798

To get the carrying capacity, add 60 per cent to the registered tonnage as given above.

Turkeys are having large sales for Thanksgiving. Prices are advanced, but heavy receipts are looked for, which, if proven correct, will send prices down. Choice hens are wanted at full prices, as are choice young roosters, ducks and geese.

Choice hops are more inquired for, owing to the stronger market at the East. Buyers here are bid-

ding down, but quietly pay good prices for sound parcels of choice.

In wools there is nothing new to report. The heavy sales of the past fortnight reduced selections. It now looks as if prices for the year's clip will rule higher than last spring.

Eastern advices report flaxseed high, owing to the light crop and good demand.

San Francisco, Nov. 22, 1887.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. TUESDAY, Nov. 22, 1887.

BEANS AND PEAS		Paper shell..... 15 @	
Bayo, cils.....	2 00 @ 2 35	Brazil.....	11 @ 12½
Butter.....	2 00 @ 2 20	Peanuts.....	6 @ 9
Pea.....	2 25 @ 2 00	Peanuts.....	4 @ 6
Red.....	1 40 @ 1 60	Philberts.....	10 @ 11
Pink.....	1 50 @ 1 75	Hickory.....	7 @ 8
Large White.....	2 00 @ 2 25	POTATOES	
Small White.....	2 10 @ 2 20	Burbank.....	65 @ 1 00
Lima.....	2 10 @ 2 20	Early Rose.....	45 @ 60
Fld Peas, blyeye.....	1 00 @ 1 05	Butter Cove.....	@ @
do green.....	1 00 @ 1 12½	Potatoes.....	@ @
do Niles.....	1 25 @	Tonales.....	@ @
BROOM CORN		River reds.....	35 @ 55
Southampton.....	50 00 @ 75 00	Humboldt.....	@ @
Northampton.....	50 00 @ 75 00	do Kidney.....	@ @
CHICKEN			
California.....	6 @ 7	Oregon.....	@ @
German.....	7 @ 5	Peelies.....	50 @ 75
DAIRY PRODUCE, ETC.		Salt Lake.....	@ @
BUTTER		Sweet.....	1 25 @ 1 75
Cal. fresh roll, lb.....	37½ @ 40	POULTRY AND GAME	
do Fancy brands.....	45 @ 50	Hens, dos.....	5 50 @ 8 00
Pickie roll.....	32½ @ 35	Roosters.....	5 50 @ 11 00
Firkin, new.....	24 @ 24½	Birds.....	4 00 @ 8 00
Eastern.....	@ @	Ducks, tame.....	7 00 @ 8 50
CHICKENS		do Mallard.....	3 00 @ 3 50
Chesee, Cal. D.....	13 @ 16	do Sprig.....	1 25 @ 1 50
Eastern style.....	14 @ 16	do Geese, pair.....	1 75 @ 2 25
do.....	@ @	do Geese, single.....	@ @
Cal. ranch, dos.....	40 @ 42½	do Geese, large.....	@ @
do store.....	35 @ 37½	Turkeys, do.....	19 @ 21
Ducks.....	@ @	do Dressed.....	20 @ 25
Oregon.....	@ @	Turkey Feathers.....	@ @
Eastern.....	25 @ 32½	tail and wing.....	@ @
FEED		Sulph. Eng. dos.....	@ @
Bran, ton.....	16 00 @ 17 50	do Common.....	@ @
Grain.....	@ @	Do.....	@ @
Gr'd Barley ton.....	20 00 @ 22 00	Quail.....	1 00 @ 1 50
Hay.....	11 00 @ 12 00	rabbits.....	1 00 @
Middlings.....	21 00 @ 22 00	Hare.....	1 25 @
Oil Cake Meal.....	26 50 @ 28 50	Venison.....	@ @
Straw, bale.....	40 @ 70	FLOUR	

Cal. Fresh roll, 18	37 1/2 @	42 1/2	POULTRY AND GAME.	
do. Country brands	45 @	50	Hens, dos.	5 50 @ 8 00
Extra roll.....	32 1/2 @	33	Roosters.....	5 50 @ 11 00
Firkin roll.....	24 @	25	Chickens.....	5 00 @ 10 00
Eastern.....	@	@	Ducks.....	6 00 @ 50
OILS.			do Mallard.....	3 00 @ 3 50
Cheese, Cal., D.,	13 @	16	do Sprig.....	1 25 @ 1 50
Eastern style.....	14 @	16	Geese, pair.....	1 75 @ 2 25
SEEDS.			do Goslings.....	@ @
Cal. ranch, dos.	40 @	42 1/2	Wild Gray, dos.	@ @
do store.....	35 @	37 1/2	Turkeys, D.....	19 @ 21
Ducks.....	@	@	do Brahma.....	20 @ 25
Oregon.....	@	@	Turkey Feathers,	
Eastern.....	25 @	32 1/2	tail and wing.	
FEED			Snipe, Eng., dos.	@ @
Bran, ton.....	16 @	17 50	do Common.....	@ @
Commeal.....	28 @	30	Doves.....	@ @
Hay, 3 Barley ton, 20	@	22 00	Quail.....	1 00 @ 1 50
do 100 lbs.....	11 00 @	12 00	Gallin.....	1 00 @
Middling.....	21 00 @	22 00	Hare.....	1 00 @
Oat Cake Meal, 26	50 @	52 50	Yankee.....	@ @

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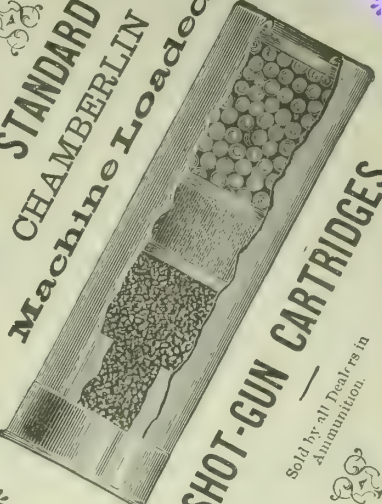
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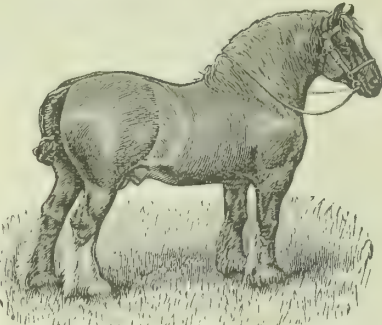
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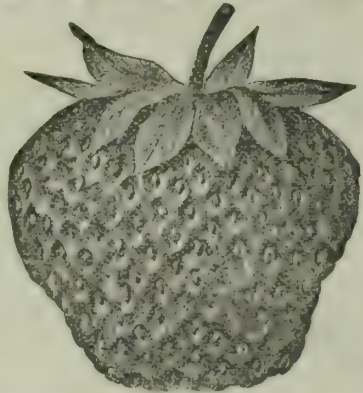
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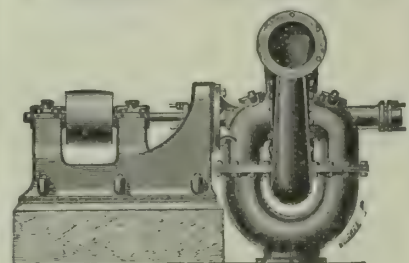
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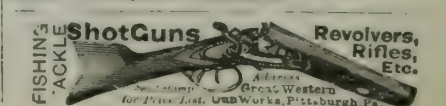
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LIFE-SAVING APPARATUS OF REINDEER HAIR.
A Norwegian engineer, Herr W. C. Moller, of Drammen, Norway, having had his attention drawn to the extreme buoyancy of reindeer hair, has succeeded in constructing various articles of this material for life-saving at sea, with which some interesting experiments were recently made. The first life-saving object tried was one which can be used on board ship, as a chair, bedstead or couch, but which, in case of need, may be converted into a small boat. This apparatus was found capable of supporting three full-grown men in the water, although only intended to bear two. Another object tried was a suit made entirely of reindeer hair, and covering the entire body except the face, and in which a man floated on the water without having to make the slightest movement. It was found perfectly impossible to dive in the dress. The third object tried was a door-mat made of reindeer hair, and this supported a man easily, although he was dressed in full out-door clothing. On comparing life belts made of reindeer hair with similar ones made of cork, it was found that the former were much lighter than the latter—a very important advantage to an exhausted drowning person when he has to put it on in the water. Herr Moller's assertion that reindeer hair is capable of supporting a weight ten times its own was fully borne out by these experiments. It should be pointed out that jackets, belts, etc., made of reindeer hair are soft and pliable, and that they impart a good deal of warmth.—*London Iron.*

Complimentary Samples.

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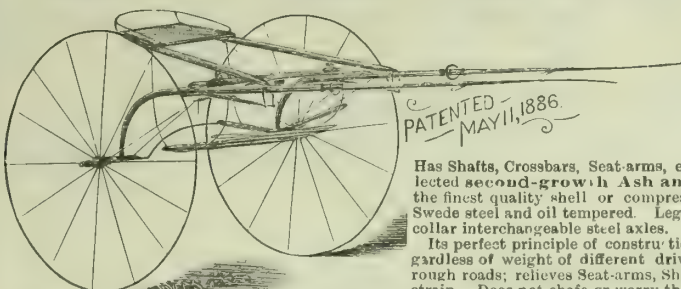
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UNIVERSITY OF CALIFORNIA, Nov. 3, 1886.

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Soluble Phosphoric Acid.....	12.90 per cent
Reverted Phosphoric Acid.....	.95 "
Insoluble Phosphoric Acid.....	2.83 "
Pota h.....	2.23 "
Ammonia.....	1.87 "
Nitric Acid.....	2.95 "

The above amount of Nitric Acid is equal to 0.85 per cent Ammonia, therefore, total of Nitrogen calculated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vineyards, orchards, gardens, farms, and I recommend its use by the cultivators of the soil generally, in California. Yours truly,
DR. E. A. SCHNEIDER.

University of California, College of Agriculture.
BERKELEY, Nov. 20, 1886.

Dr. J. KOWBIS, San Francisco—Dear Sir: I take pleasure in adding my testimony to that of Dr. Schneider as to the high quality of the "Nitrogenous Superphosphate" Fertilizer, analyzed by him at your request. It is a high-grade article, and as such returns the user a better money value than a low-grade

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OVER ALL COMPETITORS.

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Manufactured by JOHN DEERE & CO., MOLINE, ILLS.

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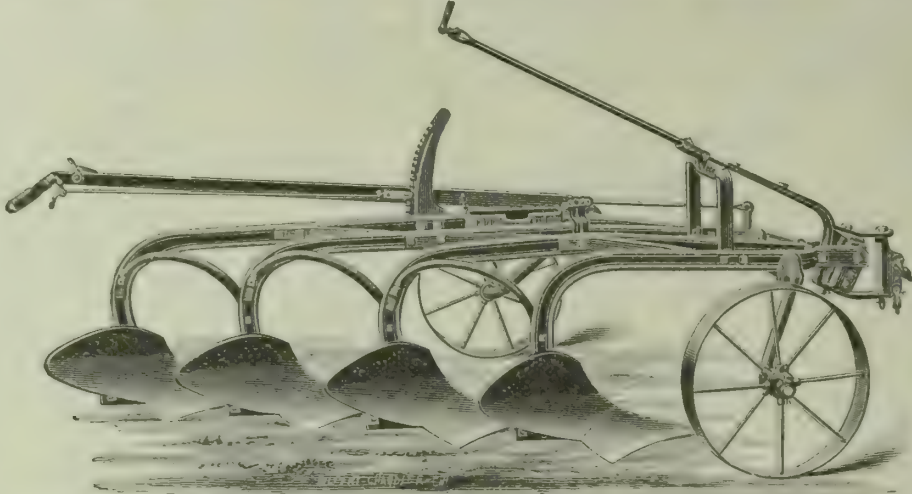
THREE,

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—AND—

FIVE

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EQUIPPED

—WITH—

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TWELVE-INCH

PLOWS.

Amongst other improvements, all Four Gang New Deal Plows are so constructed that the OUTER or REAR BEAM can be removed, thus making it a THREE GANG for use in first plowing, and READJUSTED to a FOUR GANG for second or cross Plowing.

FOR LIGHTNESS OF DRAFT, EASE OF MANAGEMENT, STRENGTH, DURABILITY AND QUALITY OF WORK,

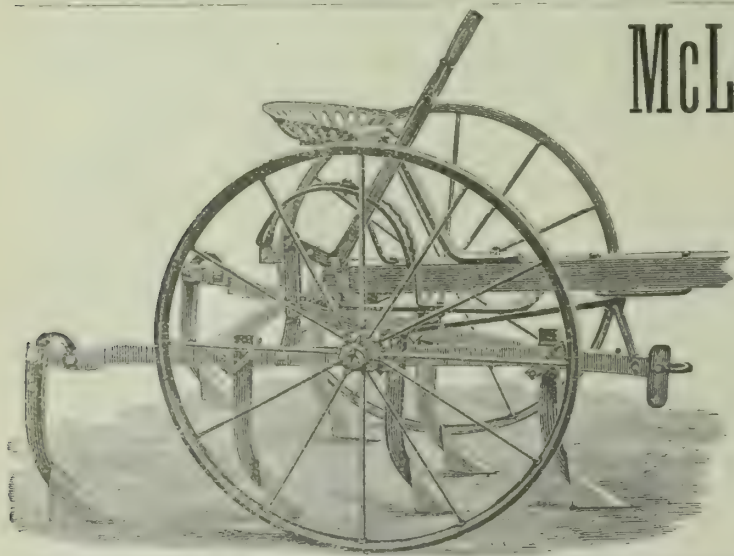
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HALF PRICE.

I am prepared to furnish the Washington Navel, the hardy Unshu, of Japan, and other choice varieties of Orange Trees, for the season of 1888, at about ONE-HALF the price usually charged.

This is a rare opportunity for setting out orange orchards cheap, and for getting first-class trees. Send for Circular.
J. H. FOUNTAIN.

Riverside, Nov. 14, 1887.

WEST COAST LAND COMPANY.

SAN LUIS OBISPO COUNTY FARMING LANDS. 21,000 acres, representing \$600,000, sold in 14 months, to Nov. 1, 1887, to 260 settlers:

From New York.....	8	From San Luis Obispo county.....	34
" Minnesota.....	9	" Santa Clara county.....	34
" Colorado.....	8	" San Francisco.....	41
" Michigan.....	4	" Los Angeles county.....	17
" Texas.....	5	" Monterey county.....	6
" Kansas.....	5	" Other counties.....	48
" Iowa.....	11		
" Other States.....	24	Total from California.....	184
" Canada.....	4	Total from other places.....	76
Total.....	76	Grand total.....	260

43,000 acres of Vine, Fruit, Olive, Fig, and Farming Lands, being the balance of the Company's property, are for sale at \$10 to \$35 an acre, on same terms—1 cash, balance in four equal payments on or before 2, 3, 4 and 5 years; interest, 6 per cent per annum.

Parties who have purchased are building, fencing, planting olives, vines for wine and raisins, fruits, figs, wheat, oats, barley and all other products adapted to the soil and climate.

These lands are located in San Luis Obispo county on the Salinas river, and are traversed by the Southern Pacific Railway for 16 miles, affording near market to all parts. All lots have timber for domestic use, and good water at 20 to 40 feet. There is living water in springs and streams on many tracts and sufficient rainfall throughout, requiring no irrigation.

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For Sale by all druggists

OLIVE TREES.

One-year old in boxes; two-year old in nursery.
Picholine variety. C. W. CRANE
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TWENTY-PAGE EDITION.

Vol. XXXIV.—No. 23.

SAN FRANCISCO, SATURDAY, DECEMBER 3, 1887.

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SINGLE COPIES, 10 CTS.

A Grand Horticultural Event.

We have received a note from W. H. Ragan, secretary of the American Horticultural Association, stating that it is definitely decided to hold the annual meeting of the society in Riverside, beginning February 14, 1888. This event has been under contemplation for a long time, and several California towns have sent invitations to the society to accept their hospitality. Riverside has captured the distinction, and will, we have no doubt, wear it gracefully. Riverside can do a great thing when the people really try to be hospitable and to make a full display of productions. It is some years, however, since Riverside has done her best in this direction, and if the coming occasion awakens the zeal and interest of the people, we shall have a meeting and fair the like of which has never been seen in this State or in this country.

Secretary Ragan writes in his announcement: "Perhaps no point on American soil could have been selected for this meeting which would have offered greater attractions to horticulturists than Riverside in particular and Southern California in general. Eastern horticulturists should avail themselves of this rare opportunity of visiting California." The society has a large membership in the Eastern States and Canada, and it is estimated that 100 or more may make the California trip.

Riverside proposes to make the meeting of the American Society the occasion for holding a citrus fair to which all the State will be invited to contribute materials. We trust the invitation will be accepted as far as possible. It will be too late in the year to show the fruits for which the upper part of the State is famous and we imagine a little too early to show the Southern oranges in their best condition. They will, however, be gorgeous so far as appearance goes. The preserved and dried fruits, nuts and other imperishable products are now in such great supply that a good show can be made at almost any date.

We understand that the excursion tickets which will be issued to attendants at the meeting will include also a visit to the upper part of the State. The members should not be content with seeing only one part of the State. There should be an adjourned meeting of the society at some point which will welcome the organization, say at San Jose, at Sacramento, in this city or at some other point. This will give the

fruit-growers of Northern California an opportunity to welcome their Eastern brothers and discuss with them matters of mutual interest. We hope this course will be found practicable.

CHRYSANTHEMUM FAIR.—An exhibition of chrysanthemums was given last month in S. F., in aid of the Woman's Exchange, which deserved a much more elaborate notice than we were able to accord it. The show took place in the same store, on the ground floor of the

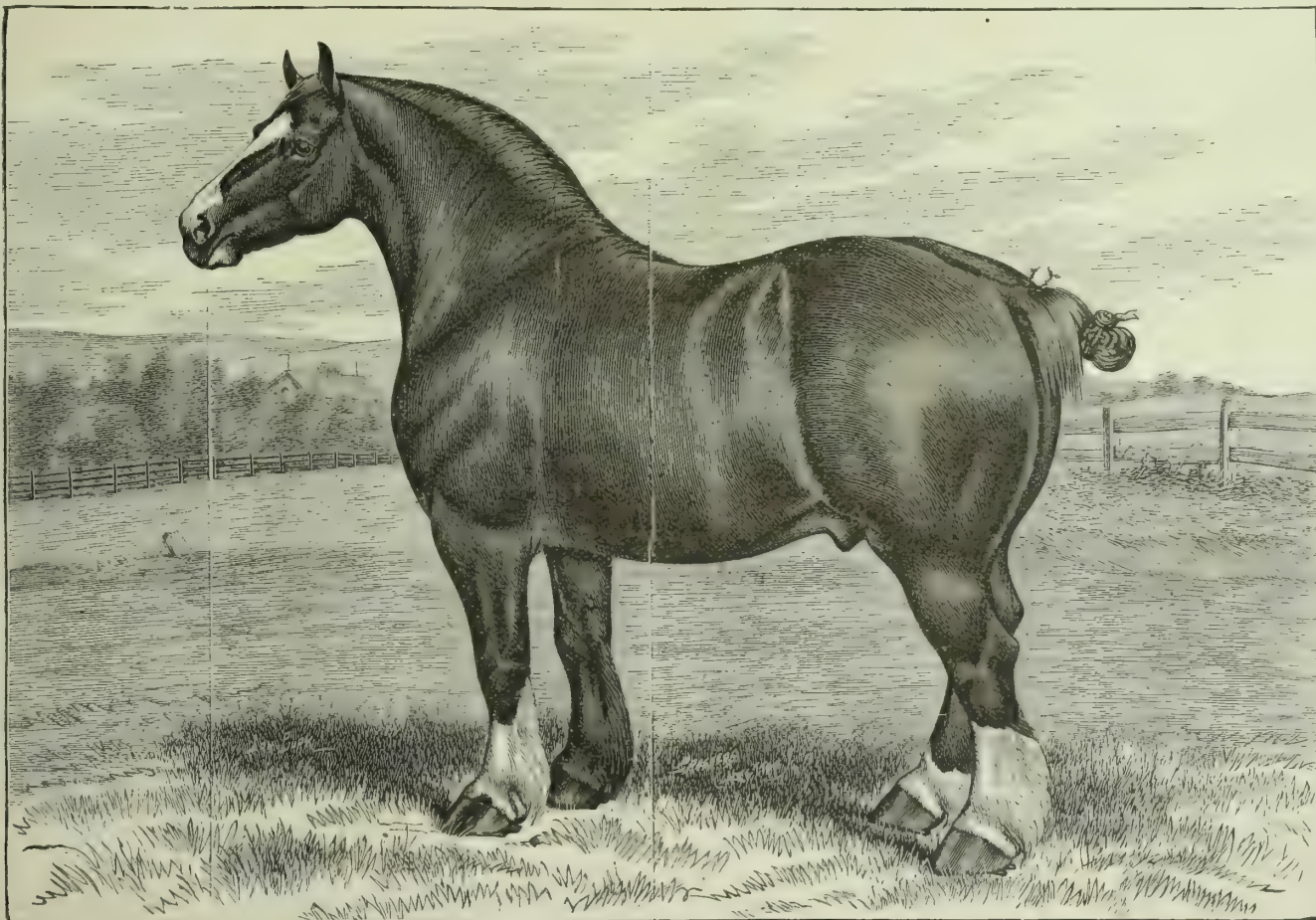
Government Aid for Irrigation.

It is telegraphed from Washington that Senator Stewart of Nevada has prepared a bill, which he intends to introduce, in relation to the irrigation of the San Joaquin and Sacramento valleys. It provides for a survey of the water-courses of the western slope of the Sierra Nevada mountains and also for setting apart sufficient land in proper places for reservoirs. He is of the opinion that all the water flowing on

Duke of Rothsay.

The Duke of Rothsay, of whom we give a portrait, is a fine specimen of the Clydesdale breed, standing at the head of the Clydesdale Breeding Stud of the Door Prairie Live-Stock Association. He was four years old last May, was bred by James Duncan of Scotland, is recorded in Vol. 9 of the Clydesdale Stud-Book of Great Britain (No. 4974). He was sired by Gilderoy (1430), his dam being Maggie by Lofly (462). He is a stylish, showy horse, but with plenty of substance, strong constitution, good bone and excellent feet. In color he is a bright bay, with white face, and three white legs. He took a leading place in the three-year-old class in both the Clydesdale Society and the State Fair at Chicago a year ago last September, as well as at the Fat-Stock Show in November, in both of which he had a very strong competition. Last month the owners of Rothsay showed Clydesdales and Cleveland Bays at the Chicago show and won four premiums, one for each horse shown.

As there is some disposition among our farmers to co-operate in securing good blood which is, perhaps, beyond the reach of individual effort, we give a few facts concerning the organization which owns Duke of Rothsay and other fine stock. The Door Prairie Live-Stock Association at



IMPORTED FOUR-YEAR-OLD CLYDESDALE STALLION, DUKE OF ROTHSAI.

Union Club building, where the rose fair was held last spring in behalf of the same good cause. It was surprising to see what a diversified and beautiful display could be made with varieties of a single flower. There were chrysanthemums large and chrysanthemums small, with close heads and loose heads, long corollas and short, petals flat, petals quilled, petals entire and petals fringed, pure white, golden yellow, rosy pink, orange red, dark maroon and shades we cannot pretend to enumerate—a marvelous and fascinating collection to whose beauties words, however multiplied, could do but partial justice.

SECOND-CROP WHEAT.—We have received from J. W. Mackie of Tulare 10 sample heads of wheat grown on his place since the middle of July. He put some straw over a patch of potatoes to retain the moisture, and as much wheat as potatoes came up. The kernels are of fair size and solidity and should make bread good enough to eat. As harvest in Tulare comes in June and early July, it seems that two grain crops a season are possible in that county.

the western slope of the Sierra Nevada mountains will be needed in a short time for irrigating the valleys, and he thinks that now is the proper time for the Government to survey the country and ascertain to what extent it can be irrigated and what streams can be made useful, and that now is the best time to make reservation in the mountains for sufficient land-storage reservoirs.

This ground has been already pretty well covered by the years of investigation which our State Engineer has made, and concerning which he has prepared most elaborate maps and reports. We suppose the point in Senator Stewart's movement is to get the United States to do the work with especial reference to the setting apart of Government land for storage reservoirs, and this, probably, can only proceed upon survey and report by United States engineers. The proposition is, so far as we understand it, a very important one and should receive attention.

A DEVON cow took the first prize at a dairy test at a late fair at Toronto.

Door Village, Indiana, was originally established for the purpose of improving stock of its individual members, and also that of the surrounding country. It was organized in 1873 by a body of farmers, all in comfortable circumstances, and it was the original aim to obtain stock from which each member might breed. It was not until 10 years after that any great changes were made in the direction of an extensive stud. Some of the heavy strains, intended more especially for draft purposes, and also carriage horses, were decided upon, and, after considerable canvassing, Clydesdales and Cleveland Bays were chosen, and some exceptionally fine specimens of these noted breeds are now found in the barns of the association.

In 1882 the first direct importation of 43 head was made from England and Scotland. Since then four importations have been made, every invoice containing horses of the very best possible pedigree. Their stables now contain a great number of exceptionally high-rank animals, and both in breeding and in trade their experience has been very satisfactory.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Santa Ynez Valley.

[No. 2.]

EDITORS PRESS:—The name of this beautiful and extensive valley (pronounced, Santa Enes) is destined to become a household word through the whole of our country. Isolated from the world as it has been, it is only within a short period that it has been taken from the grasp of the stockman and placed before the public knowledge and broken into bits of such size as can be absorbed by the ordinary home-seeker.

Now this transition period is at hand, and ere long thousands will pour in after rubbing their eyes to think they should have been asleep all these years, and they not having known of such a vast acreage of the richest soils of California lying idle, will make haste to secure some of it for their own, and happy will all those be who do secure some of it while the reasonable period lasts.

This region of country so lately attracting attention is close to Santa Barbara, only the Santa Ynez range of mountains intervening between it and the Naples of the Pacific Coast. This range, constituting the southern boundary, running due east from Point Conception, becomes merged into the Coast Range proper; and with that on the east, and the San Rafael range on the north, encircles an elongated valley of great extent and varied soils, the whole being not less than 200,000 acres, much of which is suitable for agricultural and horticultural purposes. The valley has, properly, two portions; that lying near the ocean being the lower or Lompoc valley, and the main upper valley the Santa Ynez.

Access to this valley has hitherto been only by stage and wagon-road from the sea. Now, however, the extension of the narrow-gauge railroad from Los Alamos, some 12 or 15 miles, brings the traveler to one arm of the Santa Ynez valley, called the Ballard valley, in which is located the terminus Las Olivos.

But very soon a far greater influx of travelers and settlers will flow in through the completion of the great through route of the Southern Pacific railroad, whose survey stakes have been seen for some time, and which will very soon be covered by the ever-progressive graders, and almost in a day the rails will be laid and the locomotive be speeding across the valley. Then this isolation will be a thing of the past, and the health-giving properties, the beauties and fertility of this region, become known to the world.

If you travel the whole length of the coast of California you will find but this one valley that has a main course of due east and west, and protected on the north and on the south by mountain ranges which insure safety to crops and comfort to the person from the dry and desiccating north winds, and from the severity of the storms from the south, while at the same time receiving the gentle health-giving breezes of the ocean tempered gradually from the moisture of the seaside to the dry and comfortable air of 50 miles of valley in its hardly perceptible ascent of 30 feet to the mile. Through the middle of this long valley in some places, and to the side of it in others, courses the Santa Ynez river—a stream never going dry and receiving very numerous side streams from well-watered mountain ranges, which insure to all this region ample moisture to the soil for all crops; consequently artificial irrigation is not required. Near the sea this valley is broad and damp. A few miles up, the hills of the San Rafael range on the north and the Santa Ynez on the south approximate, and a certain protection is given to the main upper or Santa Ynez valley from the rawness of the ocean air. From this point at the western limits of the great Buell ranch (San Carlos de Janata) on the north of the river, and the no less fertile possessions of the De la Cuesta family on the south, the valley widens, a portion of which, because of its being a level plain, is named the

Llanos Grande

(Pronounced Yanos), or Big Plain, of the Santa Ynez. This embraces some of the most fertile and valuable soil known in California, producing every known crop, and, as may be seen in the orchard of the De la Cuesta family, all the temperate fruits in the most lavish profusion without irrigation.

The subterranean, as well as the surface, flow of the river here gives such moisture to the soil, while being well drained, as enables it to produce from the seed and bring to the fullness of a perfect maturity everything which the husbandman may choose to plant, and to a perfect growth of tree and shrub everything the nurseryman may cultivate. The soil here is of the very richest character, a dark loamy ash sediment of unknown depth, of such softness and ease of manipulation as would delight the lazy plowman and old family horse who might come from a more inhospitable clime and tougher soil to luxuriate in the plenty here to be obtained with the minimum amount of labor. This is the kind of soil we have just been reading about where the great \$150 prize five-pound onions and man-size beets, and 250-pound squashes were produced. If the farmer wishes something more attractive and drawing, let him sow the tiny mustard-seed, which will return him a ton to the acre and

bring two to three cents per pound waiting for this crop to mature; the only difficulty the lazy farmer and his sedate horse will have will be to break his way through the mustard-stalks, which are higher than he can see over, standing up in his buggy while on the way to the country grocery-store.

On the north of this rich tract is one of the main highways from San Luis Obispo, and not far from here are valuable hot springs, which enterprise will develop. On the south is the

Cuesta Canyon.

Called Gaviota pass on the other side, through which the Southern Pacific R. R. is soon to make its way. The late Dr. De la Cuesta, a marked representative of that pioneer class of old and pure Spanish families, looked with admiring eye upon the goodly country debouching from the foot of this pass, the only natural one through this portion of the Santa Ynez range, and upon a garden spot of 8000 acres built his home, and with his excellent lady spent many happy years, raising a delightful family of children, numbering 11, who continue to entertain in the most hospitable manner, according to the example set by their lamented parents. Their mansion-house is of durable adobe, but, possessing such rubber-like elasticity that 20 persons are often entertained, with such profusion of table that no less than a whole calf roasted a la barbeque will suffice for a supper and breakfast, and seasoned by the entertaining conversation of the four delightful daughters of the house. Is it a wonder that any who taste the hospitality of this charming home should cherish it in remembrance? Should you need exercise while their guest, a trip is taken up their canyon to the Honey-moon falls, otherwise known as the Nojoqui falls—pronounced Nok-ko-wee. Here, in this picturesque canyon, is a place where the water falls in spray some 200 feet, amid mosses and ferns, and then hurries on after this display of beauty to its useful purposes in the valley below. To the tourist, this canyon will, in the future, be one of the lovely and grand sights of his transcontinental trip. All these hill and mountain slopes are well wooded, as are they well watered and grassed. Live-oaks of enormous size and girth are a prominent feature of this landscape. Some three or four miles east from the De la Cuesta home the mesa lands from the north come down to a rounded point near the river, and upon this mesa stands the old mission, Santa Ynez. Religious services are still held here occasionally. The mission should be restored and be permanently a prominent feature of the grandest natural site for a town that the valley possesses.

Prospective.

It is thought by those most competent to judge that the main town of the valley will be here located, as it possesses every valuable requisite of gentle elevation, rich and well drained soil, extensive views of the grandest scenery, the purest atmosphere, and the greatest facilities for a perfect sewer drainage—a fact which so seldom enters into the calculations of town-site proprietors. It is certain that one great town will become the center of business for this great valley, and this would seem to be the natural location for such town. The fathers who located the mission at this place made no mistake in their choice. From this point, as the hub of the wheel, radiate various arms of valleys from the main valley which spreads out in vast extent to the east. We should consider here from this point east the main valley to consist of level-bottom valleys and more or less level and rolling mesas—these meaning lands that are elevated above the valley bottoms. While sitting in the buggy near the old mission, behind a pair of fine steppers and beside that genial gentleman General Willey, who took it upon himself to show me some of the beauties of this great valley which is his great delight, we hardly knew in which direction to go first, for all directions from this point are so attractive. Finally, setting our horses' heads up the river, we passed through the Selby place and on by the ruins of the first woolen-mill ever erected on this coast, and which was built by the Mission fathers. Although but a few adobes now show where this enterprise commenced, evidences are on every hand that vigor and industry were characteristic of those brave old men. Here a most remarkable stream of the purest water flows into the main river, which has arisen from large springs breaking out of the valley lands near the town of Santa Ynez. Not far from here is the old college building and chapel, erected and used for years by the Catholic church on a large grant of land of 35,000 acres, belonging to that church and called the College ranch. This property has heretofore been withheld from sale, but has recently been purchased by the Santa Ynez Land and Improvement Co., and is now being surveyed into small tracts and offered for sale in amounts and at prices to suit all buyers. The gentlemen composing this company are well known throughout the State and of ample capital to carry through to a successful completion all the enterprises they may undertake. The two members of the company in charge here are E. W. Steele, Esq., of the Steele Bros., and ex-Surveyor-Genl. H. I. Willey, who are uniting in their efforts to open up to settlement these old but hitherto locked-up lands. They are now using the old college as their headquarters, and being but a little way from the postoffice town of Santa Ynez, is very convenient. Continuing our ride, we pass through the town of Santa Ynez and

bowl along over the best natural roads I ever saw, skirted by vast wheatfields up the valley, taking the main stage route to the San Marcos Pass, which leads directly over to the city of Santa Barbara. For miles and miles, as far as the eye can see, the College ranch is dotted over with great white oaks, and here the person is indeed hard to please if he cannot find some land to suit his wishes and purse.

Topography.

The capabilities of this land I intend to dwell upon further along. There are valleys and rolling lands and low hills of a rich, gravelly loam, suited not only to the growth of the cereals which never fail to yield good crops of the best of grain, but which are destined to be devoted very largely to the growing of the olive. In our ride, we cross numerous small streams and go up the valley many miles, when, as time warns us, we must head in another direction, so we circle about and return by another road to Santa Ynez, and then out to the north, where, ascending a knoll that is a peculiar landmark of the valley, we are entranced with the unexpected view here obtained of the vast amphitheater of valley and surrounding mountain walls miles away in every direction and encircling in their protecting embrace all excepting the outlet to the sea. From this vantage point it is easy to see and understand what General Willey pointed out of the vast watershed pouring its treasures down from every side to give to the rich soil the vivifying influence, and which only needs the cultivation of man to make blossom as the rose. Ten miles to the northeast of where we stand, on the summit of the San Rafael mountains is a marvelously beautiful lake, Ziaa it is called, of some 30 acres in area, of unknown depth and surrounded by magnificent oaks and pines, making it a most lovely spot to visit. Seeing this vast reservoir at such an altitude it is easy to believe that artesian flowing water could be obtained anywhere in the valley by sinking wells to a moderate depth. The enterprising gentlemen in charge of this great land company intend at no distant day to test this supposition. Riding down the northern slope of our lookout knoll, we take the road to the Ballard valley, which is a fertile arm of the main Santa Ynez valley and in which is located the hamlet of Ballards and still further up the site of the new town of Los Olivos, seeing on our way to the right the large olive orchard of the Boyda. If we now turn southwest again we will pass successively through the domains of a most pleasant English gentleman, Mr. Henry D'Urban, whose mansion is nestled under some of the largest live-oak trees to be found in California, the possessions of Louis Janin, Esq., of San Francisco, the Hayne Bros., who are the pioneers of the olive industry as such in the Santa Ynez valley, and on to the old Mission again. These gentlemen named have orchards which will be described in another place. To the right and north of the Llanos Grande valley of the Santa Ynez, in the hills, is another very fertile valley called the Ballard field, where is to be found a large extent of fine farming land. All this portion of the Santa Ynez main valley on the north of the river is comprised in the Buell ranch, the very cream of which the Santa Ynez L. and I. Co. own. Having now made a small circuit of the valley—which, let it not be supposed can be made in one day, for it required two days under the guidance of Gen. Willey to investigate only in part—we will turn from the topography of the valley to its climate, only calling attention to the vast acreage of tillable and fertile land here to be found comprised in a few large ranches, amounting to 50,000 acres. Of these, the San Carlos de Janata or Buell ranch and the College ranch—Canada de los Pinos—furnish a large portion of the lands of the great valley.

A more attractive region or a more valuable one cannot be found in the State, and no region will hereafter be more eagerly sought than this for its many advantages of beautiful location, climate and productive capacity.

Climate.

The temperature of this valley is more even than that of Santa Barbara, in so far as its effects are discerned by the sensitive person; so many who feel the slight chill of the immediate sea air can here find that delightful balmy atmosphere formed by the admixture of sea and interior air that is so comfortable to the person and so soothing to the sensitive air passages. Indeed, so healing and so enjoyable is this balmy air that many invalids have here regained health and have no dread of the most vigorous outdoor employments. For benefit to asthma, bronchitis and phthisis no superior climate can be found for those who do well in proximity to the sea. As one gentleman remarked to me, he had hunted the State over for a perfect climate; not north, not south did he wish. The rawness of the north was too much, the enervating moisture of the south was too trying, the heat of the far interior too great. Coming here, the combination of all the excellent qualities of climate gave him what he desired, and he here cast his fortune and "put all his eggs in one basket." The moderate altitude secures an even, dry and pleasantly sustaining atmosphere, not too cold in winter and not too hot in summer, the warm morning air of summer merging into the gentle tempered sea-breeze stealing along at about 11 o'clock and subsiding at sundown. In this dry and even-tempered air the most exquisite comfort is experienced, and man and beast and plant all equally flourish. This

is the haven of rest to the tired invalid, the pleasant tonic to the vigorous worker.

In my next I will treat of the agriculture and horticulture of this Santa Ynez valley.
Auburn, Cal. S. F. CHAPIN, M. D.

THE STOCK YARD.

Color in Shorthorns.

EDITORS PRESS:—I am a firm believer in the fact that a good animal is never of a bad color.

There has been and still is a senseless and unreasonable prejudice against all colors in Shorthorn cattle but deep red. Fortunately, however, this prejudice has never taken deep root, if any, among the largest and best breeders. I say fortunately, for if all breeders should use red bulls only the majority would have to use middling or inferior animals. A breeder who knows his own mind and is aiming to build up a herd of a fixed type or style, cannot be altogether confined to using bulls of any one color, yet he must not be altogether regardless of color, for all breeders have cattle to sell at some time or other, and it is well to bear in mind the wants of buyers.

I do not think there are any grounds for the prejudice against pure white or a mixture of red and white in any degree of color among Shorthorns. Neither do I believe that red cattle, taken altogether, are as good as those of mixed colors, or pure white even. There are plenty of facts to prove that the white, red and white and roans hold their own, both in sale and show rings, but more especially in England than in the United States. At the same time I admit that a right good color helps to sell an animal, but I have never in my experience found that a good roan would not sell full as well as a red one, and I have always found sale for any white bulls that I have reared. In making sales from my herd I have several times had white bulls taken in preference to some of other colors—red not excepted—not because of the color, but rather because of the superior size and quality of the animal itself.

It is not necessary to go back to the days of Chas. Colling, whose roan bull Comet sold for 1000 guineas (more than \$5000), in the year 1810. Higher-priced bulls have since been sold, but the fact remains that the highest-priced bull ever sold—of any breed—was a roan Shorthorn, the celebrated Duke of Connaught, bought by Lord Fitzhardinge, in 1875, at the Earl of Dunmore's sale, for 4500 guineas (very nearly \$23,000); and "at Berkeley he did great service and was the talk of the country. Many of the best cows in England were sent to him at a very high fee; indeed, his cost price was said to have been returned in less than five years." Calved August 10, 1874, he was useful up to March, 1886, when he caught a severe cold from which he never recovered.

I had the pleasure of seeing this fine bull in 1875, and then thought him nearly (but not quite in one or two points) perfect in shape. He proved himself to be a most impressive stock-getter.

Two years before the sale of this high-priced bull, the great sale of Shorthorns had taken place at New York Mills, where the highest-priced cows ever sold were bought to go to England. A red and white cow was knocked off for \$40,600, but was afterward sold to Col. Morris for \$30,000, so that Earl Bective's purchase of the roan 10th Duchess of Geneva for \$35,000 was in reality the highest price paid. This cow proved to be a profitable investment at the very large price paid for her.

At the sale of the late Mr. J. B. Booth's herd in England, about a year ago, 40 cows and heifers, including calves, made an average of \$500—the highest sale average of the year. From the English Herdbook I have got the colors of 32 of them, four of which were red and three of these among the very lowest-priced animals in the sale; as usual, a roan cow sold for the top price of the day.

Twenty-seven head of the leading prize-winners (male and female) at some of the best English and Scotch shows in 1887 consisted of 18 roans, 6 red and white and three white animals.

There are not many pure-bred cattle of any breed made up for the fat-stock shows, but all who are interested in cattle matters will remember reading of the white, pure-bred Shorthorn steer from the Bow Park herd, exhibited at the great American fat-stock shows a few years ago. He was one of the very few steers, and I believe the only pure-bred one of any breed, exhibited every year of his life, and never beaten in any ring in any year. A white bull was sold for \$500 at Kansas City last spring.

It is but a short time since I heard the remark that it was no use showing roan animals in America. Those that attended our last State Fair at Sacramento may have seen some reason for thinking differently, and if that is not enough, we will just state that at the Illinois State Fair this year a Shorthorn herd of four roan cows with one red bull took the \$500 herd prize, beating "seven other herds from five different States, and representing as good specimens in the Hereford and Polled Angus classes as are to be found in America"—so says the *Stock Journal*; also that a roan Young Mary two-year-old Shorthorn heifer took the first

premium over eight red competitors at the Ohio State Fair this year.

I have endeavored to set forth a few plain facts about what animals of the lighter colors have achieved in the way of prices as well as prizes, and I cannot conclude better than to give an extract from the *Chicago Stock Journal* on the color question, written by an English writer, who has the following on Shorthorn colors, which coincides with my own views on the subject and experience also:

That white implies weakness of constitution is a theory most thoroughly exploded by frequent exposure. Take, for instance, only the illustrative instances of the swan and white bear, and the vicissitudes of severe weather to which they are respectively subjected without harm. No one can say that the white cow fails on the score of milk—they are usually most excellent at the pail—or that the white bullock is backward in laying on meat. What can be the cause of such a senseless prejudice, then?—a prejudice, too, which is so detrimental to the best interests of the breed; inasmuch as to comply with the requisition of your market, men are scared from using a white one, either male or female; so that a large quantity of the best possible material falls out of use, and so, eventually, a considerable element of the very best will be lost. The white cow is very apt to bring a roan calf. From that point of view, then, damage is done by tabooing, and so eventually obliterating the whites.

It is not the extermination of the color that I deprecate so much as the great amount of inherent, long-descended excellence that that color indicates, and which must be ultimately lost unless we can stem this mighty tide of prejudice. Then that best of colors, most beloved of old breeders, the "yellow-red," is also being tabooed. There is no doubt that cattle of this hue give the richest milk, and the brothers Colling were especially fond of such. I have myself known some whose yield was as golden as that of the Alderney, and far more abundant in quantity. This, again, is an unreasoning prejudice. And yet the modern buyer will not look at an animal of the color. He wants dark red, very beautiful, no doubt, but suggestive of a black infusion at some date, or roan he will take, especially the "blue roan" of the Bates school, which I have never known to occur among Booth cattle. The Booth disciples have their roan, but it is a yellow-red roan. The same tint was found at Towneley and prevalent at Fawley. Both Col. Towneley and Sir Charles Knightley, be it remembered, used much Booth material. Then, again, you do not get the black nose at Warlaby or Fawley. How comes it among the Bates families? As I think, in tow of the "blue-roan," however, that really may have been introduced. Undoubtedly, where the blue roan is found, there, too, black noses turn up. The Booth cattle were somewhat indebted to the "alloy." The Galloway (a red polled Galloway), from which the "alloy" came, is singularly free from all nasal stains of any sort, and they, too, have no "blue roans" among their cattle. I do not remember a single instance of that color occurring in their herds. Yellow roan and red roan they have, but no trace of blue. After all, can a really good cow be of a bad color—that is, provided she have shape and quality? I hope our breeders will disregard a childish cry, and breed their cattle as they come in respect to hue. There is a stream of people who follow fashion and the public cry. They may increase our difficulty, but I do hope we shall not lose the famous and beautiful white.

There are very few of the yellow-red Shorthorns in this country, but what there are of them are good, giving plenty of rich milk. Those I have of that color get the yellow from a roan bull that I brought from England in 1861, a descendant of Sir Charles Knightley's stock, mentioned above. Some of his calves were yellow-red or yellow-roan, all of which were fine, large cattle and good milkers. It is not long since the last of his get went to the butcher, hale, strong and fat in her nineteenth year—proof of that strong constitution which all good Shorthorns should have.

ROBERT ASHBURNER.

Salt for Stock.

EDITORS PRESS:—An impression seems to prevail among stockmen in this State that stock do not require any salt, and I have often heard the remark that they would not eat it if given to them. This, I think, is a mistaken idea. All animals not only relish salt, but absolutely require it in order to promote a healthy condition of the system. Poultry require less and milch cows more than other animals. Even honey bees relish and devour with avidity an occasional ration of salt. If flockmen would give their sheep salt and sulphur, mixed in the proportion of three parts of salt to one of sulphur, I know they would not be troubled with ticks, and I am persuaded they would not be troubled with scab either. Many experienced herders with whom I have conversed on this subject agree with my views about this matter, too. I have fed salt to cows in this State where complaint was made that they were failing in their milk and that it took a long time to churn the cream from their milk. In every instance the cows ate the salt with avidity, and there was a marked increase in the amount of milk they gave, and there was no more complaint about the butter not coming soon enough.

I have been surprised to hear intelligent persons give, as a reason why stock did not want and would not eat salt, that there was plenty

of salt deposited on vegetation from vapors arising from the ocean! Every one ought to know that not a particle of salt or any other impurity is ever exhaled from the ocean. In the immediate vicinity of the ocean salt may be deposited on vegetation and other things from the spray carried by the wind, but none is ever taken up by the process of evaporation. Horses that are constantly kept in the stable should have their regular weekly allowance of salt, sulphur and wood-ashes. The same should be given to fattening hogs shut up in a pen.

Santa Rita.

J. S. TIBBITS.

Horns and Handling.

EDITORS PRESS:—In your issue of November 19th Mr. Ashburner says: "I never had a vicious bull nor ever had the handling of one."

The commonly accepted meaning of the word "vicious" as applied to a bull is wicked or unruly. I suppose Mr. Ashburner's bulls are much like other people's—not vicious if they are restrained from becoming so.

My experience has taught me that most bulls when they arrive at the age of 15 or 18 months are inclined to be vicious, and would be so if they were not properly handled.

If they are handled as they should be until they are three years old, they become more tractable and afterward there is not as much danger of their becoming vicious. Their temper is variable, and there is no certainty that their inclination to viciousness may not assert itself at any unguarded moment. For this reason they should always be handled carefully, firmly and gently.

If dehorning a bull is sure to work so radical a change in his temper that he will not be inclined to be vicious, I would say, "Off with his horns;" but unless it does that I would prefer to have the horns left on the bull's head. I often find the horns a convenience in handling a bull, and when he is inclined to be vicious he can deal about the same destruction without horns as with them.

I would not trust a vicious bull merely because his horns had been sawn off, for the power for mischief is still in his head.

Centreville, Cal.

J. N. BREWER.

POULTRY YARD.

Marketing Eggs and Poultry.

The producer can often get useful hints from the merchant's views of preparing products for sale. From the *Grocer and Country Merchant*, a journal well informed on trade affairs of this city, we take the following hints about marketing eggs and poultry:

Eggs.

There is probably in no one article of the same relative value, so much loss from injudicious management as in eggs. This is best illustrated in the Eastern trade. Some shippers will gather up in small lots a sufficient quantity to make a shipment to this market; having the amount on hand necessary to make a shipment, they search the store for old boxes, barrels, etc.; anything that will hold the eggs, in their judgment, is good enough. It always pays to pack eggs in cases or egg-carriers; they are uniform in size, self-counting, no experienced packer required, clean and convenient to handle, only a small space required to pack them, will carry eggs much safer than any other package, scarcely any loss by breakage, save in freight, and they go into market much cleaner. Railroad employees cannot roll them about as they do barrels; and the best and above all, eggs in cases bring from 2¢ to 5¢ cents per dozen more than in any other package. Why is it our market reports are always quoting eggs with such a wide range in prices? Simply because of the injudicious management and unskilled handling. In packing, make two grades of eggs, that is, fresh eggs; keep the clean ones by themselves, and the uncouth ones the same. A little fresh, thoroughly clean and perfectly dry straw, or if proper straw is not obtainable, several layers of clean, dry paper, should always be put in the bottom of the box, and also next to the lid. The straw or paper serves as a cushion and tends to prevent breakage. Stale, dirty, damp or musty hay or straw should never be used, as it not only injures the appearance, but affects the quality of the eggs. Care should always be taken to prevent eggs coming in contact with any foreign odor. In shipping a long distance be sure that your eggs are not only sound but recently laid. Eggs may be candled and repacked, but if they are stale, though apparently sound, they will be sure to reach this market in bad order, or will so rapidly change that dealers will be sure to lose money on them. This rule is especially applicable to Eastern and Salt Lake shippers; the motion of the cars so muddles eggs not entirely fresh that they appear cloudy, stale and will soon spoil, if, indeed, they are not already bad. Do not hold lots after they are packed. Ship at once while fresh.

Dressed Poultry.

Food in the crop injures the appearance. Purchasers object to paying for this worse than useless weight. Therefore always keep from food 24 hours before killing. They should, however, have all the cold water they can

drink, as this makes the meat white and firm. Opening the veins of the neck and bleeding in the mouth are the best modes of killing. Never cut off the head unless the process of killing should injure the appearance. When such is the case, the head should be taken off at the throat, the skin peeled back a little and a portion of the neckbone removed, the skin then drawn over the end and tied and trimmed neatly. But it is in no way necessary to cut off the head, if properly managed. For instance, hang the fowl up by the feet, lock the wings and bleed with a sharp penknife, as above noted. Leave the feet on also. The intestines or the crop should not be drawn. And it is very essential that you should never scald your poultry when dressing for this market. Buyers always prefer dry-picked, and such lots will always command the market at higher prices. Poultry looks much cleaner when dry-picked than when scalded. Then, again, the peculiarities of our climate seem to produce discoloration very quickly, when scalded. This is one reason that Eastern stock invariably sells at discount. Another reason is, that buyers prefer the feet and heads left on. You cannot be too careful in observing all the minor wants of the market, if you expect the best market price for your poultry. Have all the pin-feathers, etc., removed very cleanly without breaking the skin. This can be done if proceeded with at once, while the fowl is warm.

Pack in light but strong cases to contain 200 to 500 pounds; also ship some 100 to 150-pound cases to supply small buyers. The larger-sized cases, say 300, 400 and 500 pounds in each case, are suitable for festivity days. Ordinarily, cases containing 100 to 200 pounds are preferable to the trade. The cases should not be over 18 to 24 inches deep, to prevent pressing the fowls out of shape. Do not pack until the fowls are cooled through; if packed when warm inside, they will be sure to spoil if long on the way. Pack closely as possible, lining the package with clean paper, and see that the package is so full that when the cover is nailed on there will be no chance of the poultry being moved about. In packing turkeys, pack gobblers breast up, and hens back up; appearances of packages are thus improved. Never use straw in packing poultry, for besides creasing the bodies, there is always more or less chaff that hurts the appearance of the fowls. Our best markets for poultry are Thanksgiving (generally the last Thursday in November), Christmas and New Year. Turkeys sell well on either of these occasions, but best on Christmas—especially large ones. Care should be taken that lots shipped for these occasions should arrive in sufficient time before the event to meet the best sale.

Live Poultry.

Give live poultry all they can eat and drink before shipping. Avoid putting small and large ones in the same coop, especially if crowded. Never put chickens in the same coop with turkeys, as the latter trample them, and are liable to kill some. When possible, assort so as to have each coop uniform in quality. It is a great mistake to suppose that a few choice, fat chickens mixed in with a lot of small and sometimes poor, scrubby chickens, will sell to advantage. In fact it more often detracts.

Turkey coops should be say 20 inches high by 6 feet long and 2½ feet wide. Chickens, 16 inches high, by 2½ feet wide, by 5 feet long. And in every instance it is very essential that the slats should be upright, so as to be convenient in watering. Have the coops light but strong. Large young roosters and ducks have the best sale for the Chinese New Year, occurring about the 1st of February; as their calendar differs from ours, it is impossible for us to name the exact date. Geese sell best during the Jewish holidays.

THE VINEYARD.

On Vine Pruning.

EDITORS PRESS:—I have often thought that the grape and wine industry don't receive its share of the space in the *RURAL PRESS*, and to give a good example I send this in reply to "Vine Grower's" letter in the *PRESS* of Nov. 12th. If any of your readers ever pruned his vines before the leaves were shed, let him give us his experience.

The main reason why I would like to know is this: Supposing a man had a large vineyard and wanted to prune it all himself, how soon would he begin? I have often noticed that in places where a shoot was broken in picking, and sometimes split in halves, buds almost on the edge of the break will send forth good healthy sprouts in spring, but I never pruned vines before they were dormant. "Vine-Grower" seems to think it injurious for a vine to bleed. It is my opinion that this blood is little more than clean water, and that late pruning has no other effect than to keep back the sprouting of the buds for a week or two. As to painting over the cut ends, I would say that in pruning grapes the cut is mostly made about half-way between two buds, and the piece of shoot between the cut and the extreme bud dies and no amount of paint can keep it alive. Of course the cut could be made so close to the bud that no dead wood were left, but who will know where that place is every time? If you cut on one side you will injure the best

fruit bud on the spur, and if you cut on the other side there will be a dead piece, and it might just as well be two inches long as an eighth of an inch. With the usual system of back pruning the whole business will most likely be cut off again next year, so that it makes little difference whether the cut has healed or not.

When you have to cut off a thick branch, cut it off smooth, or even cut a piece out of the main plant, and you will find it to heal better than if you leave a knob sticking out and daub it full of paint.

Mr. "Vine-Grower," do us the favor of pruning a few of your vines at once; apply the paint to the roof of one of your buildings, and next year let us know the result.

G. G. Green Valley, Sonoma Co.

Vine-Pruning.

EDITORS PRESS:—"Vine-grower" of Redwood City in your issue of Nov. 12th gives his experience in pruning vines last winter in January and February, when he found that the vines bled after cutting, and asks whether it would be doing the right thing to prune them now while they are as dry as a bone.

Vine-pruning may be done, speaking generally, at the time after the ripening of the wood down to the time when the vines commence to bleed. The only objection to early pruning is that it will cause the vines to start two or three weeks earlier in the spring, and the new shoots are liable to be nipped by the frost. Late pruning is the rule for localities which are subject to late frosts. The theory is that the sap which would otherwise have but little force in any one bud, if acting upon a large number at once, as would be the case before any are removed by pruning, it would have a very powerful effect if concentrated upon but a small number, and would cause them to start a good deal earlier than they otherwise would. If your correspondent's vineyard is so situated that there is no danger of frost after the buds start in the spring, there is no objection to his pruning as early as the middle of November, except that the eyes left on the spurs are a little more liable to be injured by winter frosts than when a long cane is left to be pruned off later.

Although most writers are afraid that the bleeding of the vine may be injurious, the celebrated Dr. Guyot, a man whose opinion was of great weight in France during his lifetime, and whose writings survive him, believed that the bleeding did little or no harm.

However this may be, it is safe to say that in a locality where the early shoots would be caught by a frost, the injury done by the frost would far exceed that which might possibly be caused by the bleeding of the vines.

The same inquirer also wants to know if it is a good plan to paint over the wounds or cut ends made in pruning. In a large vineyard this is impracticable except to a very limited extent, and he will very soon find that it is entirely unnecessary, because the first cuts when the vine is young will readily heal and in subsequent prunings the old wood with the cut on it will mostly be removed. In changing the form of an old vine, in reducing its height, etc., when it is necessary to make a large cut, it would be useful to cover the wounds, for these ought to heal as soon as possible.

E. H. RIXFORD.

San Francisco.

Vine Pruning.

EDITORS PRESS:—In answer to "Vine-grower," Redwood City, in your issue of Nov. 12th, I would say that it is practically impossible to prune a vineyard in California without subjecting the vines to more or less bleeding.

The vines might be pruned just after the crop is gathered, as suggested; it would do no harm. Of course it must be remembered that the earlier a vine is pruned, so much earlier will it start in the spring.

As the vine is cut midway between two buds it would be useless to paint over the ends.—LEONARD COATES, Napa.

LUMBER TRANSPORTATION ON THE MISSISSIPPI.—Lumber is rafted from La Crosse, Wis., to Hannibal, a distance of 300 miles, for 75 cents a thousand, and in times of high water often as low as 50 cents a thousand. From La Crosse to St. Louis, a distance of 450 miles, the charge is 85 cents a thousand, no charge being made for deck loads of shingles and lath. Lake dealers have to pay three and even four times these rates. There is no quoted rate from any lake-producing point to this city less than \$1.62½, where figures run up to \$3.25. In addition to this disadvantage, the Chicago dealers pay higher rail rates to reach their Western customers than the rivermen have to do. It costs them \$1 a thousand more to pile their lumber in their yards than it does the dealers on the river, and after the lumber is in pile it occupies much more expensive ground here than at St. Louis. There is all this in favor of the Mississippi-river lumbermen, yet competition laughs at the handicap. When the Chicago dealer desires to place lumber in territory west of the Big Muddy, he knows that his river competitors have from \$1 to \$1.50 the start of him. Yet he goes out there, the Mississippi man finds, crowded in a manner that annihilates all profits. It is surprising how they do it, but they do!—Exchange.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Our National Grange Display.

From reports already received from the National Grange, it is evident that California, and especially the Grange, will receive great credit, and such as must result in permanent benefit, from the display at this session. Its further display in Chicago will also render more than value paid for the enterprise of the donors, Patrons and friends of agriculture who actively assisted in contributing, transporting and placing the exhibit so successfully.

Hundreds, if not thousands of Patrons, all over the Union will remember with good opinion California and her rare productions. We shall be mistaken if many Grangers are not attracted to California, and put in their application for affiliating as one of the best and first things they can do on arrival upon our sunny shore. And may not thousands of coming farmers to California be, by ocular demonstration at the National Grange, and through reports of the show of the products of our California soil and climate, be induced to join the Grange as one of their early acts?

For Discussion in the Grange.

Among subjects which may be appropriately discussed at the celebration of the Grange's birthday, the following occur to us:

What can be done at once to thoroughly revive the work of the Order in our county and State?

How to manage our county and district picnics so as not to interfere with each other in time of holding, etc., and yet increase their enjoyment and benefits.

Shall we hold a State or Interstate picnic in California? When and where?

What is the best date to be established in this State as Arbor Day? Would not Grange birthday be the best, and can we not consistently ask the Legislature that it be made a legal holiday in California?

What is the best method that can be devised for nominating and electing town, State and national officers, in order to secure the best public servants possible?

It would also be well to read extracts from the proceedings at the recent meeting of the National Grange, and exchange views and comments on the sayings and doings of that important body.

A Pomona Grange in Sutter.

At Yuba City on Saturday, Nov. 19th, Butte Mountain Pomona Grange was organized by District Lecturer B. F. Frisbie. There were present members of North Butte, March, South Sutter and Yuba City Granges, to the number of 30 or thereabout, but the charter-list contained about 50 names, which will be largely increased, as the list is to remain open for 90 days. An unexpected degree of interest was manifested in the proceedings, from the opening to the close of the meeting.

Officers were elected as follows to serve through 1889: O. E. Williams, M.; Otis Clark, O.; Mrs. M. J. Frisbie, L.; R. Mahon, S.; C. C. Patridge, A. S.; Zetta Sammis, C.; R. K. Stevenson, T.; James B. Wilkie, Sec.; W. P. Smith, G. K.; Josie Walton, P.; Lena Newkom, F.; Clara Pratt, Ceres; Mary Patridge, L. A. S.

The next meeting is to be held in Yuba City, Saturday, Dec. 17th.

Amendments to the Constitution.

The following amendments to the constitution, which were handed down by the National Grange a year ago, have been adopted by the several State Granges, the vote standing 26 to 1, six States not voting:

County or Pomona Granges may be represented in State Granges under such regulations as the State Granges may provide.

The State Granges shall have authority to confer the degree of Flora on all members of the Order in good standing in their respective States, who have taken the degree of Pomona, in like manner and form as the same is now conferred by the National Grange, and each person receiving the degree shall be entitled to a certificate of membership in the sixth degree from the National Grange and duly attested under its seal.

Grange Birthday at Oakland.

The 21st anniversary of the birthday of the Grange will be celebrated at Oakland Saturday, Dec. 3d, by Eden and Temescal Granges with literary, musical and social exercises. Among the notable and eloquent Patrons who are expected to be present and make their voices heard is Bro. S. T. Coulter of Santa Rosa, whose addresses are ever entertaining and instructive. Exercises will commence at 10 A. M., and all Patrons who can attend are cordially invited.

Santa Rosa Grange.

EDITORS PRESS:—Santa Rosa Grange is to properly observe the natal anniversary of the Order. The day will be Saturday, and the program will be interspersed with songs, short speeches, select readings, a basket-dinner and so forth. None but members of the Order will be admitted.

Since the session of the State Grange at this place our Grange has had two applications for membership. All the meetings are well attended, and unless something in the shape of a terrible storm or epidemic visits us, our annual election of officers will be held at the next regular meeting, Saturday, Dec. 10, 1887.

The most important work to be done by Subordinate Granges this month is the selection of officers for the new year. Without competent and attentive officers none can hope to prosper as it should, and if Subordinate Granges are not in a flourishing condition, how can the State Grange perform the work expected of it? It does seem important that all who have the Good of the Order at heart should attend the Grange election and assist in choosing wide-awake and industrious officers.

There is some talk of reorganizing Healdsburg Grange. It is surprising that in a community so thrifty they should not have maintained their organization. Let us indulge the hope that Healdsburg will soon be honored with a prosperous Grange.

Worthy Master E. W. Davis and his wife, Sister Davis, were honored by their Grange friends with a surprise party on Friday night of last week. There were about 150 persons present, and a most agreeable evening was had. A good supper was brought by the invaders, and heartily enjoyed by all. These Grange surprises are always successes, and bring about much goodfellowship.

We are glad to note that Bro. Past Master Coulter is to deliver the annual address at Temescal Grange reunion. We promise his hearers a good speech and an entertaining and instructive meeting.

By thus setting the example, we hope to see Santa Rosa Grange items frequently reported for the press. FRATER.

Anniversary Celebration at Sacramento.

EDITORS PRESS:—Arrangements have been completed for our celebration on December 5th at Sacramento. The joint committee of Sacramento, Franklin, Enterprise, Florin and Elk Grove Granges met at Grangers' hall, Sacramento, on Saturday, November 26th, and arranged a program for the occasion, which consists of addresses by Wm. Johnston, P. M. S. G., Daniel Flint, Lecturer S. G., Judge J. H. McKune of Sacramento Grange, W. Walter Greer, Master Sacramento Grange. Remarks by the Masters of the different Subordinate Granges in Sacramento county. Speeches by prominent Grangers. Discussions on the outlook for the Order and reviews of the past.

There will be essays, recitations, readings, songs and instrumental music by members of different Granges.

The time set for meeting is 11 o'clock A. M. At noon a feast will be spread, around which all Patrons are invited to gather.

Although we expect a large crowd, we have ample room and we hope to accommodate you all. I need say nothing further only to mention the committee who will be in charge of the tables—Sisters Hamilton, Jackman, McMullen, Greer and Wilcox—which will alone assure you we will have something to eat.

The meeting of Sacramento Grange on Nov. 26th was well attended, and among those present were noted several visiting members.

When suggestions for the Good of the Order were reached, we were entertained with speeches by Bros. Welty, Flint, Hale of San Jose, Aiken, McKune, and Sisters Johnson, Aiken and McMullen.

Sister Johnson has something to say to the brothers of Sacramento Grange, which she will probably do through your columns. Anent this more anon.

W. WALTER GREER,
Master Sacramento, No. 12.

Grange Election.

SAN JOAQUIN COUNTY POMONA GRANGE.—Elected at Lodi, Nov. 19: Ed. Elliott, M.; S. W. Sollars, O.; E. J. McIntosh, L.; T. C. Shaw, S.; S. O. Waters, A. S.; A. A. Gunsey, C.; E. Fiske, T.; J. D. Hoffman, Sec.; J. Thompson, G. K.; Mrs. J. D. Hoffman, Ceres; Nellie Norton, P.; Mrs. W. B. White, F.; Alice Adams, L. A. S.

* NOTE.—The Secretaries of Granges are requested to forward reports of all election and other matters of interest relating to their Grange and the Order.

MERCED GRANGE received nine candidates into full membership Nov. 16th, and afterward enjoyed a sumptuous feast, wherein the poultry and fruits of Merced county figured extensively. This Grange will hereafter hold its regular meetings on the first and third Wednesdays of each month.

STOCKTON GRANGE celebrates the anniversary of the Order on Dec. 3d, by a literary entertainment, and invites the assistance and co-operation of all the Granges in the county.

National Grange.

The full list of officers of the National Grange, elected at Lansing, Nov. 23d, is as follows:

Master—Put. Darden, Fayette, Miss.
Overseer—James Draper, Worcester, Mass.
Lecturer—Mortimer Whitehead, Middlebush, N. J.

Steward—X. X. Charters, Virginia.
Assistant Steward—J. H. Hale, Connecticut.
Chaplain—A. J. Rose, Salado, Texas.
Treasurer—F. M. McDowell, Wayne, N. Y.
Secretary—John Trimble, Washington, D. C.
Gatekeeper—A. N. Brown, Delaware.
Ceres—Mrs. Kate A. Darden, Fayette, Miss.
Pomona—Mrs. Jas. Draper, Worcester, Mass.
Flora—Mrs. M. E. Luce, Michigan.
Lady Assistant Steward—Mrs. H. A. Sims, Kansas.

Executive Committee—Dr. J. M. Blanton, Virginia, chairman; Hon. J. J. Woodman, Michigan; Hon. J. H. Brigham, Ohio, and Put. Darden, Mississippi, ex officio.

Topeka, Kansas, was selected as the next place of meeting.

On the closing day resolutions were passed favoring the election of postmasters by a direct vote of the people interested; indorsing the actions and objects of the International Peace Association, and laying out work for the Executive Committee in petitioning Congress during the next session for legislation on matters of importance to the Grange interest, such as a reduction of postal rates, appropriations for an agricultural bureau and a Washington home office, and kindred subjects.

We shall endeavor to present in our next issue a summary of the more important features of the session not mentioned in the RURAL of Nov. 26th.

Good Advice from a State Grange Committee.

At the last session of the State Grange the Committee on Good of the Order, in reporting, made the following suggestions:

We have carefully considered all questions confided to us, and have reported to the best of our ability as promptly as circumstances would permit, and now we respectfully offer a few suggestions that seem to us likely to promote the prosperity of the Order.

The prompt payment of quarterly dues by Subordinate Granges and prompt reports to the State Grange from Subordinate Granges is of vital importance. To deprive the Order of the necessary funds to enable its officers to transact the business entrusted to them renders the proper discharge of official duties difficult—in some cases impossible. The Subordinate Grange is the source of power, and from it must flow the life-giving strength to animate and sustain State and National Granges in the duties assigned them, or your State and National influence will be impotent.

Co-operation is a fundamental principle in our Order, and how to solve that immense problem and secure its potent power in favor of humanity is worthy of our best efforts. The few through co-operative effort aggregate wealth and dominate the many. There is opportunity in the Grange to study and apply co-operative methods adapted to the conditions of all its members. The accumulation of desirable books in Grange libraries for the use of members, securing periodicals and magazines at club rates, exchanging flowering shrubs and seeds in the Grange. By accumulating orders in the Grange, wholesale rates in the purchase of articles needed for domestic use may be obtained, and in case of sickness or misfortune small amounts, such as each member can afford, when accumulated may be made to yield relief of incalculable value to a suffering sister or brother. However poor a member may be in material possessions, we may all be rich in fraternal affection, and there is no way that wealth of affection can be accumulated so surely as by acts of kindness.

Experience has shown that the pure air of the country away from town influence is most congenial to Grange life.

Open meetings in which children are entertained and instructed, and where young people are brought within the moral influence of the Grange, are earnestly recommended by your committee.

Bro. I. C. Steele, Bro. John Adams, Bro. Nelson Carr, Sister N. A. Sanders, Sister M. A. Sheldon, Sister C. E. Kinney, Committee.

San Jose Grange.

At the meeting of the San Jose Grange last Saturday, Bro. Keesling reports to the Patron, the discussion on "Worms in Potatoes" was opened by Bro. D. H. Coates, who exhibited a number of Early Rose potatoes that he termed the grandchildren of those planted in February last and which were the result of potatoes left in the ground when digging his crop in June. They were of fair size and smooth appearance, but were somewhat infected with worms, although not so badly as the first crop. He stated that the presence of the worms was indicated by a dust-like substance in the eyes of the potatoes. He was of the opinion that a moth similar to the codlin moth laid its eggs on the potatoes while in the ground, and that the larvae entered the potatoes at the eyes. Bro. Pettit stated that in his experience potatoes should be dug as soon as matured, as the worms increased rapidly thereafter. Bro. Woodhams stated that this could be avoided somewhat by plowing a furrow of earth over the rows just before maturity, as it evidently prevented the moth from reaching the tubers. Sister Woodhams asked if some kind of manure or fertilizer could not be used to prevent the worms from attacking the potatoes. This Saturday the Grange will open at 10 o'clock A. M. for election of officers, after which a feast and entertainment will be provided for the members and their families.

A COTTON-PICKING BEE.—Some one writes from Pleasant Grove to the Record-Union that

on Saturday, Nov. 5th, the neighbors were invited to attend a picnic at the home and farm of Jeremiah Parker, on the Auburn ravine, when 101 on the arrival of the women and children, it turned out to be an old-fashioned cotton-picking. When all the cotton had been picked, the party repaired to the house, where a bountiful dinner was prepared, with all the good things of the season. Some of the cotton was sent by the Patrons of South Sutter Grange to Lansing, Mich., to be exhibited as a product of Sutter county.

Worthy Master Overhiser's Report.

The Worthy Master of the California State Grange made the following report to the National Grange on Tuesday, Nov. 17th:

In submitting my report it is my purpose to state as correctly as possible the condition of our Order in California.

There are in our State 54 Subordinate Granges, with a membership of about 3000, all having paid their dues to the State Grange to July 1, 1887. Forty-six have paid to October 1, 1887, leaving eight Granges in arrears for the last quarter, ending October 1st.

We have, also, in California, three Pomona Granges, in Sonoma, Sacramento and San Joaquin counties, all doing good work, and, as I have recently been informed, there are now in Sutter county a sufficient number of members ready to form another, only waiting to be organized.

Some five years since Sonoma County Grange No. 1 made an exhibit of the agricultural products of that county at the State Fair and was awarded a special premium.

At the session of the State Grange, held soon after, the following resolution was adopted:

Resolved, That the State Grange of California, through a committee to be appointed, request the State Board of Agriculture, to appropriate at least \$5000 for the purpose of encouraging agricultural exhibits at the next State Fair, and that gambling be prohibited on the Fair grounds.

This resolution was presented in due time, and the Board of Directors of the State Agricultural Society appropriated \$500 for premiums, to be awarded for county exhibits; \$250 for the first prize, \$150 for the second, \$100 for the third. The exhibits to be made by the Granges of the different counties, and the money turned over to them.

Sonoma, Sacramento, San Joaquin and several other counties entered for the prizes, which added a new and interesting feature to the fair.

In 1886 and 1887 the Agricultural Society appropriated \$2000 each year for county exhibits to be awarded as follows: \$500 for the first prize, \$300 for the second, \$200 for the third, and \$100 for the fourth.

This brought out 11 competitors at our fair this year.

The Mechanics' Institute in San Francisco, holding their exhibition at about the same time as the State Fair, also offered premiums to the counties of the State, as follows: \$1000 for the best, \$750 for the second, \$500 for the third, and \$250 for the fourth. There were six counties which placed exhibits in the Mechanics' Fair, making in all 17 counties in our State competing for supremacy.

Sonoma, Sacramento and San Joaquin counties were represented through their Pomona Granges this year.

But this competition of the counties of our State was only a small part of the good accomplished by the resolution passed at the State Grange session of 1884. These county exhibits created a new and healthier interest in our agricultural fairs, and were the means of calling the attention of our people, both young and old, to the true object of agricultural fairs, the study of all the products of the farm, and away in a measure, from racing and gambling.

We hope that in the near future gambling and the use of intoxicating liquors will be banished from our fair grounds, and if so desirable a result is obtained we will have every reason to believe that it has been brought about through the moral influence of our Order. During the past year four new Granges have been added to the list and three dormant ones revived.

Believing that more means were required to carry on the revival work commenced last year, at the last State Grange meeting the dues were increased, so that we might be better able to keep the State Lecturer and deputies in the field.

The lectures and suggestions of Bro. Whitehead, National Lecturer, as published in our Grange organ, the CALIFORNIA PATRON, have been the means of great good in our State, but could he in addition "come over and help us," and let us who are beyond the Sierras hear his voice in our halls, I believe the number of Granges in California might be doubled during the next year.

In conclusion, I desire to call your attention to some of the products of California, its golden sheaves and ripened fruits. These were sent by the people of our State, that you may see what our varied climate and fertile soil will produce.

Worthy Master and members of the National Grange, I will now extend to you a renewed invitation to hold your next annual session in California.

POMONA'S PORTRAIT.—Among the contributions to the National Grange exhibit at Lansing, the Secretary of the State Grange mailed

an enlarged photograph (20 by 24 inches) of Sister Roache as she appeared at Santa Rosa in her regalia of fruit, staff and other decorations. This fine likeness will, it is probable, be fittingly placed in the office of the National Secretary at Washington. A similar copy can be seen at the office of the State Secretary.

It is very gratifying to notice that so many Granges in California and Oregon are now arranging for celebrating the birthday of the Order. They will all have a good time and Grange-inspiring results.

SECRETARY TRIMBLE of the National Grange reports 28 new Granges organized during the month of October, against eight for the same month last year.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

CITRUS FAIR.—*Oroville Register*, Nov. 24: Everything is progressing favorably for the Oroville Citrus Fair; the courthouse yard is being put in fine condition, the lumber has been hauled to the ground for the framework for the building, the contract is let to cover this with canvas, and the committees are all at work in their respective departments. Many fruit-growers have spoken for room for exhibit, and everything indicates that the fair will be a grand success.

BIG BEETS.—*Gridley Herald*, Nov. 24: In 1883 Garret Keppel planted about six acres of his adobe and slickens land to sugar beets, intending to use the same for hog and cattle feed. The seed was sown the early part of December. In June, 1884, some of the beets were so large that it required a two-horse team to pull them out of the ground; and one was thus pulled up which weighed 187 pounds. The soil is still there and its area embraces nearly 2500 acres. It lies along the Cherokee slickens canal, where moisture is abundant the year round. We do not believe better land for the purpose can be found on the coast.

Colusa.

IRRIGATION TRIUMPHANT.—*Colusa Sun*, Nov. 26: The votes by precincts on the Irrigation question in Central Districts was as follows: Division No. 1; Yes, 11; No, 13. No. 2: Yes, 16; No, 6. No. 3: Yes, 31; No, 4. No. 4: Yes, 97; No, 10. No. 5: Yes, 116; No, 18. Total: Yes, 271; No, 51. The vote on all the officers except Treasurer and Director in Division No. 4 was practically unanimous—the votes except for those elected being scattering. The officers of Central Irrigation district are: Assessor, J. B. Compton; collector, W. F. Mason; treasurer, Chas. B. Harden. Directors: 1st Division, F. X. St. Louis; 2d, H. B. St. Louis; 3d, Jos. A. Sutton; 4th, R. DeLappe; 5th, A. J. Tully. All of them are strongly for irrigation except F. X. St. Louis, and he, of course, will simply try to have the work done right.

Contra Costa.

A VETERAN ORANGE TREE.—*Antioch Ledger*: J. P. Walton, the venerable horticulturist and pioneer-orchardist, informs us that the seedling orange tree planted by him 18 years ago is vigorous and healthy. It has attained a height of 12 to 15 feet, and is at present full of finely developed fruit. He says he has picked over 700 oranges from the tree in former seasons, and it is now as full as it has ever been. The fruit is entirely free from mold or blemish, and both tree and fruit present an appearance that fulfills one's ideal of this most beautiful of fruits. Mr. Walton has other orange trees of more recent growth, all in bearing, and showing abundant fruitage. These trees have never been attacked with scale to any extent; one application of whale-oil soap has been found a sufficiently destructive agent to clean them off at any time.

Fresno.

SWEET POTATOES.—*Expositor*: Moodey & Bretzner have a 23-pound sweet potato on exhibition. The hill from which it was taken contained 132 pounds of potatoes. They grew on the place of James McKay, Fresno Colony.

Marin.

SCARCITY OF FEED.—*San Rafael Journal*, Nov. 24: Feed is very short in most parts of this county, in fact it is nil. Quite a number of cattle have already died. The safe thing is to raise hay enough to keep all the stock on the place, and then don't be tempted to sell it, no matter what price may be offered. The higher the price of hay the surer you are to need it.

Mendocino.

WHAT POISONED THEM?—*Mendocino Beacon*, Nov. 26: At Little River last Tuesday, two cows belonging to Mrs. R. Stevens were turned out of the stable about 10 o'clock in the morning, and wandered down to a watering-trough. On returning to the farmyard, they showed signs of distress, and in less than two hours both died. It was evident that they had partaken of poison of some kind, as they were taken with frequent spasms and suffered much pain. Upon cutting them open, the blood was found to be clotted considerably, but the flesh, instead of being blue, as in most cases of poisoning, was red, as if poisoned by strychnine. Near the watering-place where they drank grows some hellebore, or Indian poke, and there was some evidence that it had been cropped off. It is commonly supposed that

animals will not eat it, and it is frequently found on the ranches in this part of the country. We would be pleased to hear from any of our readers if they have ever known cattle to eat it, and if so if it has been followed with fatal results.

Merced.

TIMBER CULTURE WITH ARTESIAN WATER.—*Merced Argus*: W. G. Mills some time ago filed a timber culture claim on a quarter-section of land, about 10 miles southwest of town, and at once set to work improving it in accordance with the provisions of the land laws of the United States, and in order to facilitate the growth of timber, he has gone to work boring for artesian water, and at the depth of 250 feet has struck an average flow of water, but will continue boring 50 or 100 feet further, though the flow at present is ample to irrigate the breadth of land required to be cultivated in trees in compliance with the terms of the "Timber Culture" law.

MERCED FRUITS.—*Argus*, Nov. 17: We observed at the Grangers' banquet yesterday a variety of fruits, the product of Merced county, among which were almonds of three kinds—paper-shell, soft-shell, and the small hard-shell—English walnuts, both hard-shell and paper-shells, several varieties of grapes—wine, table, and raisin; late fall and winter apples of several varieties, perfect in flavor, color and shape, and free from blemish. Most of these were raised on Merced river-bottom lands, John A. Robinson's orchard being credited with fruits of the foregoing varieties that would compare favorably with similar products raised in any locality. Besides, Mr. Robinson had on exhibition a limb loaded with ripe and luscious Japanese persimmons.

Monterey.

JOLON JOTTINGS.—*Cor. Salinas Index*, Nov. 21: It is almost Thanksgiving Day, and no rain yet. Our farmers are clearing brush and getting ready for plowing. Cattle are beginning to die off here. Some of the ranches are overstocked, and there is no feed. There is plenty of mast, but it doesn't seem to do much good. Where there is water the poor cattle get into the mud and there they die. It seems too bad that such big ranches do not raise hay to keep their stock from starving.... This will undoubtedly be a good fruit country. When thoroughly plowed and cultivated, the soil keeps moist all summer. J. A. Forbes was offered \$3000 for 80 acres by parties who wanted it for grapes and olives. The brush land, which was thought to be good for nothing a few years ago, is now considered as good as any other. It improves with working. Mr. Ulrey of Pine Canyon cleared a piece of brush land 10 years ago, and says it has improved every year since.

Placer.

FIRST SHIPMENT OF ORANGES.—*Record-Union*, Nov. 25: Curtis Bros. & Co. of this city received yesterday 10 crates of oranges from Newcastle. They were of the St. Michael variety, and were grown and shipped by A. Moger. The oranges were of good size and excellent flavor, and will command very high prices.

San Benito.

ORANGES.—*Hollister Free Lance*, Nov. 25: Last April Dr. J. D. Hendricks set out a pair of young orange trees, one year old, of the Washington Navel variety. He gave them every attention, and was surprised by one of the trees blossoming, and forming a dozen oranges. The tree being so young, the oranges were picked off. The trees are looking remarkably well.

PLOWING BY STEAM.—On Wednesday a traction engine was set in motion for the first time in this valley. The engine was brought hither by Thos. Flint, who believes it can be successfully employed in plowing the fertile fields of San Benito county. The engine does the work of 35 horses, and easily pulls along four heavy gang-plows, set deep in the ground, at a speed of three miles an hour. The engine can be guided at will by means of a small wheel, and its movements can be directed by a boy. It will turn round in very narrow quarters, and can be backed or moved in any direction at will. It is kept from sinking into the soft ground by wheels 16 inches wide, the width of which also gives the necessary friction, which prevents the wheels from slipping.

Santa Barbara.

OLIVES IN THE SANTA INEZ.—*Ballard Cor. Press*: There are no less than 25,000 olive trees already planted in the valley, all within a radius of two miles, and covering an area of some 400 acres. At one spot in the valley it is possible to see 13,000 trees in one vast stretch, each long line straight as it is possible for human agency to make it. The soil is kept in a beautiful state of cultivation, entirely free from weeds, and in such a loose condition as to retain a large amount of moisture even in the driest season. Our soil is a loose, gravelly loam, and when taken at the right time is easy to keep free from weeds. The oldest orchard, that of R. R. Selby, has now been planted nearly five years, the trees being mostly three years old from the nursery, thus making them nearly eight years old at present; these bore slightly for the first time this year, and are in fine growing condition.

Santa Clara.

CITRUS SUCCESSES.—*Santa Clara Journal*, Nov. 25: Any one doubting that oranges and lemons will grow to perfection in this valley, can have those doubts removed if he will make a visit to the farm of Mr. H. Curtner at

Warm Springs, and take a look at some bearing trees on his place. The boughs are loaded to their utmost capacity with fruit of as fine quality as was ever raised in the southern part of the State. Mr. Curtner also has several lemon trees which are likewise bearing heavily, and show as large lemons as we have ever seen, and of very fine flavor. The vicinity of Warm Springs appears to be one of the favored localities.

SECOND CROP GRAPES.—Mr. A. V. Fatjo made a trip west of town this week, and while driving past the place of Mr. Norton, noticed that gentleman gathering a very heavy crop of grapes, the second growth of this year. The grapes were yielding about four tons to the acre. Mr. Norton informed him that the first crop had yielded quite as largely as the last one was doing. The cause of this large yield was pruning the vines very short the winter before.

Santa Cruz.

DRIER AT SOQUEL.—*Courier-Item*, Nov. 26: Mr. R. H. Martin purchased and erected an evaporator, getting it in working order a little over a month ago, too late to avail himself of any fruit except apples. But he has kept it running nearly to its full capacity, evaporating 60 boxes of apples per day. He received an order last week for a ton and a half of the dried fruit, and will not be able to fill orders, so that there is neither doubt nor difficulty about a market for his product, which is of an excellent quality. The vinegar made from the skins and cores of the apples also commands ready sale. Eight girls are employed to pare, core and slice the apples, two young men in the packing, etc., and one overseer, Mr. Shaw, who attends to the evaporation. The evaporator will probably run about two months more upon apples, and Mr. Martin will then put up a considerably larger one to be ready for next season's work.

Solano.

EDITORS PRESS.—Not much doing now. Many are pruning vines and trees. Those pruning trees are generally only side-pruning, and will not finish the top until the leaves drop, when they can see better how to shape the tree. We had a frost last Thursday night, which killed the tomato vines and leaves on the grape-vines in many places. The last two nights we had ice half an inch thick, and the pumps were frozen up solid. The mercury stood at 32° this morning—pretty cold for a semi-tropical climate. Oranges are ripe in Pleasant valley, and are now being shipped. It is one of the many blessings we now enjoy that we have not many orange trees, for if we had, fruit-picking would never end in Vaca and Pleasant valleys.—*G., Vacaville*, Nov. 27th.

Sutter.

JAPANESE PERSIMMONS.—T. B. Hull of Sutter county brought to the *Appeal* office the other day some very handsome specimens of Japanese persimmons. They were of the flattened-globe shape, and two had one end pointed. The latter were from a tree of the U. S. Government importation and free distribution made in 1879-80. The Japanese persimmon thrives well in this section, and the trees with their rich-colored fruit are beautiful ornaments.

INDIAN CORN.—*Sutter Farmer*, Nov. 25: Jacob Doty of Meridian has favored us with a sample of the corn crop, grown on his farm on the Sacramento river, in this county. The ears average 10 to 12 inches in length, and are well filled with large, plump kernels and as handsome as we ever saw in the Eastern States. A portion of the sample will be left at the office of the Bureau of Immigration for Yuba and Sutter counties, in Marysville, and the rest will be sent to the rooms of the State Board of Trade, San Francisco.

Tulare.

CURTAILED PASTURES.—*Della*, Nov. 24: All the cattle and sheep taken to the mountains during the summer were brought back to the valley or foothills some time ago in excellent condition. Some of them are pastured on the large stubble-fields, but those that depend upon the natural feed find scant pasturage. In another year there will be little land in the valley portion of this county not cultivated, and the pasture-lands will be greatly restricted in consequence. Owners of sheep will feel the change most. The day of the sheepman in the valley is nearly over.

Ventura.

EDITORS PRESS.—There are many improvements going on and others contemplated in our young "city by the sea," such as building, laying sidewalks, and everything pertaining to the beautifying of a place already notable for its many advantages. Despite drawbacks in the early part of the season, farmers have done well, crops of corn and beans having yielded much better than expected before harvest, as our well-filled warehouses attest. There was a rainfall of one to two inches last night, and from present appearances we will have more before the weather clears up, which will start vegetation, and soon our hills will be clothed in green. Then the weary traveler can find no more beautiful spot for a sojourn of a few days than in the Santa Clara valley.—*D., Ventura*, Nov. 23d.

Yolo.

THE RAISIN INTEREST.—On the 22d inst. a representative of the *Mail* asked Mr. N. Wyckoff, the well known raisin-maker, how Yolo county's raisin-crop has turned out this year, and he answered: "I think I may safely say, very well indeed. The market for 'Layers' is active and good, ranging from \$1.60 to

\$1.90 per box in Sacramento. There seems to be an over-abundance of loose raisins on the market, and the demand is not so good for that class of goods. I attribute this to two causes. Last year loose raisins commanded so good a price that those who had packed their raisins in layers hardly felt compensated for the extra trouble. Then again, this year bunches did not fill out so well as usual, were more straggling, so that it was easier to strip them loose than pack in layers. The second crop this year is remarkably good, and the season could hardly have been any better for curing. Yes, I think Yolo raisin-growers have done very well this season, and the prospects are excellent. I have sampled the foreign raisin and candidly I must say that I consider the California raisin its superior. The Yolo county raisin possesses merits that the world cannot beat."... The raisin-men, generally speaking, are intelligent and progressive, and they are exercising all that care and caution in curing and packing which will enable them to establish an enduring commercial reputation for the California raisin.

ARIZONA.

ALFALFA.—*Florence Enterprise*, Nov. 19: C. W. Fuller has finished cutting his fifth crop of alfalfa for the present year, the last cutting giving a yield of about a ton of hay to the acre. He has on his ranch 4½ miles east of town 15 acres of alfalfa and has cut over 150 tons of hay from the field, an average of 10 tons to the acre, all of which brought \$12.50 per ton in Florence. The first crop last spring yielded 4½ tons to the acre, the alfalfa being about 9 feet in height. The subsequent crops were not permitted to grow so rank, but they exceeded a ton to the acre on an average. The proceeds of the total crop of hay from Mr. Fuller's 15-acre field amounted to \$1875, or \$125 per acre, and he has the benefit of fine pasturage all winter.

OREGON.

MORE SAMPLES.—*Rogue River Courier*, Nov. 25: On Monday Mr. Shattuck brought into town a load of vegetables that would have done credit to any place in the world. A number of his potatoes of the "King" variety weighed from two to five pounds. His carrots, a garden variety, were the size of large beets; while the beets weighed in the vicinity of 30 pounds each. These mammoth vegetables were produced without irrigation, and are an evidence of what intelligent cultivation of our soil will accomplish.... H. L. Robertson, living 12 miles down Rogue river, brought in some very fine vegetables on Tuesday. One of his blood beets was three feet ten inches long, and a sugar beet weighed 35 pounds. We have to thank Mr. Robertson for a box of delicious Rambo apples, which variety seems to do particularly well in this section.... J. McDaniels of Applegate brought us one day last week one of the finest collections of apples we have seen on the Western coast. They consisted of Swaar, Spitzenburg and Smith Cider. The Spitzenburgs were particularly large and handsome. Such fruit, properly put up, would bring 15 or 20 cents per pound in many southern markets, or in those of inland States.

CATTLE MAY STOP AT RENO.—We recently stated the issue the Nevada cattlemen made with the railway, that they be permitted to unload stock at Reno for a season of feeding, without being obliged to re-ship at new rates. If the railway refused to make this concession the growers proposed to make a drive to Reno and ship from that point, thus saving the railroad freight from their several locations to Reno. The railroad does not like this idea and General Manager A. N. Towne, after considering the matter, agreed to incorporate the following provision into the cattle-shippers' contract, which was found acceptable:

Cattle shipped from points in Nevada, east of Reno, to San Francisco or other destinations in California, may, during the period from October 15th of each year to April 15th of the next year, at the request of the shipper, be stopped in transit at Reno, in the State of Nevada, provided that the through rate from the point of shipment to the point of final destination be prepaid or paid at Reno upon such stoppage, it being understood and agreed that such stoppage shall be for the purpose only of feeding and taking care of such cattle, and that the shippers thereof shall and will ship the same cattle and no other from Reno to their destination not later than the 15th of April next ensuing; and that upon such reshipment, the shipper shall pay to the Southern Pacific Co. the further sum of \$5 for each and every carload of such cattle so reshipped to defray the additional expense thereby caused.

THE OREGON STATE AGRICULTURAL SOCIETY has decided that the next State Fair be held near Salem, after the middle of September. A portion of the new officers are as follows: Pres., J. T. Apperson; V.-P., M. Wilkins; Sec., J. T. Gregg; Treas., A. Bush; Ex. Com., Van Delashmutt, J. Q. Wilson, Wm. Galloway, D. H. Looney; Supt. of pavilion, K. L. Hibbard.

OUR PAPER THIS WEEK.—The freight blockade existing on the overland railroads caused no little inconvenience upon this coast. Among its effects is a paper-famine, to which our readers will charitably ascribe the inferior quality of the sheets on which this week's paper is printed. We have our usual shipment on the way.



Smile When'er You Can.

When things don't go to suit you,
And the world seems upside down,
Don't waste your time in fretting,
But drive away that frown;
Since life is oft perplexing,
It is the wisest plan
To bear all trials bravely,
And smile when'er you can.

Why should you dread to-morrow
And thus spoil your to-day?
For when you borrow trouble,
You always have to pay.
It is a good old maxim
Which often should be preached—
Don't cross the bridge before you
Until the bridge is reached.

You might be spared much sighing
If you would keep in mind
The thought that good and evil
Are always here combined;
There must be something wanting,
And though you roll in wealth,
You may miss from your casket
That precious jewel health.

Though you are strong and sturdy,
Not full may be your purse,
And earth has many trials
Which I consider worse;
But whether joy or sorrow
Fill your mortal span,
'Twill make your pathway brighter
To smile when'er you can.

Will She Marry?

There were only seven of us, all girls, in the dear old parsonage at Wrayburn, where papa had lived for 30 years. Under the daisies in the pretty country churchyard dear mamma had slept since Kate was a wee baby, and Aunt Jane had come to care for the motherless children of her brother as soon as the calamity fell upon him.

We are a rosy-cheeked, healthy set of girls, rather good-looking, Nell being our beauty, and I the only invalid. I am a cripple; but I am not going to bother you with my story, excepting as my observations are recorded.

It was in the spring, and my sisters and Aunt Jane were very busy with housework. I was in my room knitting; papa was wandering about, disconsolate at the invasion of his study and consequent interruption of his literary work, when the murmur of voices from the porch floated up to me, and I mentally exclaimed:

"Dear me! Chris is proposing to Nell again!"
"And nobody ever will or ever can love you as I do," Chris was saying.

Then Nell's voice struck in:
"There, that window fairly dazzles you! Who says I can't clean glass? Oh! I beg your pardon, Chris. No, of course!"
"But, Nell, do listen to me."

"Chris, did you ask me to marry you when I was in my cradle? I am sure you have asked me once a week ever since. I won't, you know, or ought to know by this time. Why can't you ask somebody else, just for variety? I am sure any of the other girls will make a much better wife than I will; that is," said Nell, with a sudden spasm of loyalty for the rest of us, "if any of them would take you."

"How can I care for any one else when my whole heart has been yours all my life?" said Chris, disconsolately. "It is cruel to trifle so with true and honest love."

"Don't be an idiot!" said Nell, sharply. "I told you that you were a horrid boy, and I would never marry you, when you used to steal apples to present to me, and I never, never told you anything else, did I?"

"No," sighed Chris.

"Then why don't you let me alone?"
Here Aunt Jane, her head tied up in a manner that defies description, came upon the scene, saying:

"Oh, here's Chris! Chris, do run over to Smith's and get me a paper of carpet tacks!"
Chris departed.

Presently Smith's boy brought the carpet-tacks, and Nell was left alone for the remainder of that day, as far as Chris was concerned. The next day the cleaning went forward briskly, but it was still early in the morning when Nell came to my room equipped for a walk.

"Any letters?" she asked, carelessly. "I am going down the street."

"None," I said. "I did not think you could be spared."

"Aunt Jane is rather grumpy about it," said Nell, adjusting a coquettish wreath of apple blossoms upon her hat; "but I want to get the smell of soap-suds out of my nose. 'I may stop at Gilmore's. Have you any message?'"

"Only my love to Mrs. Gilmore."
Now Mrs. Gilmore was the mother of Nell's persistent adorer, Christopher Nelson Gilmore, and the families had been intimate for years.

Still, for Nell to take middle of house-cleaning week to call on Mrs. Gilmore was a little out of order.

She flitted away, her sunny curls dancing in the soft May breeze, and I, putting two and two together, remembered that Chris had not been in the house for 24 hours. Vainly I tried to recall a similar interval when he was in Wrayburn. School, college, business had called him out of the village, but his home hours were always fairly divided between his mother's house and ours.

Something must be the matter! I thought of all possible and impossible catastrophes, till I was not surprised to see Nell coming in at the gate in a subdued frame of mind apparent upon her pretty face. She came directly to me, as they all do, even Aunt Jane and papa, in emergencies.

"Belle," she said, in a low, grave tone, "Chris has gone to Cape Town."
"Gone?" I cried; "why, he was here yesterday!"

"He went to London yesterday afternoon, and he has gone to visit his uncle, the one who offered him a business opening some time ago. Chris did not want a business opening, as he has plenty of money, and Belle, Mrs. Gilmore says that it is all my fault that she is left alone and childless."

"Scarcely your fault, dear," I said, my heart aching for the piteous strain in the sweet voice, the pain in the bright eyes. "You were right to refuse to marry a man you do not love, and I am sure Chris will find a wife and return."

But Nell only grew whiter, and went slowly to her own room. After that, in all the family lamentations for Chris, so many years a sort of adopted brother in our midst, Nell never spoke of him.

The next winter, Meg, our eldest, was married; and, as if matrimony was a contagion, Jane followed her example; then Maud, Lizzie, and even Kate, our baby. Nell, the prettiest, smartest, sweetest of all, had offers in abundance, spent two winters in London visiting Meg, and, by all accounts, captivating hearts by the score, but coming back to be the life and brightness of our home.

"There must be one old maid in every family," she said; and when I suggested my eminent fitness for the position, she smiled loftily and said: "Mr. Brooks says you are the household angel, so please let us hear no more nonsense."

"There is Aunt Jane, too," I said mildly.
"Belle," she said, severely, "will you stop talking nonsense? Aunt Jane, indeed!"

It really did seem as if Nell was in earnest about a single life; but, after all, she was only 24 and looked 17.

But one day who should walk into the parsonage parlor, as coolly as if he had left it the day before, but Chris. We were all there as he came in, but before he had spoken to Aunt Jane I saw that Nell had vanished.

Did Chris see her run out of the door as he entered the front window? I think he did. There was a subdued twinkle in his eyes as he inquired for my infirmities, not at all consistent with his words of sympathy. Presently Nell came in, with a quiet smile of greeting and a perfect composure of manner; but Chris was a match for her.

It was as good as a play to watch those two, so completely did they ignore that he was a discarded lover who had been sent away by her cruelty. They conversed easily and gracefully—Christopher's African experiences, varied by descriptions of the family weddings, the new homes, the brothers-in-law, the children, and a thousand other details, in which our caller expressed the greatest interest.

After that he dropped in as of old, making himself agreeable and useful to every one in the house, especially tender, as he ever had been, to me. Indeed, I found myself wondering sometimes if he was going to take Nell's mocking advice, and all the others being appropriated, offer himself to the poor cripple.

He took me for long drives in his mother's pony carriage, and was always ready to hear of Nell's conquests, showing no jealousy, but a great deal of amusement, over her coquetries.

"She was a born coquette!" he said once; "and yet nobody can call Nell vain. It has been a matter of course for her to be admired ever since she could run alone."

"She is our beauty now, as of old," I answered; and Chris assented cordially.

"I have seen no face so winsome since I left home," he said; but he spoke with the frank admiration of a brother, and gave no token of a lovesick swain.

Had he outlived his love, I wondered, and come home to prove to Nell that her days of tyranny were over? I think Nell suspected that he had.

Always even-tempered, Nell became fitful and capricious; bright and laughing when Chris was with us, often silent, and sometimes gloomy when she thought herself unnoticed. She lost her color, and I caught her more than once rubbing her cheeks when going downstairs to see Chris, and she was snappish and deeply repentant therefore a dozen times a day.

"What ails Nell?" Aunt Jane asked me, anxious for her darling. "She eats nothing, Belle, and I am sure does not sleep well. I wonder if it would do her any good to spend a few days with our Kate?"

Nell, on being consulted, caught eagerly at the suggestion, and hurried her wardrobe into a trunk as if answering a sudden life or death summons. She made no farewells, but fitted

off so abruptly that it made us all stare with surprise.

"Elinor was always impulsive," papa said. And Aunt Jane only answered:

"But bless me! I didn't mean to drive the child out of the house."

Chris said nothing, but I was certainly convinced of the reality of his whiskers, so ferociously were they pulled all the evening. But the next day Mrs. Gilmore sent over a wee note of dire distress: Chris had been thrown from his horse, and the doctors feared some spinal injury. Aunt Jane went over at once, and came back with an exceedingly grave face.

"He is badly hurt—entirely unconscious," she said.

If Nell's departure was sudden, her return was not less so.

"Did you take off your hat at Kate's?" I inquired, with mild sarcasm.

But I regretted it when Nell's arm stole around my neck, and a face wet with tears was pressed against my own.

"Will he die?" she whispered. "O Belle! what shall I do if he dies?"

Then, as if ashamed of letting even my loving eyes read her secret, she rushed away and locked herself in her room. Such restless misery followed that my heart ached for her. She made Aunt Jane spend nearly all her time at Mrs. Gilmore's, and undertook the housekeeping herself, letting papa miss nothing of his sister's care. But she seemed to live in a sort of breathless expectation of the news from Chris.

Worse! worse! very low! Such were the disheartening tidings day after day, until there came one dreadful night of agonized watching, and Chris changed for the better.

Convalescence was slow and tedious; but one day, when we were all in the drawing-room, there was a soft rush across the room, on the porch, down the garden, and a joyous ring in Nell's voice, crying:

"O Chris! Dear Chris! are you really here once more?"

Then I saw him leaning one hand on her shoulder, one on his cane, as he came feebly up the path, pale, thin and weak, but Chris restored to us after all our anxiety.

Spring came round once more, and Nell and Aunt Jane busied themselves with the usual extra housework. Once more voices floated up to me from the porch.

"You were cleaning those windows when I went away, Nell."

"Please, Chris, don't!" Nell pleaded.

"Don't repeat the offense for which I was banished, Nell? But I must, darling; it is for the last time."

"Hush!" I whispered at this crisis, as Aunt Jane entered my room. "Chris is proposing to Nell."

"Well," said my aunt, "that is an old story."

"But she has accepted him," I said, exultantly, as faintly stole up to me:

"Yes, dear Chris; I know now you are the only man I could ever love."

"Ahem!" said Aunt Jane. "You and I, Belle, will be the old maids of the family, after all."—*Exchange.*

Temperance Text-Books.

During the last five years, the Legislatures of 23 out of our 35 States, and the National Congress for all the ten Territories, have made the study of Scientific Temperance compulsory "for all pupils in all their public schools."

The population of these States and Territories is over one-half that of the whole country. Thus America's majority to-morrow is in these schools of to-day.

It was the intention of those who secured these laws that the children should have the latest science concerning the dangers and hurtful qualities of alcohol used in any degree, and the peril of forming the habit of its use.

The law requires this; nothing less than this will ever satisfy its friends.

Those text-books that only point out the evils of drunkenness and the danger of excessive use of alcoholic drinks and narcotics, do not meet the requirements of the law, and do not satisfy those who secured its enactment, and who are determined to secure its enforcement.

A petition, therefore, has been signed by many legislators who voted for these laws in various States, and in the National Congress, by the representatives of Temperance organizations, who are familiar with the sentiments, and are entitled to speak for the very numerous membership of different churches and other bodies, extending widely throughout the land, and by citizens who speak for themselves.

This petition makes a respectful and earnest appeal to all publishers of text-books on this subject, to revise their publications to conform to the latest results of scientific inquiry, and to meet the terms and spirit of these statutes, so that public and authorized expressions of approval and indorsement of all such books can be issued and given wide circulation.

Such an appeal to all publishers effectually refutes the charge that the friends of Temperance instruction are peculiarly interested in the sale of any particular book. It is because the question of total abstinence for the children of this country, and, therefore, of their well-being, and that of the land soon to be governed by them, depends largely upon the teachings in the text-books employed, that this appeal is made.

Woman's Especial Vocation.

T. W. Higginson is fortunately ready to advocate all sides on the woman question, and in the last *Harper's Bazar* he takes up the defense of the vocation of wife and mother which modern "advanced thought" has been so inclined to rate below that of the successful professional woman. His line of argument is as follows:

When a successful author becomes a teacher, or an eminent lawyer takes to politics, there is no general complaint or criticism. Everybody recognizes that there are many different spheres of usefulness, and that though a change of occupation offers a risk of failure, it also presents an opportunity of increased success. But when one of the most eminent of American women resigns in her early prime the presidency of a great educational institution simply to become the wife of a professor in another such institution, people shake their heads as if something quite unusual or inconsistent had been done. "See," they say, "the result of putting women into these positions! Had a man been president of ——— college, he would have simply continued his official duties after marriage, and probably with increased energy and usefulness."

And yet these are the same people who tell us, in another breath, that it is the very highest function of a woman to be head of the household, and that no public duty, however important, should be allowed to stand in its way for a moment. In this view, a woman who is married is promoted, and it is recognized that however admirably she may have done her former work, her new work is higher still. But waiving this extreme claim, and supposing that a woman

Simply Changes Her Vocation.

Without rising or falling, it is plain that she merely does what men are allowed to do all the time. Nor is it necessary to assume that there is any rise or fall in the change now described. It is impossible to estimate the good to be done by a noble and lovable woman at the head of 700 young girls; but it is equally impossible to overrate the good which may be done by that same woman—first in her own household and then as the dispenser of hospitality and influence in a university town. It is absurd, in this age of the world, to deny the enormous influence that may be exerted by unmarried or childless women; but it would be still more absurd to deny the supreme dignity and vast influence of the home. And the home is the woman; without her there may be a luxurious abiding-place, but no home. Whatever her previous achievements or opportunities, no woman can be said to step downward when she passes to the head of a fireside. The habit in all social circles of giving precedence to the married woman—though sometimes absurd in application—is a recognition of this fact. In ancient Rome, where priests were married, a priest lost his office on becoming a widower. The American woman, especially if already a teacher, completes the dignity of her office in becoming a wife.

Even in regard to her former pupils, she cements her control over them by preceding where it is their normal destiny to follow. The most adoring pupil of an unmarried teacher is compelled either to take that teacher strictly for a model and remain herself unwedded, or, being married, to find herself launched at once upon a career where her model has afforded no direct and immediate example. She is like the

Loyal Subject of a Virgin Queen.

A subject who can never tell how her sovereign would have borne the responsibilities that she herself incurs. All the recent jubilee services in England and elsewhere have shown how immeasurably greater has been Victoria's influence from the simple fact that she herself has assumed and fulfilled—and on the liberal English scale—the duties she shares with the humblest married woman in her realm. The stoutest republican, to whom all else in the jubilee procession seemed medieval and childish, might well uncover his head at the spectacle of a woman escorted by a body-guard of outriders, all being her sons, or sons-in-law, or grandsons. That escort made her more than a queen or empress, for it vindicated her as a woman.

The prospective marriage of which I speak, although it may cost ——— college an incomparable president, yet vindicates all women's colleges from two serious though shallow charges—that they destroy feminine "chances" for matrimony, and that they diminish the inclination of young women for that sphere. Wedlock with a college professor, however eminent, may not, indeed, seem so glittering a "chance" as that held out to Gentle Jane in "Patience":

"The consequence was, she was given in marriage To a first-class earl as keeps his carriage."

Yet to an honest American heart it will seem a far more desirable lot in itself, and even as pertaining to that aristocracy of brains which is the nearest approach to caste that America affords—a reality before which the prestige of mere wealth is a very shallow and local phenomenon. And as a proof that the highest cultivation is also compatible with true womanhood and the recognition of woman's duties, such a

Shining Example Refutes a Million Sneers Against the alleged misanthropy of educated women. The higher education will in all prob-

ability make young girls more exacting in their demands upon young men—it would be a misfortune all round if it did not—and it may, therefore, make young men emulate Shakespeare's Brutus in praying the gods to make them worthy of these noble wives. But all education that is truly higher will make women more womanly, and will give them a truer ambition to fulfill the whole career of life.

Instead, therefore, of citing it as a proof of the unfitness of woman for a high educational position that she may leave it any day to be married, we should rather say that she in that case honors two offices in turn, one of which a man might perhaps have filled equally, while the other—that of the creator of the home—no man can fill, so that it must be hers alone. Under such circumstances her half-career of official work, followed by a career of other kindred duty, may well count for more than the whole lifetime of many a worthy masculine president who has filled that vocation only. But, after all, how subordinate a matter is this question of vocations! What really exerts influence is the man or woman. Where MacGregor sits, there is the head of the table. And, as Jean Paul finely puts it in his "Levana," a woman is first and chiefly a human being, and no special vocation can overbalance or replace that, but must become its means, not its end.

On the Wing in San Mateo.

EDITORS PRESS:—Few places, even in California, can offer more attractions as a suburban home than San Mateo, a town of about 800 inhabitants located on San Francisco bay 20 odd miles from California's metropolis. Here we spent Sunday, the 13th inst., and a more delightful day we have not experienced this year. Residents claim that Los Angeles has no percentage over them in point of climate. The place boasts of many very fine residences, most of the occupants of which are engaged in business in San Francisco. The most expensive palace and grounds are owned by A. Haywood, Esq., the cost of which is reckoned at about \$350,000. Others very nearly approach it in elegance, if not in cost. The valuation of the property of San Mateo amounts to about \$65,000,000. We came in contact with people here whom it was a pleasure to meet, and to whom we are under obligations for favors.

Having a desire to see the Spring Valley Water Works, whence San Francisco derives her supply of water, and having also in view the object of extending the patronage of your journal, we drove thither on Monday morning. The Crystal Spring dam now in course of construction is only about five miles from San Mateo up a creek of this name. We found it a pleasant drive, the road being sprinkled daily, and was accordingly almost free from dust. At the dam we found a camp of over 300 men at work, running five engines and six rock-crushers. The work was commenced last spring and already 22,000 barrels of cement have been used in the dam. It is computed that it will require the present force two years to complete the work, and the expenditure of about two millions of dollars. The dam will be 170 feet high and the capacity of the reservoir thirty billions of gallons. The source of supply upon which it is depended to fill the reservoir is San Francisco creek and from the rainfall of winter. It will be the largest reservoir in the world.

After dinner we drove over to the county almshouse, which is superintended by Mr. J. C. Potter, who has discharged his duty so satisfactorily that he has held his position for about ten years. There are at present 27 patients in the institution.

We were hospitably entertained on Monday night by Mr. and Mrs. J. T. Hoyt, who reside within a few miles of San Mateo. Mr. Hoyt prides in fine stock. His Berkshires are beauties, and his Jerseys unexcelled.

At the Holstein farm, McLellan Bros., we saw some excellent Holstein cattle. The proprietors prefer this stock to any other, claiming that they are better milkers and gentler to handle.

At the ranch of Andrew Smith, Esq., superintended by Mr. Jao. Shanks, we had the satisfaction of seeing some of the purest bred Berkshire swine in the State; also some Shropshire Downs. Mr. Smith imports direct from England.

This locality is admirably adapted for fruit-growing and much attention is being given to the business. Those visiting Redwood City will be well repaid in driving to the foothills west of town to get a glimpse of the surrounding country. From here we have a fine view of Mt. Diablo, Mt. Hamilton, the home of the Lick Observatory, and other points of interest. The hospitality of the people of this neighborhood is also an additional charm.

Redwood City, county seat of San Mateo, is a thriving town of 2000 inhabitants, and also offers many attractions as a place in which to live. A-joining this place may be seen on the neat farm of Frank Kenfield, Esq., some excellent stock of horses, cattle, and hogs.

Friday night we passed with Mr. John Winkler and lady at Woodside. Mr. Winkler has a fine vineyard and has commenced winemaking, having 15,000 gallons now ready for market. This locality, which is six miles south of Redwood, claims some advantages over the country nearer the bay, as it is rarely visited with fog.

F. B. L.

[Original.]

That Faithful Wife of Idaho.

BY JOAQUIN MILLER.

Huge silver snow-peaks white as wool;
Huge sleek, fat steers knee-deep in grass,
And belly deep, and belly full,
Their flower-beds one fragrant mass.
Oh flower land so calmly grand
Where flowers chase the flying snow!
Oh, high-held land in God's right hand,
Delicious, dreamful Idaho!

We rode the rolling cow-sown hills,
That bearded cattle man and I;
Below us laughed the blossomed hills,
Above the dappled clouds blew by.
We talked. The topic? Guess. Why, sir,
Three-fourths of all men's time they keep
To talk, to think, to be of HER;
The other fourth they give to sleep.

To learn what he might know of love,
I laughed all constancy to scorn.
Behold yon happy, changeable dove!
Behold this day, all storm at morn!
Yet now 'tis changed to cloud and sun.
Yea, all things change—the heart, the head,
Behold on earth there is not one
That changeth not in love," I said.

He drew a glass, as if to scan
The steeps for steers; raised it and sighed.
He craned his neck, this cattle man,
Then drove the cork home and replied:
"For twenty years (forgive these tears)—
For twenty years no word of strife—
I have not known for twenty years
One folly from my faithful wife."

I looked that tarn man in the face—
That dark-browed, bearded cattle-man.
He pulled his beard; then dropped in place
A broad right hand, all scarred and tan,
And toyed with something shining there
Above his holster, bright and small.
I was convinced. I did not care
To agitate his mind at all.

But rest I could not. Know I must
The story of my stalwart guide;
His dauntless love, enduring trust;
His blessed and most immortal bride.
I wondered, marveled, marveled much;
Was she of Western growth? Was she
Of Saxon blood, that wife with such
Eternal truth and constancy?

I could not rest until I knew—
"Now twenty years, my man," said I,
"Is a long time." He turned, he drew
A pistol forth, also a sigh.
"Tis twenty years or more," sighed he.
"Nay, nay, my honest man, I vow
I do not doubt that this may be;
But tell, oh! tell me truly how."

"'Twould make a poem, pure and grand;
All time should note it near and far;
And thy fair, virgin, gold-sown land
Should stand out like a winter star.
America should heed. And then
The doubtful French beyond the sea—
'Twould make them truer, nobler men
'To know how this might truly be."

"Tis twenty years or more," urged he;
"Nay, that I know, good guide of mine;
But lead me where this wife may be,
And I a pilgrim at a shrine,
And kneeling, as a pilgrim true"—
He leaving, shouted loud and clear:
"I cannot show my wife to you;
She's dead this more than twenty year."

The Scots' Breakfast.

A writer in the Cincinnati Commercial Gazette remarks on the rapidly extending use of oatmeal in this country: Fifty years ago there was not a bushel of oats used in the United States for any other purpose than horse-feed. Now there are mills owned and run by millionaires in this and other States which are exclusively employed in making oatmeal for diet for men and women.

It is well known that this commodity has been a favorite food in Scotland and other parts of Europe over a hundred years. Bobby Burns in his poems more than once celebrates the virtues of "porritch." And yet so fixed are national prejudices that the use of a new article of diet, however desirable and meritorious, is slower than it ought to be; so that to find a family that has oatmeal on the table once every day is the exception rather than the rule in this country; and simple as the preparation of a good dish of the material is, one rarely meets a cook or a housekeeper who knows how to make it well.

During the Irish famine, some 30 years ago, we recollect that a cargo of corn, which was shipped from Marietta, Ohio, to Cork, and offered as a bounty to the poor people to prevent starvation, was rejected with scorn at first as food only fit for swine.

"Oats is only fit for horse-feed," say our scornful American youth; "for our part we are satisfied with beefsteak, boiled ham, eggs, hot-cakes and coffee." And thus they gorge themselves with viands and drinks which induce dyspepsia and other diseases in proportion as they are taken hastily and in excess.

The writer has partaken of many a good, satisfactory and nourishing breakfast on oatmeal and cream, and can warmly commend their use as producing brawny men and beautiful, healthy women. Physiologists and economists attribute much of the Scots' energetic and effective character to the hearty porridge on which their youth is mainly reared, and we are inclined to believe there is much in the claim.

DOMESTIC ECONOMY.

Home Canning of Meat.

[Written for the RURAL PRESS by M. A. S.]

F. B. Clayton in the RURAL PRESS of Nov. 19th asks the question "Is there any practical way that farmers can put up fresh meat in cans?"

Having eaten of meat put up in cans in a farmer's family six months after canning that retained its flavor and was as palatable as meat retailed fresh by the butchers cooked in the same manner, we will give F. B. Clayton the benefit of the knowledge we gained from the lady at whose table we first tasted home-canned meat.

The meat was fresh pork, mostly lean meat, cut up and roasted in a big dripping-pan, and properly seasoned with sage, pepper, and salt, enough water in the pan to keep it from scorching. When done the meat was separated from the bones and the meat packed in a tin can. Some of the grease was dipped off, the dripping-pan put back on the stove till the gravy boiled, and then poured in to fill up any interstices between the pieces of meat. Set the can on the stove for a few minutes, run the handle of a spoon on the side of the can to the bottom to make sure that all air is expelled; fill full and seal or solder on the cover, making sure it is airtight, same as in canning fruit.

Some made from the heads of hogs boiled till the bones come out easily, then chop coarsely, season to suit your taste and pack into cans. Have the liquid you have boiled the meat in strained, and heat to a boiling point; fill up the cans with this liquid, and, if sealed airtight, when opened months after it will make a palatable dish.

Beef and Mutton.

Take cheap pieces of beef—not fine roasts or steaks, but such as butchers cut for pot roasts. Take out all the bones and place meat in a flat-bottomed kettle with a little suet cut in small bits underneath, but omit the salt and pepper till you add the water. Let the meat fry till both sides are browned, cooking slowly with a tight cover over it for half an hour, turning it often to see that it does not scorch but browns nicely. Add to the meat a half-pint of hot water and the salt and pepper, and replace the cover, cook slowly till done, adding water a little at a time, as is needed. This is what is called by some cooks "smothered beef," and all the juices are retained. Can and seal up in the same manner as before given. When opened for use, when heating up add sweet herbs to suit your taste, and if your family are fond of gravies, when the meat and gravy has boiled up in your frying-pan remove the meat and thicken the gravy with scorched flour.

I think soup meat with the bones and fat removed, then the soup heated to boiling and poured in with the meat and canned, would doubtless keep good. It would cost very little to make the experiment.

If the soup stock was boiled down and well seasoned, when opened for making soup water could be added and the soup stock not injured.

The lady who gave me directions for canning pork said she had taken the fore-quarters of mutton, had the big bones and shoulder blades removed, the ribs cut across, backbone chopped, and put them in a big kettle with water sufficient to boil the meat, kept the kettle covered and cooked till she could remove the meat with knife and fork and done enough to pack closely.

She let the water cook away enough to leave only what she wanted to fill up the can, and after removing the bones returned the meat to the liquor and let it come to a boil before canning. She used the meat for stews and sometimes made a meat pie; as she lived rather isolated from a meat market, it was quite a convenience many times to have something in her storeroom she could put on her table at a short notice when visitors come in quite unexpectedly, as well as to vary the bill of fare for her own family.

There is a dish often seen on farmers' tables in my native State—New York—that I have never eaten on this coast.

But few of the farmers there patronize the butchers often, but raise and slaughter most of the meat their families consume on their own farms, depending on poultry and salt fish for a change.

The dish referred to is made from the heart, part of the liver, the tongue and lower jaws, of a sheep or lamb. These are carefully washed and put into boil with just enough water to cover, and boiled till tender, scum being removed soon as it arises. When done, take up and skin the tongue, remove the bones from the jaws, put all in a chopping-bowl and hash finely.

Strain the water in which the meat was boiled into a saucepan (should be not over a coffee-cup of liquor), add the chopped meat, pepper, salt, and butter to taste, thicken with flour. This is a fine relish with nice baked potatoes.

Some do not use the water but put a piece of butter in the saucepan, with the meat, adding a little parsley cut fine, with other seasoning, and stir it while it heats slowly. Serve smoking hot.

I will add another item that may be of interest. A good housekeeper gave me this method of canning sausage meat.

Her husband slaughtered his hogs and made

them into bacon, cured the hams and shoulders, because the price of hogs was so low he thought it more profitable to do this than to sell on foot.

She had such a quantity of sausage-meat they could not dispose of it, even after giving away liberally to her neighbors; so she determined to try canning. She had the seasoning ground through the machine with the meat at the rate of six ounces of salt, three of pepper (sage and thyme guesswork) to 20 pounds of meat.

She filled dripping-pans about half an inch deep with this prepared meat without adding any water, cooked till done, taking care to not let the oven get hot enough to scorch it. This meat she canned hot in the sausage gravy, sealed airtight, and it was a success, as I can testify. The meat was just cooked done, not dried up, and she said she used only the same care as in canning fruit to exclude the air.

YOUNG FOLKS' COLUMN.

Dreamland.

[Written for the RURAL PRESS by MARTHA T. TYLER.]

Say, have you passed through the kingdom of Nod,
Ever so far to a city that seems?
Blue are the roses and red is the sod,
Everything strange in the country of Dreams!

Flowers have faces and butterflies sing,
Frogs go a-fishing in crystalline streams,
Babies fly out of the bells when they ring,
Everything queer in the country of Dreams!

Pigs dance at picnics and trees take a walk,
Fussies do patchwork and spiders sew seams,
Mice are musicians and terrapins talk—
Everything odd in the country of Dreams!

Bottles wear broadcloth and spoons spin a top,
Ladies play leap-frog and tarriacs drive teams,
Dishpan's a damsel, who married the mop—
Everything droll in the country of Dreams!

Moon is meringue and the mountains are cake,
Sun is a giant plum pudding that steams;
Pie islands float in a lemonade lake—
Everything good in the country of Dreams!

How the Bears Helped One Another.

Bob Bruin was a good, young bear, that minded what his father and mother said to him.

"When you take a walk out of the forest," said Mr. and Mrs. Bruin to Bob, "don't go near those houses. Men live in them and they treat bears very badly."

"What do they do?" asked Bob.

"Oh," said Mr. Bruin, "sometimes they kill us and eat our flesh. Sometimes they tie a great log to our legs so that we cannot run."

"Ah," said Bob, "but I would bite them."

"To prevent that they would tie a great muzzle on your mouth; so keep away from them, Bob."

Bob promised to obey. But one day, while walking outside the wood, he fell into a pit. He roared so loud that Mr. and Mrs. Bruin came running out to see what was the matter. When they came to the pit, they saw some nuts, and fruit and buns lying on the grass. So they made a step forward to get these nice things, when down they went where Bob was, with the buns and nuts.

They found that the food had been laid on twigs and leaves across the pit, which was dug as a trap for them to fall into. But how to get out was the puzzle.

After a little while Mrs. Bruin got on top of Mr. Bruin's shoulders and so scrambled out of the pit.

"Now, Bob, you do the same, and I'll tell you how you may then help me out."

So Bob got out of the pit as his mother had done.

"Now," said Mr. Bruin, "go to the woods and bring me back a strong branch of a tree." They did so, and placed the end at the bottom of the pit.

"Now, hold the end tight on the top," said Mr. Bruin, "and I'll try and climb up."

So Bob and Mrs. Bruin held the branch at the top of the pit, and Mr. Bruin, who could climb very well, managed to scramble out of the pit.

They all went home again to the forest in safety, and had a long talk about men, and their tricks to catch poor bears in pits.—Selected.

THE LITTLE FOLKS. — A San Luis Obispo mother had occasion a few days ago to reprove her little boy aged four years. Among other things she told him that the angels in heaven were weeping at his conduct. The next day the little one again became unruly, and his mother scolded him soundly and made dire threats of extreme measures if he ever did the like again. "Mamma," at length said the four-year-old, "I think the angels up in heaven are weeping at your own self's conduct." That discussion came to an untimely end.—Tribune.

THE fine residence of J. H. Drummond, near Glen Ellen, was burned, with most of its valuable contents, Sunday night, Nov. 13th. The fire is supposed to have caught from a defective flue. The family had retired, and the flames had made such headway before they were discovered that there was little time to save anything except some jewelry and loose articles that could be picked up in a moment as the people were making their escape.



A. T. DEWEY. W. B. EWER

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See Advertising Columns.

The Week.

The longed-for rain came at last in true style. A storm from the north working southward in the face of southerly surface winds. The amount of precipitation up to the time of our writing on Wednesday evening has not been great, it is true, but the general behavior of the storm is promising. We collate a few figures from this afternoon's dispatches, showing the rainfall to date at the following points:

	Inches.
Redding, Shasta county.....	1.20
Marysville, Yuba county.....	1.24
Gridley, Butte county.....	1.36
Woodland, Yolo county.....	.60
St. Helena, Napa county.....	3.20
Napa, Napa county.....	1.90
Santa Rosa, Sonoma county.....	2.77
San Francisco.....	1.25
San Mateo.....	1.55
San Jose.....	1.36
Sacramento.....	.33
Stockton.....	.71
Auburn.....	2.31

Some of these figures are probably not accurate, as they come by telegraph, and they are not large, but a little rain is a good thing

after so long waiting, and it serves to cheer and encourage the people notably. It is needed to quicken agricultural operations, to revive trade, and to supplement the activity which the flock of incomers inspire, with the assurance of production and prosperity. Let it go on.

Other Anarchists.

The last two years have witnessed an extraordinary interest in social science in this country. The faculties of the schools of political science at Johns Hopkins University, Columbia and Harvard Colleges, are publishing a series of valuable studies of American society, politics and jurisprudence. Other works in a kindred line are in process of preparation. The popular magazines have also taken up the subject, and thousands of citizens, who were a little while ago content to let things drift, relying on Providence to interfere at a critical moment, are now keenly watching social questions. They are aroused from the pernicious delusion which has so long prevailed, that the problem of government has been settled once and for all, and that there is nothing to do in these United States but to blow off rockets and Fourth of July oratory about once a year.

Now this increased interest in social matters augurs well. It will result in the perception of dangerous elements that have come to the surface of the body politic that should be promptly suppressed. When dangerous elements are spoken of, the majority of people naturally think of the German and Bohemian anarchists, and some labor organizations that have sought to have their own way and terrorize society by the boycott and other forms of violence. The recent lesson at Chicago teaches that the American people will never tolerate this shape of anarchy, but that they will mercilessly crush its authors whenever and wherever they shall present themselves. That they will make no changes in their institutions in obedience to threats of violence from any quarter, and while offering a generous asylum to all well-disposed people, will allow of no anarchistic experiment on our soil.

But we desire to call attention to another shape of anarchism that strikes quite as fatally at the life of government. What is an anarchist? It is a man who despises all restraints and would abolish government or limit its authority to the minimum. Properly speaking, a socialist is the opposite of an anarchist. The socialist desires to extend the authority and functions of the State so as to embrace all industrial enterprises and regulate all human relations. Both socialism and anarchism are born of discontent, and hence the two have been confounded. It is only just to keep this distinction in view. When the Knights of Labor advocate the purchase and administration of all railroads by the State, the tendency is toward socialism, but this is a very different thing from the nihilistic or anarchistic program. One tends to political despotism, the other to political anarchy.

But the analyst has not found the only form of anarchy in the Haymarket outrage in Chicago. He will find another expression of it in the management of the Standard Oil Trust, and monopolists of all kinds who desire to be left alone while they endeavor to evade or neutralize the law that protects society from their depredations. They differ from the Chicago anarchists in the use of different agencies. The poor, ignorant fanatical anarchist resorts to the bomb; the rich anarchist manipulates the law into a shield to protect his thieving schemes. He packs the political conventions. He buys the Legislature. He corrupts the channels of justice.

What, for instance, are the so-called trusts that have so alarmingly multiplied of late but an attempt to despoil society for the benefit of a few? They are extra-legal associations of capital, secret or semi-secret financial conspiracies, the object of which is to artificially enhance the price of an article by monopolizing its manufacture and exercising a policy of brutal force and terror against all possible competition. That this applies to the Standard Oil Trust goes with the saying, but the hundreds of millions it has abstracted from the wealth of the people without interference on the part of the State has naturally encouraged other unscrupulous business men to attempt a similar experiment. We have the Cotton Seed-Oil Trust, the Rubber Trust, the Cattle Trust, the Coal Trust, the Gas Trust, and many others, all of which

aim to gain the sole control of some indispensable article. It is clear if this tendency is not arrested the time is not remote when nearly every necessary of life will be at the mercy of unscrupulous capitalists who will not hesitate to enhance the cost of living.

The powerful lobby at Washington and capitals of the respective States demonstrates anarchistic tendency of capital. Hence extremes meet. The millionaire capitalist who undermines social order by forcing thousands of his countrymen to want and penury is no less reprehensible than his ragged colleague who harangues incendiarism from the top of a beer-barrel. The man who for private gain wages open or secret war against society has no claim upon the toleration or charity of those he despoils. He strikes at law, social order, the very existence of society. Surely it is the duty of society to protect itself against all such shapes of anarchy.

Eastern Grape Diseases Not Here.

What appears to be an official report on the grape diseases which Prof. F. Lawson Scribner did not find in California during his recent visit is telegraphed from Washington to the *Chronicle* over the professor's signature. It is, of course, but a point or two from the report which will be finally made, but it contains much that is satisfactory in that it confirms the statements already made by the State University experts that the downy mildew has not yet been identified in this State. We have pests enough and are glad to know that we have thus far escaped some.

It will be remembered by those who have the Government publications that in the map prepared to illustrate the report of the mycologist, California was included among the regions in which the downy mildew existed. Prof. Scribner gives this explanation of the matter:

Early in the season of 1886, a circular containing quotations relative to the mildews which attack the vine was sent out by this department to the viticulturists of the country. The replies to the circular from California asserted that the downy mildew or *peronospora* of the vine prevailed to an injurious extent in the southern part of that State, and also in the region north of San Francisco, and from the evidence the supposition of infected areas were indicated on the map, showing the distribution of this fungus disease in the United States, published in the report of the mycologist in the annual report of the department for 1886. By the direction of the Commissioner of Agriculture, the mycologist of the department visited the supposed infected districts in California during the past season, and, although careful observations were made, no evidence of the presence of the downy mildew was found. The disease which some of the viticulturists had supposed was the downy mildew had no connection whatever with that parasite, and the conclusions drawn were that it is very doubtful if this fungus occurs at all within the State. In view of this, it is strongly urged upon the viticulturists of California to exercise every precaution against the possible introduction of this parasite within their limits, for the injury it would occasion would be far greater than it is at present in any part of the Eastern States, as the varieties grown there are much more susceptible to its attacks.

It will be seen from Prof. Scribner's statement that the report that California had the downy mildew was based upon the circulars returned by some of our vine-growers. We can but caution our growers against trusting to casual resemblances between what they see on their vines and descriptions of diseases which they read. Sometimes appearances are "very deceiving" in plant diseases as in other affairs. We had the opportunity of examining a number of specimens sent in by growers as samples of downy mildew, and found they were altogether mistaken. The fungus they found was innocent as compared with the *peronospora*. We should be conservative in such matters. We have local experts who can detect such things, and when they declare that the sample does not contain the mooted pest, no report should be given which will lead into such incorrect publication concerning the State. We are sincerely glad that Prof. Scribner was sent to California, and thus enabled to assure us that we are not as badly off as some of us were led to think.

Another statement of Prof. Scribner is important, and that is that he saw no indication here of the black rot of the grape as Eastern growers understand it, and against which they have to coddle their clusters in paper bags. As we have said before, we have illa enough without borrowing others.

A Good Word for Sorghum.

While Mr. Spreckels is proceeding on his triumphal parade in the interest of the sugar-beet, it is interesting to note that sorghum, the old aspirant to the saccharine throne, does not forsake her claim. Indeed the plant comes forward with even stronger forces and stronger claims than hitherto. It is an interesting fact that the sorghum dynasty has survived three administrations of the Department of Agriculture, and the present incumbent has done more than his predecessors to demonstrate the fitness of the plant to cut a large figure in the home-grown sugar proposition.

Hon. N. J. Colman, Commissioner of Agriculture, believes that the experiments the past season at Fort Scott in Kansas have been completely successful, and have demonstrated the value of sorghum. He says that heretofore the method of milling the sorghum was defective, as not more than 25 per cent of the sugar could be extracted from it. He used in his experiment the German method of extracting the sugar from beets, which is called the "diffusion process," by which the cane is cut into small pieces about two inches long, and placed into cells upon which warm water is then poured. The water absorbs the saccharine matter of the cane, and this water is afterward boiled in a vacuum, when the sugar is granulated.

The experiments, Col. Colman thinks, will be to revolutionize sugar-making in Louisiana, and he says that the most advanced sugar-makers of that State have been at Fort Scott, where the experiments have been conducted, and were delighted with the results obtained there. He says that a sugar-planter shipped to him at Fort Scott, ten cars of sugar cane, and that he had obtained 150 pounds to the ton by his method of reduction, while the sugar-planter in Louisiana obtained only 80 pounds from the cane by the old-fashioned process.

The method of sugar extraction by the diffusion process has already been described in our columns. Last year the Department of Agriculture procured the best machinery, and the result is described by Col. Colman as stated above. Those who desire to pursue the matter further should apply to the Commissioner of Agriculture at Washington for his publications on this subject.

Postal Telegraphy.

In view of the extortions practiced by the telegraph monopoly, which has \$4 of watered stock for every dollar ever actually invested in their plant, it is refreshing to see how Hon. B. F. Shively, M. C. from Indiana, has just put himself on record respecting a postal telegraph in the *Washington Star*. He says:

I would propose that the Government commence by building an experimental line between New York and Philadelphia, and then, after a fair trial, extend the line to some other large city—say Chicago. Of course the telegraph would be in the Postoffice Department. I don't propose that the Government buy Jay Gould's watered stock—nothing of the kind. It would be only a question of time after the Government line was once started that Jay would offer his lines at a reasonable figure; but saying that the Government only established a telegraph system for its own business, and the people could patronize it if they desired, that would be a great benefit to the country. I can't see how intelligent people could say that a postal telegraph could be centralizing the power of the Government, because the people themselves would control it. I call it centralizing the power of the Government when these important adjuncts of the people are farmed out to corporations. I believe the question will receive a good deal of agitation in this Congress, and when the people come to realize the importance of the subject, you may depend on it that they will be in favor of the Government taking control of the telegraph.

It is reported, also, that T. V. Powderly is gathering information on the subject, and the Knights of Labor will throw their united weight into the scale to induce the National Government to establish its own telegraphic system.

ALL "BANDS."—The *Kansas City Indicator* avers that in California every collection of animals is called a "band." A herd of cattle, a flock of sheep, a party of Indians; anything and everything that walks—when seen in numbers—is known as a band, and it is regarded as a sure sign of being a tenderfoot to use any other term.

OROVILLE CITRUS FAIR.—As has already been noted in our columns, the citrus fair in Oroville, Butte county, will open December 20th and continue four days. The Southern Pacific railway announces that a round-trip excursion ticket from San Francisco to Oroville, good for four days, will be sold for \$5.10.

Progress in Mutton.

We notice indications that mutton is growing in popularity in this country, and that Eastern flock-owners are deriving some comfort from this fact amid the discouragement which overhangs the wool outlook. It is, of course, much more of an object to Eastern sheepmen who live adjacent to large meat-eating centers to have a popular opinion growing in favor of mutton than it can be to the wool-growers of the West, who could not find people enough to eat the mutton they can produce, no matter how fine it may be or how popular it may become. Still, anything good, no matter how distant, is encouraging, and it is within the possibilities that the progress noted may be quite wide-reaching in its effects.

Our attention is called to these facts by some remarks which our old friend Prof. G. E. Morrow of the Iowa Industrial University made at a recent meeting of the Illinois Wool-Growers' Association. In his address he alluded to the darkness of the wool outlook, but found some consolation even there. He claimed that wool only shows the depression common to most lines of agriculture. Wool is not relatively lower than wheat and beef. There is good prospect for some improvement; there has already been some. The reduction of flocks by some disheartened owners will help others. American wools are of high quality and will remain in good demand. Economy of production has been well learned. The average quality of many flocks has been improved by sale of inferior animals.

Wool-growers are sheep-owners. Constant recognition of this fact will help to profit. Sheep have three great purposes—to reproduce their kind, to produce mutton and grow wool. All three should be kept in mind in breeding. Breed for specific purposes; not always for a specific purpose. Good size and form are not opposed to a large fleece and good wool. The best wool is produced when the sheep are continuously well fed. It is not wise for the friends of any breed of sheep to neglect their mutton-producing capabilities.

Mutton is a healthful, nutritious, palatable food. Recent low prices have tended to increase its use. Americans are great meat-eaters. The use of pork is almost universal. There is reason to believe mutton may yet rank alongside beef. There is an increasing demand for good early lambs. Sometimes it will be wise to cross breeds to secure large lambs, but it will be a mistake to give up any of our well-established types of sheep.

These are some of the points made by Prof. Morrow. As we have said, they may be more applicable at the East than here, and yet, to a degree at least, the suggestions are valuable and practicable everywhere.

AN INCENDIARY LYNCHED.

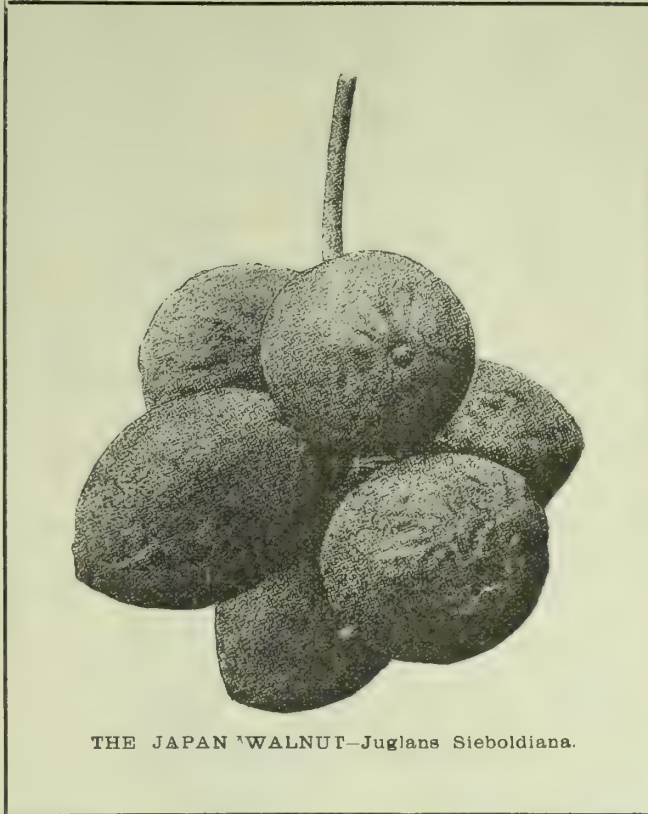
—Oakdale, Stanislaus county, has suffered from a great many fires within a few weeks past. On the night of Friday, Nov. 25th, a boy 16 or 17 years old, of bad family and ill repute personally, was caught in the act of setting fire to a barn there, and confessed that he had been the incendiary in several other cases. While a constable was taking him to the Modesto jail, a band of vigilantes relieved the officer of his charge and hanged the culprit by the roadside.

THE FRAUDULENT SURVEYS.—The United States Grand Jury for the Circuit Court, previous to being discharged by Judge Sawyer last Saturday, found 15 new indictments in the Benson survey cases. According to a stipulation made when the former indictments were quashed, defendants will have the privilege of appearing in court without previous arrest by the U. S. Marshal, if they choose to avail themselves thereof.

BOGUS DIMES of 1887 are in circulation. The Marysville Appeal says their lightness and tinny appearance make them easy to detect.

The Japanese Walnut.

We gave a few years ago an engraving of the walnut *Juglans Sieboldiana*, one of the native walnuts of Japan, the representation being made from the fruit of a tree growing at Tower

THE JAPAN WALNUT—*Juglans Sieboldiana*.

house, Shasta county. For a long time the true name of this peculiar nut was not known, though it was grown and frequently sent to this city. If we are not mistaken it was identified as Siebold's walnut by Mr. G. P. Rixford of this city. After our publication of it the propagation of

thick as the black walnut. The meat is sweet, of the very best quality, flavor like butternut, but less oily, and much superior.

The experience with the tree in this State reaches over many years, as we have said, and is very satisfactory. We should like to know

that there would be considerable plantations to test its growth in various parts of the State.

THE CONVENTION OF NATIONAL EDUCATORS.—The Executive Committee of the National Educational Association has appointed a State



PORT HARFORD, SAN LUIS OBISPO BAY, CALIFORNIA.—See page 451.

the nut was undertaken by R. J. Trumbull and announced in his catalogue. We believe it was also given attention by other propagators. Its desirability made such an impression upon Luther Burbank of Santa Rosa, that he has grown a stock of it which he offers to the trade this year. The engraving on this page is a reproduction of one published by Mr. Burbank, and somewhat different from that we gave of the nut in the first instance. It shows a cluster of the nuts and inferentially the prolific character of the tree.

Mr. Burbank says the trees grow with great vigor, assume a handsome form, and are more admired than any trees on his place. They naturally take good shape without pruning, mature early and bear abundantly and regularly.

This species is found growing wild in the mountains of Northern Japan, and is, without doubt, as hardy as an oak. The leaves are of immense size, and a charming shade of green. The nuts, which are produced in extreme abundance, grow in clusters of 15 or 20, have a shell thicker than the English walnut, but not as

Executive Committee for California, as follows: State Supt. Ira G. Hoitt, Supt. F. M. Campbell of Oakland, Supt. J. W. Anderson of S. F., Inspector J. G. Kennedy of S. F., J. K. Wilson, Principal of S. F. boys' high school, Supt. N. W. Freisner of Los Angeles, and Supt. B. F. Howard of Sacramento. This committee will, it is understood, proceed at once to make all needful preparations for the July convention, in which work they have reason to expect the hearty sympathy and co-operation of the people, not of San Francisco merely, but of all California.

DESTRUCTIVE prairie and forest fires were reported last week in Illinois, Missouri, Arkansas, Indian Territory, Mississippi and Tennessee. Not California alone is scourged with wildfire.

A BOY'S CIGARETTE, dropped in the Union Cotton-Press building at Little Rock week before last, started a fire which cost \$200,000.

IOWA's dairy association reports 480 creameries and 66 cheese factories in that State.

QUERIES AND REPLIES.

Raising Trees from Seed.

EDITORS PRESS:—Some time since a correspondent wanted information relative to raising trees from seed, and seemed to think it takes a good deal of wisdom to do so. I have raised a few plants with little trouble, and in so doing proceeded as follows: I commenced last April, but understand the months of May and June are as good a time as any. Not caring to have moles or gophers work in my ground, however few plants I wanted to raise, I first dug below the surface and laid shakes close together on the bottom and sides, then filled in 2 or 3 inches with common earth, and filled up with creek sand till the shakes were buried about 10 inches. I then planted my seeds, acacia seeds, species unknown. I poured boiling water on and let the seed soak for 24 hours; then planted half an inch deep. (By the way, all acacia and most other kinds of tree seeds that are at all hard should be soaked in hot water before planting.) All these came up and are now nearly four feet high.

English walnuts I put (without soaking) about two inches deep. All came up; are now four inches high.

Eucalyptus (red gum) being very small seed, I simply had sand sifted on by hand to the depth of an eighth of an inch or so. They came up well; are now from 4 to 15 inches in height.

Osage orange seeds were soaked in warm water four or five days, but only a dozen out of 300 or 400 came up. Next time I shall pour boiling water on them. The plants are now from five to ten inches high.

I planted two or three kinds of forest-tree seed received from the State Board of Forestry, but for some reason, presumably my own fault, as this was my first experiment in seed-planting, they did not come up. I watered the seeds night and morning for two months or over, sometimes skipping a day if the ground seemed moist, and I think some of the seeds were kept too wet and so rotted. After some came up, I kept the ground free from weeds but did not try to loosen or in any way cultivate it; the bed was too small!

Some date stones procured from the ordinary dates sold in stores, I planted in sand a year ago, but they are only ten inches high now.

They had little protection during the winter, a sack being thrown over the box at night, when I thought of it, and would have done much better behind glass or under shelter some way. These were planted an inch deep, but half an inch will do better. As would be readily supposed, they need hot weather; some planted last June in a like manner on my sister's ranch in Fresno county have grown from eight to ten inches. My dates I watered freely, but my sister's did not get much water.

May is said to be the best time to plant seeds, but some put them in so late as August.

Do not be afraid of experimenting. It does not take much time, money or trouble to raise a few trees, and, if no one else can do it, the children should be permitted to try it. Permitted, I say, because their natural taste leads them to find absorbing interest in watching the development of seeds, and having something to call their own; something to take an interest in and care for will not only keep them out of mischief part of the time, but

tend to render them observant and thoughtful.

I, too, would be glad to receive hints on raising trees. I specially hope some one will tell the best way to raise grapevines for cuttings. Haywards, Cal. C. P. NETTLETON.

When to Cut to Kill Brush.

EDITORS PRESS:—I should be obliged if you or any of your readers can give me through your paper any information as to the best time for grubbing live-oak and other brush, so that any small roots left in the ground will die and not sprout again.—RUSTICUS, Lake County.

[There is so much clearing to do, now that wastelands are being taken up so generally, we would like to hear from all readers, who have had experience both on the point our correspondent asks about and all other matters connected with clearing.—EDS. PRESS]

Shipping Young Gum Trees.

EDITORS PRESS:—Doubtless your answer to B. F. H. is the correct one; still, if he thinks he cannot afford to pay freight on so much soil, let him soak it to a soft mud, knock off one or two sides of the boxes, and with fingers and hands remove the trees, with mud adhering

to the roots, and carefully pack all in a smaller box, in natural position; sprinkle sand or dust to fill among the roots; keep moist, roots and tops; set in moist soil, or, if dry, put a pint of water to a tree, and dry soil on top, to prevent baking; cultivate first year, when they should be five to ten feet high. It plowed a time or two the second year, it will tend to keep them thrifty, and abandon all hope of raising crops near them. They are the genuine real estate agents with immense stomachs, and will grow more firewood to the square inch than any known substance. Should they wilt at transplanting, pinch off the lower leaves.—S. P. SNOW, Santa Barbara.

THE STABLE.

Horse-Raising in Lucerne.

EDITORS PRESS:—The rapid and substantial growth of most of the cities and large towns of this State, in recent years, and the settling up of the country generally, have occasioned an active demand for good horses. Two classes especially always find ready sale at really high prices. Horses for heavy draft are much used for teaming both in the cities and on the roads of the country, and the supply of desirable ones of this class has not been equal to the demand for some years past in California.

Well-trained carriage horses, of good form and size, with a reasonable amount of action, have always been scarce, and often sell at seemingly fabulous prices, especially in the cities and larger towns of the State.

Many stockmen have engaged in horse-raising, and notwithstanding the good prices, have found it did not pay and given it up as unprofitable. This result arose either from the fact that they did not breed the right kind of horses or their soil and climate were not adapted to the business. The horse may do well in almost any climate; but if fed from the crib through the winter months, the expenses for feed and shelter largely tend to lessen the profits from his raising.

To raise the best horse at the least expense, after beginning with the right breed, the leading requisites are a mild climate and green feed the year round. And in these respects Lucerne enjoys at least equal advantages with any part of this State, and, I may confidently say, any part of the United States.

To say that the rattle of the mowing machine can be heard while clipping large fields of green alfalfa of abundant yield, as late as the 10th of November, would seem highly incredible to an Eastern farmer, particularly so to those accustomed to the rigorous winters common to New England. Yet such things are of common occurrence here; so much so, in fact, as to be scarcely noticed at all, except by visitors from abroad.

Mr. H. F. Pepys, whose farm is situated one mile southeast of Hanford, cut five crops of alfalfa from one piece of ground this season, the product aggregating over seven tons to the acre. In addition to this yield, the land will furnish good pasture for nearly four months before the time will arrive for turning his stock off preparatory to the gathering of other hay crops.

This is but one instance in many, and I speak of it merely to illustrate what can and is being done in the Upper San Joaquin, showing the wonderful fertility of its soil and its adaptations to stock-raising.

The winters are so mild that shelter for loose stock running in the fields is never thought of. Native grasses are abundant, and in horse-raising the colt from the time he is weaned maintains an uninterrupted and rapid growth until he reaches maturity, which period arrives one or two years earlier than in countries where young horses are kept through the fall and winter months on dry feed.

Some years since J. R. Heinlan of Lemoore imported his well-known thoroughbred stallion Baywater, and the production of some very fine families of young horses in Lucerne has been the result. One of these, a three-year-old, has a running record of one-half mile in 48½ seconds.

Geo. A. Dodge of Hanford has given considerable attention to the breeding of trotting and first-class carriage horses, and the results of his labors in these respects are highly gratifying; and it is but fair to say that he can make a showing in this line that would do credit to any horseman in the State.

The demand for draft horses of the Norman or Percheron breeds has been so steadily increasing that five years since, W. J. Newport, whose place is near Grangeville, imported a fine stallion of this stock direct from France, at the same time procuring a fine lot of brood mares. As a result, he now has a field of 80 young horses, which are perfect beauties in their line. At two years old they readily sell, unbroken except to halter, at from \$400 to \$500 a span.

Mr. John Newport, also of Grangeville, has experienced considerable success in breeding horses of the Clydesdale stock.

Rev. N. W. Matheral, who is not only a good preacher, but one of our leading farmers and breeders of fine stock, has recently purchased and brought to Lucerne the thoroughbred stallion, King Daniels, bred by John Arnett of Alameda county. This horse's pedigree shows him to be one of the best bred animals known to Amer-

ican horsemen, and he is certainly a valuable acquisition to the horse-breeders of Lucerne, and a special delight to lovers of speed in horseflesh. It is not the object of Mr. Matheral to breed fast horses for racing purposes. His logic is simply that the best of anything is always the most desirable.

Several hundred horses are shipped from Lucerne to various points by rail yearly, and it would seem that the larger the product the greater the demand. However, it is certain that horse raising is fast becoming a leading and profitable business with the farmers of Lucerne. A. F. JEWETT.

Hanford, Nov. 27, 1887.

[This is good. Now, will not readers in other sections let us know what they are doing with horses, and how they do it? We would like to have far more about the "noble animal" in our columns. Perhaps Rev. Mr. Matheral will give us a lecture on this subject.—EDS. PRESS.]

Alfalfa as a Horse Feed.

B. F. Johnson writes the New York Tribune: Intelligent and observant horsemen tell us the California two-year-old thoroughbred is, as an average, quite as well grown and as fully developed as the three-year-old of our side of the mountains. This, they say, is probably owing to the mildness of the climate and a green forage all the year round, if needed, that keeps a colt growing right along. These are, no doubt, good reasons; but possibly they do not embrace all of them. Has it ever been sufficiently considered whether the feeding of alfalfa (lucerne) green and dry may not have something to do with the rapid growth and size attained at an early age? We know there are no better pastures in the world for putting on fat and flesh than those of Kentucky, where blue grass abounds, supported by timothy and clover, red and white; and we know, too, that in spite of these advantages, Kentucky-bred stock is losing in size and weight every year, however it may gain in quality. And the same is to a certain extent true of the blue grass, timothy and clover pastures of the entire blue-grass region west of the Alleghenies and north of the Ohio river. In view of these several facts, will it not be worth while to try experiments with alfalfa and learn by actual trial whether it may not do for Eastern stock what it has done for that of the Pacific Slope—given it the lead in fast and fine horses, with other kinds of stock to be heard from later on?

[It will be a good thing to try it, but one need not expect to reproduce at the East all the California conditions which contribute to the rapid and magnificent development of the animal merely by growing alfalfa. The fact of the matter is, that even alfalfa owes its excellence here to local climatic conditions which cannot be transplanted. Alfalfa was grown in Central New York when we were there 15 years ago, but it was mighty poor alfalfa compared with what grows here.—EDS. PRESS.]

Breaking Horses.

EDITORS PRESS:—Salinas City has become a noted place in our State to procure fine horses. There is a general interest taken in breeding horses in this section. Prof. R. H. Tapp, whose work in handling wild and vicious horses has often been described in the RURAL, has erected a large tent on Main street, and has been for two weeks the main attraction in town. His system of breaking horses, or rather of educating them, is in keeping with the progress of this age. Among his class of scholars are noted horsemen and leading business men of Salinas valley. One could hardly believe unless he had seen the results of taming and breaking vicious kicking mules and horses by a system that is founded on reason and common sense. There is no cruelty, no drugs and opiates, and no deception; it is simply teaching the horse that he must subject his will to man, his friend and master. Quite a number of horsemen and large breeders of fine horses expressed their unqualified approval of Prof. Tapp's way of educating and subjecting horses to the will of man, and believed it would be a benefaction to the State if the columns of the RURAL PRESS would give an extended and minute description with illustrated cuts of this system. H.

Salinas, Cal.

A HIGHLY COMPOSITE STRUCTURE.—The "Slim Contributor" of the Salinas Index lately took an inventory of a pre-emptor's cabin in the Upper Cholame valley with the following result: Size, 10 by 16; constructed with 1 "King of Pain" box, 3 coal-oil cans, 1 Chronicle gun-cover, 5 slabs, 7 boards, 6 pine poles, 271 broken shakes, 1 canvas horse-blanket, 2 old sheets, 13 barley sacks, 2 old blue denim pants, 1 piece canvas, 23 shingles, 2 cracker-boxes, 4 Pearl oil-boxes, 1 Singer machine table; lined with old Chronicles, Examiners, Salinas Indexes, San Miguel Messengers, San Luis Obispo Tribunes, Wasp, Weinstock & Lubin catalogues. It was built with such mechanical skill that it is warm and sheds rain.

ENTOMOLOGICAL.

Codlin Moth Remedies.

An essay read at the Santa Rosa Fruit-Growers' Convention by W. G. Klee, State Inspector of Fruit-Pests.

During the last year considerable experience in regard to the arsenical remedies or poisons has been gained, and, although we have by no means mastered the subject, we have learned a great deal in regard to their application.

Strength of Compounds.

In bulletins issued by me this spring, the strength of solution was left rather indefinite. Later on, in a bulletin issued after the Riverside Convention, it was given at 1 pound to 180 gallons, as it was ascertained that all the samples that were procured in San Francisco market contained a very high percentage of arsenic, four samples averaging about 54 per cent of arsenious acid. If this percentage could be depended upon, the 180 gallons to the pound would probably be the average, although, as will be seen later, this strength has proved too strong in some cases. At any rate, it is to be urged that a manufacture on a small scale, which could be depended upon, be established, or that a large quantity be bought—to be uniform in strength—in the East and guaranteed by the manufacturers.

The Same Strength Affecting Different Varieties.

In my experience with the spraying early this season, it was learned very soon that different varieties of fruits were affected differently. Thus, I learned that as a general thing pears were less affected than apples; still there were exceptions to this also. Of common varieties, the Bellflower on my own place in Santa Cruz proved, for instance, very susceptible to the strength, 180 gallons to the pound, causing leaves and fruit to drop. Rhode Island greening was also considerably affected, but still made a fair crop. Mr. Trumbull of San Rafael and W. W. Brier of Centerville report the same result. On the contrary, the White Winter Pearmain was not affected, except a few leaves being burned on the edges.

The general spraying of my orchard was done the first time when the tree was well out of bloom, and the second time ten days later. A few trees, with the fruit just in bloom, were tried very early in the season, although a solution of Paris green—1 pound to 55 gallons—was used, and of London purple of similar strength, the effect of this strong solution was not more noticeable than that of the later week's sprayings and did not affect the fruit of either White Winter Pearmain apple or Howell pear, on which it was used. The explanation of this phenomenon must be that the surface presented by the leaves at this early date was much less than later on, when the weak solution was used, and that the rapid growth of the leaves dispelled the arsenic from its surface before it had time to act. This seems also to indicate that the fruit blossoms are much less affected than the foliage.

Effects Increased by Moisture.

That the effect of arsenical mixtures would be more severe in a climate where damp nights prevail, I became convinced of early in the season, and in my circulars of inquiry tried to elicit some confirmation in this respect, but failed to get it. My reason for concluding this was, that in the case of the Bellflower when the trees were located so as to dry off early in the day the ill effect of Paris green was much less. Thus, from an outside tree we harvested from the less shady side of the tree five boxes of apples, while from the side facing the next tree in the row and surrounded on all sides by other trees, hardly an apple was taken, and while a portion of the tree in question produced so well, 30 trees adjoining and of the same side and same variety produced but very little—in fact only ten boxes altogether. It seems, therefore, that the moisture which naturally would remain longer in the more shaded part of the trees and the orchard as a whole, has the effect of leaching out the arsenic from the Paris green, and thereby damages the foliage or the fruit spurs, causing the leaves to fall, and the fruit in consequence thereof.

How Long Does the Effect Last?

In this connection, the question naturally arises, How long does the effect of the poison last, and how long will it prevent the fruit from being attacked?

From personal observation in Santa Cruz mountains, we believe that the effect of Paris green will last about two months, having seen it plainly where a heavy dose has been used, and no successful attack of the worms was made before that. As regards the London purple, Mr. G. W. Ousley of San Jose, who experimented last year, wrote to me under date of August 16th, this year: "From close observation, it is my impression that London purple if used every 30 days will prove very effectual; but it will have but little, if any, effect after 30 days from date of using. In accordance with this, I have sprayed my pears four times with London purple, 160 gallons to the pound. No injurious effect on foliage and trees." Shortly after this I visited Mr. Ousley and found his pears almost entirely free, and he informed me that he had noticed an increase of worms the last two times he had sprayed.

As I must confess that I would hardly regard fruit sprayed so many times as safe to eat with-

out a test for arsenic, three samples of pears, Bourse Clairgeau, Bourse Bosc and Winter Nelis, were forwarded for analysis to Berkeley, and also a sample of apples furnished by Mr. T. C. Settle of San Jose, which likewise had been sprayed four times. The result of this analysis was that not the slightest trace of arsenic could be found. From this we would naturally conclude that no danger would exist from even four treatments with London purple, if rightly and carefully applied. On general principles I should, however, hesitate to recommend such an excessive use.

Analysis of fruit sprayed twice with Paris green has given no reaction, and if done early and carefully we believe is safe to the consumer; but the eating of fallen fruit should be most thoroughly guarded against during the first two months after spraying.

From what I have mentioned above in regard to the effect of moist nights on trees treated with Paris green, it would seem that in such localities the least danger of poisoning to the consumer could result from spraying, as the trees themselves would suffer if used too strong, each part of the tree which received too much naturally shedding its fruit, and, so to speak, refusing to take more than a weak dose.

London Purple vice Paris Green.

From observation in various parts of the State, I am confident that the case of London purple versus Paris green stands thus: The effect of London purple is more severe on the trees generally; and naturally, on account of its greater solubility and less poisonous character, less dangerous to the consumer if used only twice; but its effect as a protective compared with the Paris green is less lasting, everything being equal. It seems to be more applicable on pear trees than on apple. We believe that none of the compounds, if used carefully, are of any danger to the consumer, and that they are of much benefit to the raiser.

The present season has been, according to all accounts and personal experience, less productive of the codlin moth, especially in early part of the season. Not only does this hold good in the coast counties, but also in the interior counties of the State. The effect of the spraying with Paris green has, therefore, been less noticeable. As a general thing, the first brood of the moth was quite scant, yet exceptions to this occur, as, for instance, in the locality where my orchard lies, where early apples in July were badly affected, and the clean condition of all my early fruit must, therefore, be attributed to the spraying which in this case was done only once; and in August and September there was, at least in many of the coast counties, a great increase; so much so that parties reporting at the end of August only one-fourth affected, changed it to only one-fourth saved. This was the case when only one spraying of London purple was made.

In my own orchard the results have been very satisfactory, and stand about this way: Early varieties, sprayed once; Alexander, Early Harvest, Gravenstein, not one per cent affected; fall apples, as Greening, this being the worst, sprayed twice—½ infected; Bellflower, 3 to 4 per cent; W. W. Pearmain, 2 to 3 per cent; Newtown pippin, 4 to 5. It should be mentioned that bands were used all the season.

An experiment to settle definitely the proportion that could be saved by spraying was undertaken at the University this season and has been going on all summer under Mr. Wickson's supervision, and was reported upon by him in University Bulletin, No. 75.

As regards the whale-oil soap and sulphide of potash, or soda, recommended by me this season, I am very favorably impressed with its effect, so much so that I intend to spray a large portion of my orchard with it next season. Five good-sized Winter Pearmain trees treated three times show hardly the presence of any worms. As this remedy is perfectly innocuous even if not quite so effective, I shall prefer it for my own use, and where three sprayings are practiced, I certainly should adopt this as the third. In this regard I have come to the same results as the late M. Cooke. W. G. KLEE, State Inspector of Fruit Pests.

THE Pleasanton Stock-Farm Co. has been formed to breed, raise, buy, sell and own live-stock; to purchase and hold real estate, and also improve and sell the same. The capital stock is \$100,000, with \$1250 subscribed, and H. I. Thornton, Geo. F. Gordon, W. S. Stone, W. McAllister, Jr., and E. B. Young (all lawyers) as directors.

THE hinny is the hybrid offspring of a male horse and a female ass. They are said to be very easy-gaited saddle animals. In Southern Europe they are highly prized and held at large prices. They are bred to some extent at Palmer Lake, Colorado, for ladies' use and the Denver market.

AN auction sale of 81 registered Spanish Merino ewes recently held at the farm of W. J. Gage, South Lyon, Mich., brought an average of \$6.75 per head. The highest price realized was \$15.75.

THE Georgetown Gazette denies the truth of the report that Walker Bros. of Salt Lake have bought the Fairchild ditch in El Dorado county.

EXPERIMENTS are being made by the Western Railway Weighing Association, Chicago, in weighing cars of live-stock while in motion.

FRUIT MARKETING.

Other Hardships of the Shipper.

EDITORS PRESS:—In your paper of November 26th you publish a statement from Capt. Weinstock in reference to freight charges on fruit eastward. The captain deserves much credit for his effort, but permit a "sufferer" to extend it a little. While the captain points out that the railroad companies charge \$400 to Chicago and New York on fast shipment on a ten-car train to Chicago, it is not clearly shown that the railroad company charges on that train virtually \$3500 to Chicago, and therefrom on five cars \$500 to New York, or else the railroad company will take ten cars to New York for \$4000, or ten cars to Chicago for \$4000; or ten cars to Chicago, and reship five of them to New York, for \$4000; or if but one or more, but less than five, are reshipped, the railroad company charges, I believe, the \$4000 to Chicago, and adds \$200 to each car. Now, where is the justice in that? But this does not complete our wrongs.

Captain Weinstock, no doubt, unintentionally omitted another fact equally as important to a large proportion of us fruit-growers and shippers, viz.: Mr. Towne, at the time the captain refers to, also agreed that the slow freight rates should be reduced to \$200 per car. Has that been done? No; \$250 has been charged, and while a reduction of \$50 per ton has been made, the freight has been kept two to four days longer on the road than last year, causing thereby heavy losses to shippers—in many instances not only the loss of the entire shipment, but, as a positive fact, several hundred dollars a car additional for freight, boxes, paper, packing, etc.

Now, Mr. Editor, the thoughtless will ask, why don't those parties ship fast freight? Let me answer that. It is simply because they cannot afford to do so. They are taking their chances on an eight or nine day trip to Chicago as last year, but behold, it takes no less now than 11 days and from that to 14 days, if no accident happens. But that does not yet wholly answer the inquiry. Therefore let me inform you that fruit shipped to compete with Eastern fruit, say the Bartlett pears, which were selling at three cents a pound, and peaches which were selling there at about three to five cents a pound, as this year, cannot afford to pay a railroad rate of 2½ cents per pound, boxes, paper, etc., one cent more—and even after these are gone they have to compete with Eastern grapes, fall and winter pears. I saw a letter from Kansas City, Mo., to a shipper here wherein the consignee stated: "This return is no doubt unsatisfactory, but York State pears are selling here for \$1.40 to \$1.50 per half barrel, containing 75 pounds net weight of pears, and we cannot get much more."

This does not embrace all the complaints that could be justly made, as for instance, a car of fruit is jammed on the road. It is delivered to the consignee, and though the fruit does not cover expenses, the railroad company pays nothing, but collects every cent from the poor shipper. Another instance: Fruit is stolen from the car by railroad employes while in transit. The railroad collects freight for the amount of weight that left the shipper (he is lucky if not more), but delivers the consignee empty boxes instead of full ones, and he seems to have no remedy. This is something in which not only every fruit-grower is interested, but the whole community is likewise.

FRUIT SHIPPER.

Get Land! Get Land!

EDITORS PRESS:—Get land. Joaquin Miller is eminently right. Get land. To the man of money I say, "Get land." To the landless I say, "Get land." To the speculator I need not say it, get land. Even to the gentler sex, if she have a little spare capital, get land. Have something that is substantial and that is your very own. To the man or woman who has children, get land, and their children and children's children will rise up and call you blessed. To the bachelor I say, "buy land," and the day may move on to the hour when you will no longer be a mere cumber of the earth. To maid and mother, son and father, daughter, cousin, aunt and nephew, I say, buy land, and feel that you own an interest in this fair world. Get land, and have at least a spot of earth upon which to deposit your last of earth when the inevitable scythe shall sweep you hence. Get land! Get land! Get land!

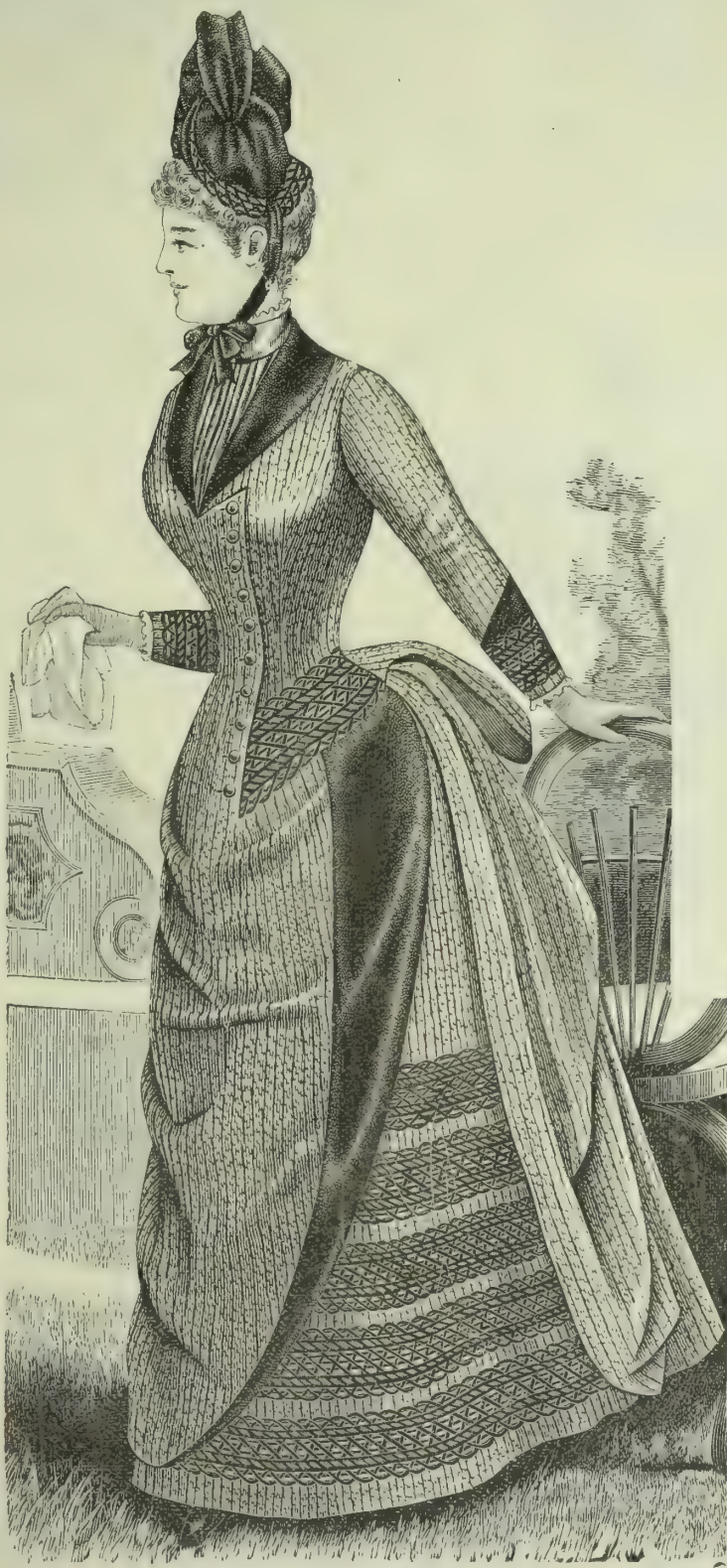
But I am sure Joaquin Miller will permit me to add a word of caution. Do not invest all in land. Leave out at least a nest-egg. Have spare means, so that if land falls to a fourth of its present value, it will not seriously distress you. I have seen many a man in the Western States who was "land-poor." I once worked at day's-work nearly all summer, and did not get money enough to pay my taxes on land. Plenty of "trade," but no cash, I have land in Kansas now, not worth so much as 13 years ago, when I left the blizzards and ague for sunny California. My father bought land in Ohio in 1805, when Cleveland was a dozen log houses and Cincinnati in the dim, indistinct future; 35 years after it was worth but little

more than he paid for it, and he had paid taxes all those dismal years. True, Ohio is not California; Kansas is not California; the Western States are not glorious California; but be cautious, be discreet. The present boom will not last. There will be a reaction. Sure as fate. Land will never go back to prices of a few years ago, but it will recede—possibly distressingly so. Nevertheless, get land, get land. I end as I began—get land, get land, and never let go a handful of sand.

S. P. SNOW.

Ladies' Costume.

The attractiveness of the costume lies in its superb method of adjustment, and the novel and gracefully diversified outlines of its drapery.



LADIES' COSTUME.

Mixed blue-and-gray suiting, blue velvet and gray Surah are very tastefully associated in the present instance, the decorative adjuncts comprising Surah, facings of the velvet and Kurscheed's Standard reverse braid, the latter corresponding with the velvet in color. Five rows of braid trim the front and side gores of the skirt, which hangs well, and is given the customary proportions allowed the standard style. The front drapery is provided by the right front of the over-dress, being draped artistically high on the right hip by upward-turning plaits on the right side edge, and reversed at its left side to form a graduated revers, the reversed portion being smoothly faced with velvet. The left front extends in deep basque length, and the closing is performed in a straight line from the neck to the bust, below which the right front is extended to lap in double-breasted style nearly to the lower edge of the left front. The top of the drapery at the left side of the front sews to the lower part of the basque front, and its attachment is concealed by a disposal of braid. Double bust and single under-arm darts in each side of the front and side-

bodies, and a curving seam at the center of the back, are used in fitting, the back extending only to short basque depth. Upon the back is attached the ample back drapery, which is turned down over its seam at the top, and descends almost to the lower edge of the skirt-breadth. Its graceful folds are produced by deep plaits and bournous loops, all of which come at the top. At the right side this drapery is turned over in a graduated revers that is neatly faced with velvet. Upon the fronts, reaching from the neck to the bust, is arranged a plaited chemisette ornament, which is pleasingly revealed between the inner edges of a velvet shawl collar. A standing collar of Surah is at the throat, and inside it is a batiste ruche. The coat-shaped sleeves are trimmed with a row

WHERE TO BUY PIANOS.



Each Piano on our list is SELECTED for PARTICULAR MERIT, and every one the Best of its class.

DECKER BROS., the Artist's Piano.

MASON & HAMLIN, Improved Method of Stringing.

IVERS & POND, Eighty in constant use in the New England Conservatory of Music.

BEHR BROS., Patent Cylinder Top.

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THE FISCHER, the Old Favorite.

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WE BUY FOR CASH and "Take our Pick."

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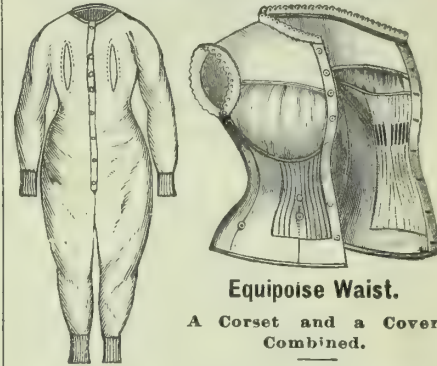
We guarantee every instrument, backing it with a guarantee, if necessary, of \$50,000.

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Equipoise Waist.

A Corset and a Cover Combined.

Union Underflannel. Ready Made and Made to Order.

The Perfect Corder Corset, all colors, for ladies and children; button or steel front. Skirt and hose supporters for ladies and misses. All styles of bustles.

Corsets ready-made and made to order. Send for Illustrated Catalogue and price list.

MRS. M. H. OBER,

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NEW HOME SEWING MACHINE
COMPANY, 725 Market St., Bancroft History Building, S. F., Cal.



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PIANOFORTES.

UNEQUALLED IN

Tone Touch Workmanship and Durability.
WILLIAM KNABE & CO.

BALTIMORE, 22 and 24 East Baltimore Street.
NEW YORK, 112 Fifth Ave. WASHINGTON, 517 Market space,

A QUEER DUEL.—A quarrelsome Jersey cow and a Poland-China hog got fighting at Moore's Hill, Ind. The hog tusked the cow in the belly and so killed her. "Let dogs delight," etc.

CHINO has a little *Champion* in the shape of a weekly paper just started.

319 and 321
MARKET STREET,
SAN FRANCISCO.

FRANK BROTHERS,

319 and 321
MARKET STREET,
SAN FRANCISCO.

General Agents for the New Model Gang.

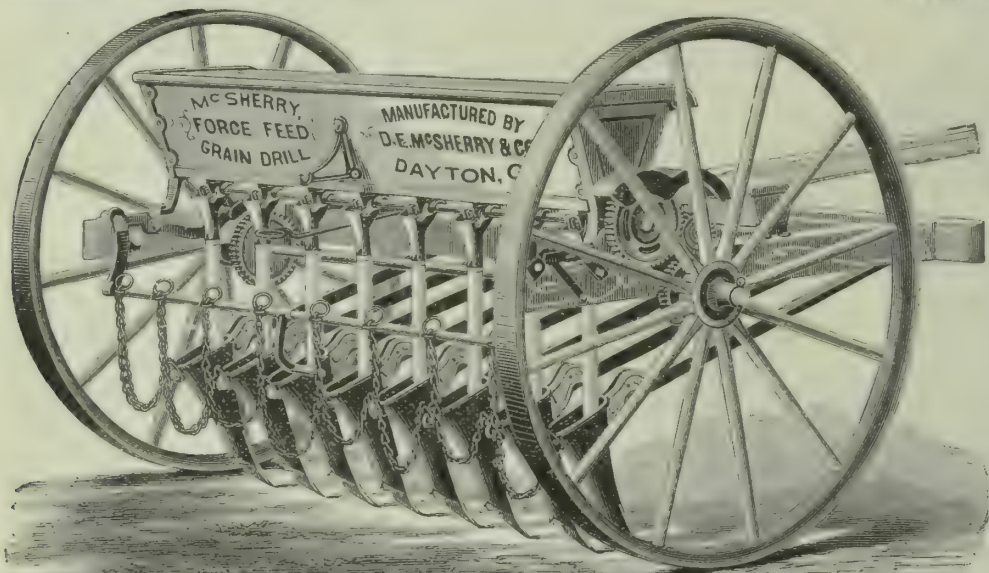
A Plow fully up to the demands of the times, and SURPASSING ANYTHING in the Plow line EVER BROUGHT OUT, in simplicity and neatness of construction, ease of management, lightness of draft, and adaptability to all kinds and conditions of soil.

It is NEW IN DESIGN, neatly and substantially put together, and operated with a single lever, which raises and lowers the Plow and levels it at all depths. The operator walks beside the Plow, on the unplowed land, or behind in the furrow, as preferred, in easy reach and control of both the Plow and the team.

ITS ADVANTAGES are very apparent to every practical farmer; more and better quality of work can be done, a more uniform depth and width of furrow made, with lightness of draft and ease of management under all conditions of soil. Especially when the ground is hard and dry does it show its superiority to the greatest advantage—sticking to its work and turning a 16 inch furrow as deep as may be desired, and with as light, or lighter, draft than any 14-inch hand plow. The harder the ground, the greater difference in its favor.

IT IS VERY NEAT and substantial in its construction. The beams and wheels are of steel, and all castings of malleable iron, giving at once lightness with great strength and durability.

The shares are so made that they will cut full width until completely worn out. The team is hitched directly to the beams, close to the work, and, having no tongue, it will plow as close to the fence at the end of the furrow as an ordinary Plow, and is turned as easily as a sulky; in fact, it is so easily operated and controlled that a boy can handle it readily.



The McSHERRY GRAIN DRILL,

THE BEST, MOST RELIABLE AND LEADING DRILL.

WITH ITS UNRIVALED FORCE FEED

It sows all kinds of Grain and Grass Seed, Oats and Barley as well as Wheat, and SOWS MORE REGULARLY than any other Drill, whether the grain be large or small-sized. IT DOES NOT BUNCH, break or crack the grain.

IT CAN BE REGULATED IN A MOMENT to sow any desired quantity per acre, with CERTAINTY of getting that quantity in the ground.

IT NEVER CHOKES UP in the feeding arrangement, as is the case with Drills regulated by rendering the discharge openings larger or smaller. IT SOWS EQUALLY WELL ON ALL KINDS OF LAND, hilly or level, and it is immaterial whether the horses are driven fast or slow. This Drill must and does sow the same quantity of seed with each revolution of the feed wheels.

IT SOWS ALL THE GRAIN OUT OF THE HOPPER, and with the same evenness and regularity when the last grains are going out as when the hopper is full.

It has High Wheels with Wide Tires, giving great bearing surface on the soil, and enabling the Drill to pass over the loosely pulverized earth lightly.

It has Long Hoes of improved style and shape, with strong, wide, and polished steel points, working well in any soil.

AGRICULTURAL IMPLEMENTS,

BUGGIES, CARTS,

HARNESS, Etc., Etc.

POWER FOR THE FARMERS!

THE

Cyclone "Geared" Windmill

WILL

Saw Wood,

Cut Hay,

Crack Barley,

Grind Feed,

Churn.

BUY ONE and run a small Grist Mill

And MAKE MUCH MONEY.

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e build them from 16 to 27 feet, and from Two
to Twelve-Horse Power.

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—OR TO—

BULL & GRANT FARM IMPLEMENT CO., 233 Los Angeles St., Los Angeles.

—OR TO—

SAN DIEGO I. C. & S. CO., San Diego, Cal.

PACIFIC COAST WEATHER FOR THE WEEK.

(Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.)

DATE.	Portland.		Red Bluff.		Sacramento.		S. Francisco.		Los Angeles.		San Diego.	
	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.
Nov. 24-30.												
Thursday.....	.12	34 Nw	.00	52 Cm	.00	54 S	.00	52 W	.T	64 SW	.T	64 SW
Friday.....	.00	28 Nw	.00	50 N	.00	52 Nw	.00	55 N	.T	62 SW	.08	60 Nw
Saturday.....	.00	38 N	.00	50 S	.00	50 SE	.00	52 N	.00	60 SE	.00	60 NE
Sunday.....	.00	38 SE	.00	48 N	.00	50 N	.00	53 N	.00	66 E	.00	62 Nw
Monday.....	.12	38 E	.02	40 S	.T	48 SW	.14	52 SW	.00	66 E	.00	64 Nw
Tuesday.....	.06	40 Nw	.66	42 Nw	.26	52 S	.41	55 S	.10	62 W	.00	60 NE
Wednesday.....	.10	46 Nw	.76	44 Nw	.16	48 SE	.39	52 SE	.00	58 S	.00	60 NE
Total.....	.40		1.44		.42		.94		.10		.08	

EXPLANATION.—Cl. for clear; Cy., cloudy; Fr., fair; Fy., foggy; — indicates too small to measure. Temperature. Wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

State Horticultural Society.

The regular meeting of the State Horticultural Society, November 25th, was presided over by Vice-President A. T. Hatch.

The secretary reported that the receipts for the year were \$222.50, and that an unexpended balance of \$150 remained in the treasury.

Mrs. J. M. Dyer and H. E. Amore of San Francisco, and N. G. Rogers of Los Gatos were elected to membership.

The name of ex-Governor George Stoneman of San Gabriel being proposed, the rules were suspended and that gentleman was elected a member of the society by acclamation.

The subject for discussion was California seedling fruits, which was opened by Secretary Wickson, who read a number of papers touching upon various fruits which had been mentioned in various records of past years, and which embraced many inquiries as to the identification of the same. As the reading progressed these inquiries were taken up and frequently answered by the members, and where the same fruits in various localities were known by different names, the society by a vote determined upon the proper designation.

For instance, the apple heretofore known as "Skinner's seedling" and "Santa Clara County King" hereafter will be officially called by the former name; the Peach called "Cook's seedling" and the "Sonoma seedling" will be known by the former appellations. The "Marshall seedling" or "red bellflower" will be known as the "Marshall red."

Notes of the discussion during the reading of the essay were taken, and we expect to present the matter in our columns as soon as possible. Mr. Wickson is writing a book on California fruit-growing, and desires all possible information on California seedlings, that it may be presented in condensed form in the book. For the purpose of further discussion and drawing out more information, the discussion on seedlings will be published in the RURAL. The subject was not finished at the November meeting and was, by motion of Mr. Stabler, made the first order of business for the December meeting. The "marketing of fruits" was also chosen for the December meeting, and R. B. Blowers and L. W. Buck were invited to open the discussion.

An Appeal to Congress.

The following resolutions were offered and adopted:

Resolved, That this society cordially indorses the resolutions passed at the late Horticultural Convention at Santa Rosa relative to legislation bearing on horticultural interests; and be it further

Resolved, That we ask and earnestly request our delegation at Washington to urge the provision for the endowment of experimental stations, so as to make it applicable to the current fiscal year, as was originally intended by the insertion of a clause in this session's "urgent deficiency bill."

The resolutions referred to as passed by the Santa Rosa convention were:

First, asking Congress to appropriate money to carry out the Experiment Station law.

Second, asking that the Government appropriate an adequate sum of money to be used by the Division of Entomology of the Agricultural Department for the following purposes: To send an entomologist to Australia, New Zealand, and adjacent islands, the native countries of the white scale-bug (*Icerya purchasi*, Maskell) and of the red orange scale (*Aspidiotus aurantii*, Maskell), to search for and study the habits of parasites and predaceous enemies of the said insects; to collect, import into the United States, propagate and distribute in infected districts such natural enemies of the pests mentioned.

Third, to make efforts to have the United States import duties on green and dried fruits, nuts and oils maintained.

BERKSHIRE SALE.—The last account of transfers of thoroughbred Berkshires, sent us by Phil. M. Springer of Springfield, Ill., secretary of the Berkshire Association, includes the sale of "Lady S," "Redwood Chieftain," "Redwood Belle" and "Redwood Lassie" by Andrew Smith of Redwood City, San Mateo county, to Thomas Waite of Brighton, Sacramento county.

A ROSE BY ANY OTHER NAME.—In "W. W.'s" notes from Contra Costa last week, Prof. John Swett appeared again and again as "Swett." Had our faithful proof-reader been long resident in California, the types would not have so disguised our famous veteran teacher.

San Luis Obispo County.

The advent of the railway to San Luis Obispo has opened up this arcaid region and produced a lively influx of people. The climate, lands, and healthiness of this county will compare with the most favorable sections of the State.

San Luis Obispo has a capital water supply, which is drawn from the creek of that name. This stream also serves as a very efficient open sewer, carrying away the refuse of the town in a very inexpensive, but it would seem satisfactory manner. The conformation of the country surrounding the place is attractive from a scenic standpoint, and numerous beautiful and productive valleys exist in its immediate neighborhood.

The Pacific Coast Steamship Company has now a narrow-gauge railway from Port Harford to San Luis Obispo. It is nine or ten miles in length and passes through a rich country. At the former place there is a fine wharf, from which heavy shipments of beans, grain and dairy products are made to San Francisco. This roadstead is finely sheltered by a range of mountains and by the configuration of the bay. A comparatively trifling outlay would make an effective breakwater and convert Port Harford into a good harbor. An appropriation has recently been procured to erect a lighthouse there, and this will be a great convenience to commerce. The benefits which would follow the erection of a breakwater are almost incalculable.

The Pacific Coast Steamship Company has also built a narrow-gauge road as far as Los Alamos through the most famous bean and dairy country of Southern California. It is understood that the enterprise of the company has proved profitable and that they are making money. The time is not far removed when San Luis will have several transportation strings to her bow, and she cannot fail to thrive immensely in consequence. Our illustration (see page 447) shows the landing-place for the steamers of the Pacific Coast S. S. Co., at Port Harford, San Luis Obispo bay. This is one of the best harbors on the coast of California south of San Francisco. A very large business is done on this wharf, as it is one of the principal shipping points of the products of San Luis Obispo and the northern part of Santa Barbara counties.

TRINITY COUNTY complains that Shasta and Humboldt sheep depasture her ranges, and the Supervisors have passed an ordinance requiring every sheep-grazier to take out a license, under a penalty of \$200 for each failure to comply therewith.

THE BEET BOOM.—The Oroville Register has been keeping count of the fields that would be planted to sugar beets in case a factory is located near enough, and finds 947,943 acres of suitable land ready to be sown to the saccharine vegetable.

The Weaker Sex

Are immensely strengthened by the use of Dr. R. V. Pierce's "Favorite Prescription," which cures all female derangements, and gives tone to the system. Sold by druggists.

Do Not Think for a Moment

That catarrh will in time wear out. The theory is false. Men try to believe it because it would be pleasant if true, but it is not, as all know. Do not let an acute attack of cold in the head remain unsubsided. It is liable to develop into catarrh. You can rid yourself of the cold and avoid all chance of catarrh by using Dr. Sage's Catarrh Remedy. If already afflicted, rid yourself of this troublesome disease speedily by the same means. At all druggists.

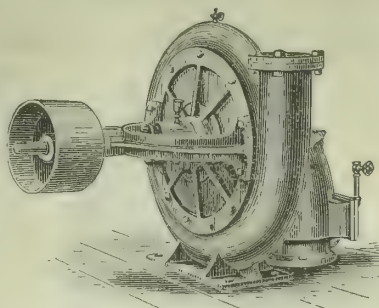
Advice to Consumptives.

On the appearance of the first symptoms—as general debility, loss of appetite, pallor, chilly sensations, followed by night-sweats and cough—prompt measures for relief should be taken. Consumption is scrofulous disease of the lungs; therefore use the great anti-scrofulous, or blood-purifier and strength-restorer—Dr. Pierce's "Golden Medical Discovery." Superior to cod liver oil as a nutritive, and unsurpassed as a pectoral. For weak lungs, spitting of blood, and kindred affections, it has no equal. Sold by druggists the world over. For Dr. Pierce's treatise on consumption, send 10 cents in stamps to World's Dispensary Medical Association, 663 Main St., Buffalo, N. Y.

Washing Made Easy.

The King of Soaps makes washing easy.

APPLE BLOSSOMS may now be seen on a tree at 219 Eddy street, in this city.



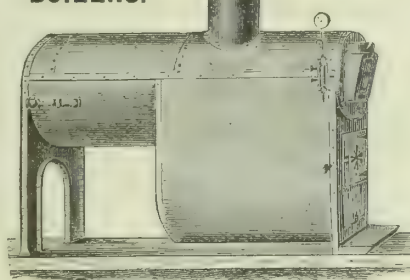
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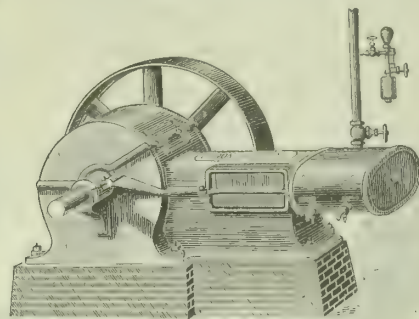
Made in ten sizes, from two to sixty-horse power, and carried in stock for prompt delivery

"ECONOMY" PORTABLE BOILERS. MOUNTED ON SKIDS. 2½ to 20 H. P.



BYRON JACKSON,
625 Sixth St., San Francisco, Cal.

For quantities of water not less than 100 gallons per minute, and for lifts not exceeding 100 feet, there is no better pump than that illustrated in the annexed engraving. It is very simple, durable, and economical. I make them in sizes from 2-inch, 100 gallons per minute, to 24-inch, with a capacity of 14,000 gallons per minute, and am prepared to build larger sizes to order. They must be set within 20 feet of the water; will draw it that far and force it up 90 feet. They are very satisfactory in wells not over 100 feet deep.



COMPLETE Power and Pumping PLANTS A SPECIALTY.

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GRASS, CLOVER, VEGETABLE, TREE AND FLOWER

SEEDS FRESH STOCK. LOW PRICES. IN LOTS TO SUIT.

CATALOGUES ON APPLICATION.

TRUMBULL & BEEBE, 419 & 421 Sansome Street, SAN FRANCISCO.

WEST COAST LAND COMPANY.

SAN LUIS OBISPO COUNTY FARMING LANDS. 21,000 acres, representing \$600,000, sold in 14 months. to Nov. 1, 1887, to 260 settlers:

From New York.....	6	From San Luis Obispo county.....	34
" Minnesota.....	9	" Santa Clara county.....	34
" Colorado.....	8	" San Francisco.....	41
" Michigan.....	4	" Los Angeles county.....	17
" Texas.....	5	" Monterey county.....	6
" Kansas.....	5	" Other counties.....	48
" Iowa.....	11		
" Other States.....	24	Total from California.....	184
" Canada.....	4	Total from other places.....	76
Total.....	76	Grand total.....	260

43,000 acres of Vine, Fruit, Olive, Fig, and Farming Lands, being the balance of the Company's property, are for sale at \$10 to \$35 an acre, on same terms— $\frac{1}{2}$ cash, balance in four equal payments on or before 2, 3, 4 and 5 years; interest, 8 per cent per annum

Parties who have purchased are building, fencing, planting olives, vines for wine and raisins, fruits, figs, wheat, oats, barley and all other products adapted to the soil and climate.

These lands are located in San Luis Obispo county on the Salinas river and are traversed by the Southern Pacific Railway for 15 miles, affording near market to all parts. All lots have timber for domestic use, and good water at 20 to 40 feet. There is living water in springs and streams on many tracts and sufficient rainfall throughout, requiring no irrigation.

Title U. S. Patent Maps and catalogues free.

C. H. PHILLIPS, MANAGER,
Templeton, Cal.

\$250.00 Free! Free!
A GREAT OFFER.

In order to extend our list of names, we will put into a box a card bearing the name of each person who sends us the names and post-office addresses of ten young gentlemen or ladies between the ages of 15 and 25 years, who would be likely to attend a Business College or Normal School. These names must be sent in before the 4th day of February, 1888. On that day Messrs. Trask & Ramsey, in the presence of the whole faculty of the Business College and Normal Institute, will draw out the names of five persons, to whom will be presented the following scholarships. These scholarships will entitle the persons to whom they are issued to instruction in the largest and best conducted private school on the Pacific Coast.

BUSINESS COURSE, six months, \$50.
SCIENTIFIC COURSE, one year, \$50.
SHORT-HAND AND TYPE-WRITING, 6 months, \$50.
NORMAL COURSE, one year, \$50.
TEACHER'S REVIEW COURSE, nine months, \$50.

CONDITIONS.—Applicants for any one of these five scholarships must be between the ages of 15 and 25 years, and must not be residents of Stockton.

A person drawing either one of these scholarships can have his choice of either of the five courses of study named above.

Write your name and post-office plainly, and state which one of the scholarships you are an applicant for.

CATALOGUE FREE. Address, **TRASK & RAMSEY,**
Business College and Normal Institute, Stockton, Cal.

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

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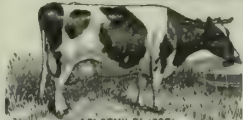
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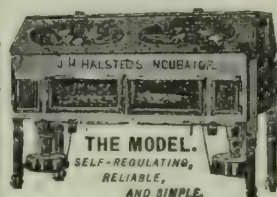
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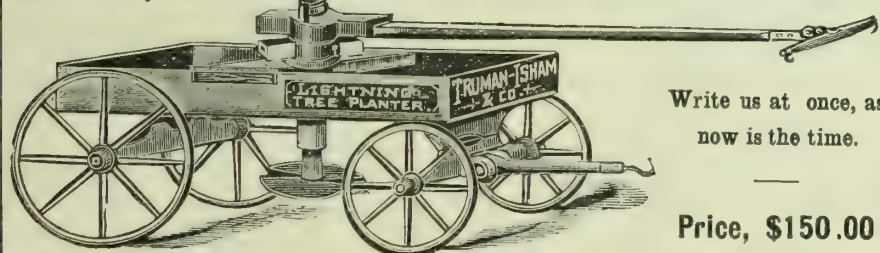
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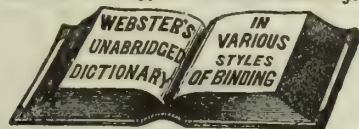
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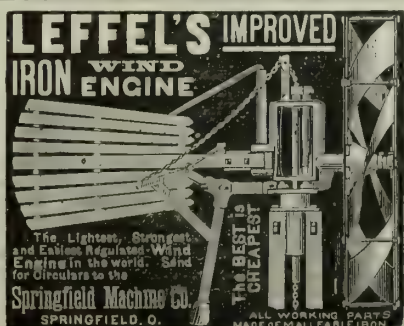


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S. F. MARKET REPORT

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Nov. 30, 1887.

Rains the past week have caused a more hopeful, cheerful feeling. More active outdoor work is reported, with plowing becoming quite general. As the supply of cereals, hay, etc., in farmers' hands is light, they are not affected, the usual changes brought in by the rainy season. In wheat the Eastern and European markets have ruled fairly active, with values well maintained, contrary to the usual run of seasons, for, as a rule, prices weaken toward the close of the year. To-day's cable is as follows:

LIVERPOOL, Nov. 30.—Wheat quiet but steady. California spot lots, 6s 7½d to 6s 10½d; off coast, 3s 4½d to 3s 5d; just shipped, 3s 4½d; nearly due, 3s 4½d; cargoes off coast quiet but steady; on passage, buyers have made a pause which, however, will probably only be temporary; wheat on passage to Continent, 1.45, 0.00 qrs; wheat and flour on passage to U. K., 1.45, 0.00 qrs; French country markets, firm; wheat in Paris, steady; flour, firm.

Eastern Grain Markets.

S. S. Floyd & Co.'s telegraph of the 30th, from their Chicago house, is as follows: Wheat market active and higher, due to liberal covering of large lines of shorts, the "knowing ones" who had sold on a sure thing, thinking there was only one side to the market. Corn market continues steady and strong. Receipts of wheat at seven primary points to day, 330,000 bu; shipments, 86,600 bu. Wheat, Jan., opened, 76½¢; highest, 77½¢; lowest, 76½¢; closed, 77½¢; May, opened, 82½¢; highest, 84½¢; lowest, 82½¢; closed, 84½¢. Corn, Jan., opened, 46½¢; highest, 47¢; lowest, 46½¢; closed, 46½¢; May, opened, 50½¢; highest, 51½¢; lowest, 50½¢; closed, 51½¢. Pork, Jan., opened, \$14.80; highest, \$14.87½; lowest, \$14.40; closed, \$14.62½.

NEW YORK, Nov. 30.—Wheat, 88½¢@89¢ for cash, 87 3/8@88½¢ for Dec., 88½¢@89¢ for Jan., 89½¢ for Feb., and 93¼¢@93 3/8¢ for May.

Eastern Wool Markets.

NEW YORK, Nov. 28.—The wool market was not very active last week, and the relative positions of buyers and sellers remain unchanged. California and Territory wools remain steady. Among the sales were 10,000 lbs scoured California at 40¢@48¢; 5000 lbs medium Oregon, 25¢; 9000 lbs Territory, private terms.

BOSTON, Nov. 28.—The market was steady, with a fair volume of business. Among the sales were 35,000 lbs; Territory, 17¢@20¢; 185,000 lbs California spring and Oregon, 80,000 lbs California fall, private terms.

The London Wool Sales.

LONDON, Nov. 26.—There was a large attendance at the wool sales to-day and bidding was active, especially by foreign operators. Scoured realized recent full values, but the high limit hindered the progress of sales at the latter part of the auction.

Raisins.

NEW YORK, Nov. 28.—California raisins are without special change. Two-crown, \$1.75@1.90; 3-crown, \$2.10@2.25; London, \$2.25@2.35.

Fruits

CHICAGO, Nov. 26.—California fruits are in steady demand. The supply is moderate and offerings rather small. Receipts consist of an occasional car of grapes, which grow fewer as the cold weather advances. The following prices are received for fruit in good condition: Tokay grapes, \$3.75@7.25; Muscat grapes, \$3.50@4; winter pears, \$2.50@3; quinces, dull, 75¢@\$1.00 box.

Beans.

CHICAGO, Nov. 26.—Beans were a shade firmer. There are no home-grown beans of consequence in stock. The California crop has been drawn on until prices are higher on the Pacific coast, and this advance is also affecting foreign beans, which are quoted higher. It is said that one broker has sold 46 cars of California beans on this market so far this month. California, according to quality, \$2.15@2.25.

Hops.

CHICAGO, Nov. 26.—Choice New York hops are in rather small supply and market firm; common grades are easy. Pacific coast hops rule steady; trade moderate for choice grades, but common qualities are slow. Pacific's new crop, choice, 18¢@20¢; Pacific's new crop, medium, 16¢@18¢; Pacific's new crop, common and low grades, 12¢@15¢; Pacific's 1886, good, 10¢@12¢; Pacific's 1886, medium, 9¢@10¢; Pacific's 1885, 5¢.

Honey.

CHICAGO, Nov. 26.—California honey is in moderate demand at 7¢@8¢ for strained.

Dried Fruits.

NEW YORK, Nov. 30.—Evaporated peaches are firm, in sympathy with the Delaware product. The best quality sell at wholesale at 20¢; apricots, 16¢@18¢. A carload of Lion prunes sold at 13¼¢, a carload of other marks at 12¼¢ for 50-lb boxes and 10½¢@10¾¢ for other sizes. Two carloads of Los Nietos walnuts were quoted at 13¢.

Raisins.

NEW YORK, Nov. 30.—The Commercial Bulletin says: Our correspondence from Malaga received to-day indicates the great scarcity of really fine raisins; in fact, the information is forwarded that the supply is almost exhausted, and that hereafter only crown loose Muscatel and London will be available. The stock remaining in Malaga and the country districts is said to not exceed 100,000 boxes, while at the corresponding period last year the supply was 550,000 boxes. These reports, coming from a strictly reliable source, should certainly have a strengthening influence upon the future market.

Local Markets.

BAGS—The market for June-July delivery is firm. One vessel is en route, with another loading, with

jute for the factories in this State. Calcutta bags, June-July delivery, are quoted at 7½¢ to 7¾¢.

BARLEY—Receipts the past week were light, while the demand for shipping and consumption was large. In options on Call, trading was unusually active, with prices showing a steady gain up to today. To-day's sales are reported as follows:

Morning Session: Buyer season—100 tons, 93¼¢; 100, 93¼¢; 100, 93¼¢; 400, 94¢. Buyer 1887—100 tons, 84½¢. Seller 1887—100 tons, 83¼¢ per cbl. Afternoon Session: Buyer season—200 tons, 93¼¢; 800, 93¼¢; 200, 94¢. Buyer 1887—300 tons, 84½¢; 100, 85¢ per cbl.

BUTTER—The market continues poorly supplied, but with the present rains there is less disposition to maintain the high prices for ruling up to Monday of this week.

CHEESE—The market is barely steady. Strictly choice is in light supply, but the demand is slow.

EGGS—The market continues to rule easy and in buyers' favor for all kinds under liberal receipts from the East.

FLOUR—The market has a stronger tone, but no advance is made.

WHEAT—There is a good demand in the sample market, with holders not disposed to sell even at the advance. Ships on berth are receiving quick dispatch on Call. Trading has been more active, with a higher range of values up to Monday, when the bears hammered prices down a trifle. To-day's sales on Call are as follows:

Morning Session: Buyer season—100 tons, \$1.47; 100, \$1.47 1/8; 500, \$1.47 1/4; 900, \$1.47 1/2; 1500, \$1.47 3/4 @ cbl. Afternoon Session: Buyer season—100 tons, \$1.47 1/4; 100, \$1.47 1/4. December—100 tons, \$1.35 1/4; 100, \$1.35 1/4 per cbl.

[COMMUNICATED.]

Market Information.

Receipts of Domestic Produce.

The following are the receipts of the principal items of California produce at San Francisco from the beginning of the harvest year to date, compared with the corresponding period in the previous harvest year:

	July 1 to Nov. 27, '86.	July 1 to Nov. 26, '87.
Flour, qr. sks.	2,078,145	1,464,736
Wheat, cbls.	7,446,582	4,186,258
Barley, cbls.	1,584,225	1,404,187
Oats, cbls.	99,398	113,991
Potatoes, sks.	436,916	497,246
Corn, sks.	29,758	94,617
Rye, sks.	10,578	11,382
Buckwheat, sks.	4,168	374
Beans, sks.	216,763	284,501
Bran, sks.	210,734	195,056
Hay, tons.	53,624	61,184
Salt, tons.	11,313	8,480
Wool, bls.	44,122	36,923
Hides, No.	48,732	43,373
Raisins, 20-lb boxes.	82,880	47,952
Quicksilver, flasks.	6,156	11,124
Hops, bls.	11,681	13,110

The receipts of certain articles of produce from Oregon, Washington Territory and other distant points, for the same period compare as follows:

	July 1 to Nov. 27, '86.	July 1 to Nov. 26, '87.
Flour, sks.	17,221	86,071
Wheat, cbls.	126,390	359,994
Barley, cbls.	1,198	75
Oats, cbls.	143,660	68,045
Corn, cbls.	45,726	12,590
Wool, bales.	9,052	6,986
Bran, sks.	26,418	26,382
Hops, bales.	648	106
Hides, No.	13,272	11,848
Potatoes, sks.	22,050	747

Oregon advises continue to report a free movement in wheat, with vessels under charter receiving quick dispatch. Considerable is also bought for this market. Barley is being sent from Walla Walla eastward, but Chicago exchanges report maltsters prejudiced against it.

In this city farmers' deliveries of wheat continue light, owing to their surplus being warehoused. The tonnage in port under charter are receiving quick dispatch. These heavy shipments are depleting stocks quite rapidly. The strong and higher markets in Europe and at the East cause ours to move in sympathy. There have been several parcels of No. 1 white shipping placed at from \$1.36¼ to \$1.38½, with occasional sales of strictly No. 1 favorably situated taken at a slight advance on the latter prices. Millers are taking sparingly, owing to the most of them being fairly stocked.

Barley has held strong throughout the week, even the rains on Monday did not make any impression. The strength is due to steadily lessening stocks, large consumption and freer shipping. The ship Sintram for New York took out about 1250 tons, while the vessel on the berth for England will take over 1500 tons. The latter will be Chevalier, which is in large supply this year.

Oats are strong at full prices, under moderate stocks and a good demand. Wild oats for seed are claimed to be selling at 2¢@2½¢ cts per lb. Washington Territory and Oregon advisers report that the quantity to come from there this season will be light, while none will be received from the West. Last season large supplies came overland.

Rye holds strong at full figures, under light receipts and a good inquiry.

Corn is very strong, due to the high market at the West, higher overland freights, light supplies on this coast and a good demand.

The N. Y. Produce Exchange Reporter, 20th, says: Our mail advices to-day from the West are more interesting than usual; the continued absence of rain and great injury and suffering consequent upon the duration of the drouth seem to be the all-absorbing subject. More mills have shut down this week for want of water; this for the latter part of November exceeds the drouth of 1881. The growing crop is not in a condition to go into winter, and in a large area of country the wheat plant is suffering, hence much apprehension is expressed for the future. We have had a fair demand for the Continent where prices are improving. Spain and Portugal are buying more freely. The movement of wheat at primary markets has been large and an increase in the visible this week is estimated to exceed 1,500,000 bushels.

From the late English exchanges, Nov. 12, the

following is obtained regarding wheat: In England the rainfall has been of immense value to the land in every respect, and the surface has been rendered workable for wheat sowing; probably the acreage sown to wheat may now exceed that of last year if the weather keeps open. In Germany the trade has developed some strength from the fact that a further increase in the import duties on grain is probable. According to a telegram from Berlin, dated Thursday, the German Agricultural Council is debating a motion in favor of doubling the existing customs on all cereals, and it is probable that the motion will be carried by the council, and presented to the Imperial Parliament. There is thought to be no doubt that a bill for increasing the corn duties will be laid before the Reichstag when it meets on the 24th inst., and the proceedings of the Agricultural Council are taken as indicative of the "way the wind is blowing." In France the rainfall has been welcome. Deliveries of native wheat have been on a much smaller scale, but millers successfully resist any advance in prices. Foreign wheats are in ample supply at the ports, and values, after deducting the duty, are relatively lower than they are in U.K. markets. In Paris, native wheats are now quoted at 38s 3d to 40s 5d, as on parity with English wheats in London per 480 lbs. The import duties, therefore, are proving of immense benefit to native growers in France, the difference in their favor being nearly 10s per qr. According to latest advices from South Australia and Victoria, the prospects of the wheat crop were never more favorable, the rainfall for the year having been the largest on record. In Southern Russia the maize crop is stated to be of good quality, but much of it is out of condition from the recent rainfall.

Feedstuff.

The rains of the past week appear to have acted as a stimulus to the market, for the demand is said to have increased, while the offerings are light. Choice grades continue scarce and readily command from \$18 to \$19.50 per ton, according to quality and where located. Straw finds a quick market at strong prices.

Free receipts of bran and shorts from Oregon caused an easier tone for bran and middlings, but all obtainable at concessions was quickly taken by dealers. In ground barley the movement continues large, but at unchanged prices.

Fruits.

Strawberries are coming in "stragglingly," and fetch good prices.

Both table and wine grapes are in light receipt, with dealers unable to get good keepers, except at an advance. It is said that some cold-storage table grapes are being marketed. They are in excellent condition.

The holiday demand for apples is quite free. The more choice hard keepers are freely taken for both shipping and local. It now looks as if a still higher range of values will rule before the holidays.

Mexican oranges move slow, owing to their poor quality. Only a few Californians have put in an appearance. Mexican limes are slow, as are lemons.

In dried fruits, contrary to general expectation, the demand continues good, with the stock of the better grades quite light. The market is better cleared up in this month than ever before at the like date. No doubt much of the heavy shipments to the East was due to the very large increased consumption there, and latterly to the fears of an advance in overland freights.

The stock of raisins is light, with a continued free call ruling. The East is still drawing heavily. The superior quality of this year's pack and its relative cheapness compared with the imported, promoted the increased demand. It can also be asserted that the cholera scare operated against the imported. The home demand is large, with the stock light.

Live-Stock.

This market continues to be fed with beef cattle from Arizona and many distant points. There is more stall-fed cattle offering, but butchers' views are too low to admit of free sales. Mutton sheep are moving off more freely, under a good demand, owing to freer consumption. Calves are in good demand.

Hogs are coming in freely, with packers taking all offering. In milch cows there is nothing new to report. There have been large offerings of small work horses, which caused low prices. For matched teams, drivers and general utility horses, the call is good at full prices.

The following are the wholesale rates of slaughtering to butchers:

BEEF—Extra, 7½¢@7¾¢; first grade, grass fed, 6½¢@7¢; second grade, 6¢@6½¢; third grade, 5½¢@5¾¢.

MUTTON—Ewes, 5½¢@6¢; wethers, 6¢@6½¢.

LAMB—Spring, 7¢@8¢.

VEAL—Large, 6¢@7¢; small, 6¢@8¢.

PORK—Live hogs, 4¼¢@4½¢ for heavy and medium; hard dressed, 6¼¢@7¼¢ per lb; light, 4¢@4½¢; dressed, 6¢@7¼¢; soft hogs, live, 3½¢@4¢. On foot, one-third less for grain or stall fed, and one-half less for stock running out.

Vegetables.

Cold weather destroyed all vine vegetables.

In cabbages, the Eastern demand, heretofore noted, is continued with choice hard heads, taken at good prices.

Choice potatoes have a stronger, healthier tone, owing to a good local and shipping demand. The bulk of the stock here is poor, only fit for feeding to stock, which causes choice to be well cleaned up each day.

Onions are stronger and higher, with a good demand reported for both home and shipping.

Pumpkins and marrowfat squash are in good demand.

Miscellaneous.

Rains the past week have caused an improving demand for grass seeds.

Game has ruled largely in buyers' favor throughout this week.

In poultry, there is a stronger tone at the close, owing to light receipts and a good demand.

Salt has been advanced from \$1 to \$2 per ton.

Beans are still moving up. The advance is due to light stocks, light supplies and a continued free demand.

In hops, there is little or nothing to note. Some large growers are consigning to the East.

Wools have ruled more quiet the past week. As usual, the close of the year is always dull, with prices in buyers' favor.

The tonnage movement compares with last year at this date as follows:

	1887.	1886.
On the way.....	308,481	195,808
In port, disengaged.....	87,389	85,437
In port, engaged.....	26,582	72,738

Totals..... 422,452 343,983

To obtain the carrying capacity add 60 per cent to the registered tonnage.

San Francisco, Nov. 30, 1887.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

SEASONS AND PEAS	WEDNESDAY, Nov. 30, 1887
Bayo, cbls.....	2 00 @ 2 35
Butter.....	2 00 @ 2 75
Peas.....	2 25 @ 2 75
Red.....	1 40 @ 1 60
Pink.....	1 50 @ 1 75
Large White.....	2 00 @ 2 55
Small White.....	2 10 @ 2 80
Lima.....	2 10 @ 2 20
Old Peas, blk eye 100 @ 1 05	
do green.....	1 00 @ 1 12 1/2
do Niles.....	1 25 @
BROOM CORN	
Southampton.....	60 @ 75 00
Northampton.....	60 @ 75 00

CHICKEN	WEDNESDAY, Nov. 30, 1887
California.....	6 @ 7
German.....	7 @ 8

DAIRY PRODUCE, ETC.	WEDNESDAY, Nov. 30, 1887
Cal. fresh milk, lb.....	37 1/4 @ 47 1/2
do Fancy brands.....	45 @ 50
Pickle milk.....	32 1/2 @ 37 1/2
Firkin, new.....	24 @ 30
Eastern.....	@

CHEESE	WEDNESDAY, Nov. 30, 1887
Cheddar, Cal. B.....	13 @ 16
Eastern style.....	14 @ 16

EGGS	WEDNESDAY, Nov. 30, 1887
Cal. ranch, doz.....	37 1/4 @ 40
do store.....	30 @ 34 1/2
Ducks.....	@
Oregon.....	@
Eastern.....	25 @ 32 1/2

FEED	WEDNESDAY, Nov. 30, 1887
Bran, ton.....	15 50 @ 17 00
Cornmeal.....	25 00 @ 27 00
Grd Bran ton.....	20 00 @ 21 50
Hay.....	11 00 @ 12 50
Middlings.....	20 00 @ 21 50
Oil Cake Meal.....	25 50 @ 28 50
Straw, bales.....	40 @ 70

FLOUR	WEDNESDAY, Nov. 30, 1887
Extra, City Mills 40 @	
do Country Mills 3 75 @	
Superior.....	3 25 @

BARLEY	WEDNESDAY, Nov. 30, 1887
Barley, feed, cbl.....	85 @ 95
do Brewing.....	1 00 @ 1 15
Chevalier.....	1 15 @ 1 30
do Coast.....	95 @ 1 25
Buckwheat.....	1 00 @ 1 25
Corn, White.....	1 15 @ 1 25
Yellow.....	1 10 @ 1 15
Small Round.....	1 20 @ 1 30
Nebraska.....	1 07 1/2 @ 1 15
Oats, milling.....	1 55 @ 1 60
Choice feed.....	1 42 1/2 @ 1 47 1/2
do good.....	1 35 @ 1 40
do fair.....	1 30 @ 1 35
do black.....	1 25 @ 1 40
do Oregon.....	@
Eye.....	1 50 @ 1 75

WHEAT	WEDNESDAY, Nov. 30, 1887
Wheat, milling.....	1 45 @ 1 47 1/2
do fair.....	1 40 @ 1 45
do fair to good.....	1 37 1/2 @ 1 40
Shipping choice.....	1 37 1/2 @ 1 40
do good.....	1 35 @ 1 37 1/2
do fair.....	1 30 @ 1 33 1/2

HIDES	WEDNESDAY, Nov. 30, 1887
Dry.....	14 @ 16
Wet, salted.....	14 @ 16

HONEY, ETC.	WEDNESDAY, Nov. 30, 1887
Beehive.....	20 @ 22
Honey in comb.....	12 1/2 @ 15
Honey in comb, fancy.....	16 @ 18
Extracted, light.....	6 1/2 @ 7 1/2
do dark.....	5 1/2 @ 6 1/2

HOPE	WEDNESDAY, Nov. 30, 1887
Oregon.....	12 1/2 @ 20
California.....	10 @ 20

ONIONS	WEDNESDAY, Nov. 30, 1887
Pickling.....	@
Red.....	@
Silverdust.....	75 @ 1 05

NUTS—JOBBER	WEDNESDAY, Nov. 30, 1887
Walnuts, Cal. B.....	12 @ 14
do Chile.....	8 @ 10
Almonds, hshl.....	5 @ 7
Soft shell.....	15 @ 16

WHEAT	WEDNESDAY, Nov. 30, 1887
Wheat, milling.....	1 45 @ 1 47 1/2
do fair.....	1 40 @ 1 45
do fair to good.....	1 37 1/2 @ 1 40
Shipping choice.....	1 37 1/2 @ 1 40
do good.....	1 35 @ 1 37 1/2
do fair.....	1 30 @ 1 33 1/2

Opening the Way to Portland.

The completion of the railway from various California points to Portland, Oregon, is now only a matter of a few days. Various efforts are in progress to secure proper celebration of the linking of the two great commonwealths of the Pacific by continuous rails. At the meeting of the State Board of Trade in this city on Tuesday of this week the following proceedings were had:

The committee on the celebration of the opening of the California & Oregon railroad met in the rooms of the State Board of Trade at 7:30 o'clock. Mayor Pond occupied the chair.

A communication was read by the secretary, from Thomas J. Haynes, Secretary of the Chamber of Commerce, stating that the president, William L. Merry, had appointed the following committees: Committee on Portland Celebration—R. S. Sneath, L. L. Baker, C. L. Taylor, W. W. Dodge and Fred A. Gibbs; Committee on Sacramento Celebration—A. C. Hecht, W. B. Harrington, L. A. Haber, W. T. J. Schenck and James R. Kelly.

A dispatch was received from John Gates, Mayor of Portland, to Mayor Pond, which read as follows:

Portland will join San Francisco and other California cities in celebrating the completion of direct railroad connections, and will heartily welcome all who may visit us on that occasion.

W. H. Miller, for the Committee on Transportation, reported that it had engaged three cars for the accommodation of San Francisco delegates and their friends. Cars containing the delegations from other cities would make up the train to Portland, which would have dining-rooms cars attached. It was proposed to have the cars gaily decorated. The time of starting from San Francisco is Monday, December 12th, at 4 o'clock.

The following resolutions, presented by W. L. Merry, were unanimously adopted:

Resolved, That a special committee of five be appointed from the members of this committee, who shall have full and complete charge of an excursion to Portland, in celebration of the completion of railroad communication between the city of San Francisco and the city of Portland and between the States of California and Oregon, comprising the following:

Four delegates representing the State of California, to be chosen by the Governor of the State.

Four delegates representing the city of San Francisco, to be chosen by his Honor the Mayor.

Four delegates from the Chamber of Commerce of San Francisco.

Four delegates from the Board of Trade of San Francisco.

Four delegates from the Manufacturers' Association.

Four delegates from the Produce Exchange of San Francisco.

Four delegates from the Executive Board of the State Board of Trade.

Four delegates from the Southern Pacific Co. and one delegate from each local Board of Trade of the cities or counties of the State of California. The latter delegates to be selected as the organizations herein mentioned shall direct.

The following committee were appointed by the Chair to carry out the resolutions: William L. Merry, W. T. Garratt, A. T. Hatch, Frank P. Dalton and George H. Sanderson. By a unanimous vote the Chairman, Mayor Pond, was added to the committee.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING NOVEMBER 22, 1887.

373,715.—COMBINED SCALE MEASURE AND SPIRIT-LEVEL—Thomas H. Bates, Pasadena, Cal.

373,651.—CONFORMATOR FOR THUMBS—John H. Fones, Oakland, Cal.

373,524.—MOWING MACHINE—Charles A. Greene, Stockton, Cal.

373,702.—OAR-LOCK—Charles H. Vite, S. F., Cal.

373,761.—ELECTRIC-ARC LAMP—Gustav A. Wiese, S. F.

373,710.—INJECTOR FEED-COCK—Gregg W. Wiswell, S. F.

17,888.—DESIGN FOR VIOLIN—David K. Darbyshire, S. F.

373,489.—PLOW—John T. Senteny, Blocksburg, Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast Inventors transacted with perfect security, at reasonable rates and in the shortest possible time.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

JARED C. HOAG—California.
G. W. INGALLS—Arizona.
GEO. McDOWELL—Santa Clara Co.
WILLIAM POOL—Fresno Co.
R. G. HUSTON—Butte, Montana.
E. P. SMITH—Washington Ter.
WM. WILKINSON—San Joaquin and Stanislaus Cos.
A. F. JEWETT—Tulare Co.
F. B. LOGAN—San Mateo and Santa Cruz Cos.
E. H. SCHAEFFLE—Calaveras Co.
H. STUCKE—Arizona Ter.
C. E. WILLIAMS—Yuba Co.

SAN FRANCISCO GRAPES.—The *Alta* has lately received from Mr. David Paine of this city a bunch of purple grapes, grown at his residence, No. 129 Dolores street. The berries were the size of the ordinary Hamburg, delicious to the taste, and the cluster weighed fully a pound.

"WITH BUBBLING GROAN!"

A Fatal Sense of Security Awfully Realized at Sea.

'A wet sheet and a flowing sea, a breeze that follows, fast.'

From his look-out the faithful old captain of yonder merchantman casts an uneasy glance at the distant horizon. See! yonder a small speck of cloud "no larger than a man's hand." He watches it with his piercing eye for a few moments, then reaches for his long eye-glass. To his experienced view this harmless little cloud betokens danger.

Across his bronzed face there comes a look of determination, and, with quick orders to the seamen, the craft is put about and all sail made for the nearest harbor, where in apparent safety the anchor is dropped, and the hardy mariners watch the approaching storm with defiance.

The storm bursts!

The decks have been cleared, the sails close furled, and all ordinary preparations made for an emergency.

The storm increases; but all seems safe.

But see! the vessel gives a sudden lurch, turns quickly about, and away she goes!

The anchor chain has broken!

This mighty ship might have ridden safely but for one weak link in that anchor chain!

The strength of the chain is no greater than the strength of its weakest link.

On the sea of life how many men are wrecked because of the unsuspected weakness of a link in the chain of health—one weak vital organ in the body.

The mystery of death is even greater than the mystery of life. We think the links of our chain are strong, but we too seldom critically examine them for ourselves and never really know that they will bear the strain that we put upon them.

"I have a friend," said Dr. Dio Lewis, "who can lift 900 pounds, and yet is an habitual sufferer from kidney and liver trouble and low spirits." The doctor, who was one of the wisest and safest public teachers of the laws of health, wrote:

"The very marked testimonials from college professors, respectable physicians, and other gentlemen of intelligence and character, to the value of Warner's safe cure have greatly surprised me. Many of these gentlemen I know, and reading their testimony I was impelled to purchase some bottles of Warner's safe cure and analyze it. Besides, I took some, swallowing three times the prescribed quantity. I am satisfied that the medicine is not injurious, and will frankly add that if I found myself the victim of a serious kidney trouble I should use this preparation."

One year ago the *Servia*, while in a great storm, parted her two-inch rudder chain—no wonder—it was rusted through. The key to human health is the condition of the kidneys, and they may long be diseased and we be ignorant of the fact, because they give forth little or no pain. They in reality cause the majority of all the deaths, by polluting the blood and sending disease all through the system.

SILK CULTURE AT PIEDMONT.—A meeting of the Woman's Silk Culture Association was held recently to furnish a plan of work to be carried on at the Piedmont Silk Station. In the search for water a depth of 40 feet has been reached, and it was decided to sink 35 feet further. It was decided to extend the facilities devoted to cocoon-raising; to make the farm self-sustaining; to cultivate the several varieties of worms and trees, to see which are best suited for this country; to build a larger cocoonery; to distribute the surplus of trees at the ranch and to form a typical orchard. The following ladies and gentlemen were present: Dr. Gibbons, president; Mrs. L. E. Pratt, secretary; ex-Governor Perkins, Prof. Hilgard, Mrs. T. H. Hittell and Mrs. Ashburner.

The Culture of Farm Crops—A Handbook of Practice for American Farmers. This book should be in every farmer's house and in every student's library; for the farmer it is a library in itself and for the student a most valuable book for reference. Mailed on receipt of \$1.50. Address, Duane H. Nash, Publisher, Millington, New Jersey.

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Should this paper be received by any subscriber who does not want it, or beyond the time he intends to pay for it, let him not fail to write us direct to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to any one who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

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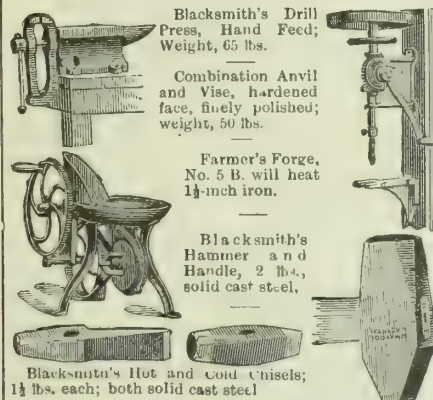
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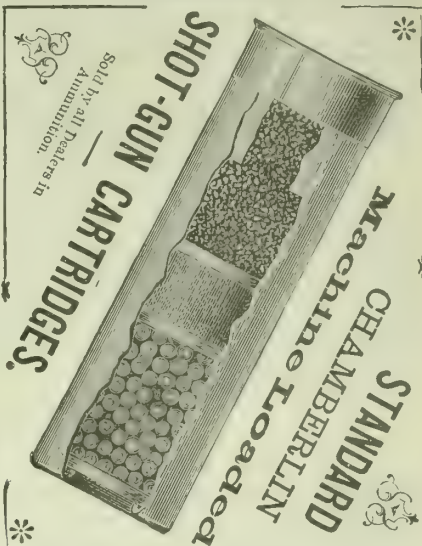
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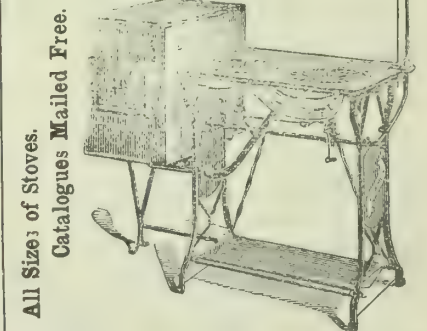
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Anarchism in America.

The S. F. *Alta* has a very timely sermon on "Lingg, the typical anarchist," and the class he represents: He was scarcely more than a boy, but he was a typical anarchist. With but little experience in the world, and with less knowledge about economic matters, he came to this country in 1885 to raise the red standard of social and political revolution. A lad of violent temper, with no homely common sense, strong physically, and a believer in force, he required the hospitality of this land, which had offered him an asylum, by libeling its institutions and murdering the officers who, by enforcing its laws, protected his life and liberty. He led others by his violence. There is a class always ready to follow professions of courage, and vociferous denunciation always secures recruits. So Lingg's voice was for blood. On the open space on the lake-front in Chicago, corresponding to our sand-lots, he harangued Sunday after Sunday against law, against God, against society, against all things that are.

He was a skilled worker in metals, and had readily secured employment at good wages, but he loved the applause that followed his violent speeches, and soon abandoned himself entirely to the task of destroying the country of which he was not a citizen, murdering the people who had welcomed him as an alien, and overthrowing the laws which divided with him the birth-right of liberty which belonged to those he had marked for assassination.

Coming here in 1885, had he been obedient to the mild laws of the country, had he been industrious and frugal, had he wrought well at his trade, with none but himself to support, by frugality he might now have been far upon the road to ownership of a home and to independence. But he preferred to cut across lots, and it led him to the gallows, which he has cheated by self-slaughter.

Let those who regard him as a hero, and propose to follow in his footsteps, beware. While they are boisterous the law is silent, long-suffering and full of patience; but once they commit the overt act, the land whose tolerance they have insulted, and whose hospitality they have betrayed, will smite them from existence.

A very serious series of questions is raised by the incident which Lingg ended with a double tragedy. Processions have been paraded in our large cities in honor of these men who libeled our government and murdered our people. In the processions, 99 per cent of the men are not of American birth. They are aliens. A majority have not even taken upon them American citizenship. They are here as critics of our country, as avowed enemies of our laws, which they did not make and which they refuse to obey. They propose no system of government to replace this which they intend to destroy. Their tendencies are destructive, and not constructive. They come here and crowd our own people, and foreigners who are quiet and well-intentioned toward our institutions, out of mills, mines and workshops. They occupy the field of skilled and unskilled labor, not to develop it, not to harmoniously advance the country, but to paralyze its industries, disorder its commerce, disturb its peace and destroy its institutions.

Our country suits our own people, those who are of the lineage of the men who made it and fought to maintain it. It suits all well-ordered foreigners who come here to take advantage of the best opportunities that men have had since the race was created, and if it doesn't suit these disturbers and murderers they would better form a procession and march out of it, for the black cap and noose will go from head to head, and neck to neck, as long as one of them raises his hand to overtly carry out the principles in behalf of which he raises his voice. They can refuse with insult the final attentions of the clergy, but they cannot escape those of the hangman.

The eight men who were convicted in Chicago, and of whom five are now dead, might by industry and thrift have been good, property-owning citizens. Within two years we have known foreign-born men in California to homestead government land, which they are now tilling, and which, by the time their title is perfect, will be worth \$5000 to \$8000 for each holding. The government gives them the land, and their labor upon it assures them a living, and by and by a fortune. The same government offered by its laws the same gift to Lingg and the rest, and they required the proffered kindness by treason and murder.

There was no faltering with them. The law they so long defied took their lives, and it will overtake their sympathizers who attempt to imitate them. The fact that is put foremost by the incident and its collateral is that we have been receiving an immigration with which we do not assimilate. That is as bad for a nation as for a man to eat more food than he digests. As the country gets older and its population more dense, its digestive faculty grows weaker and it finds it all the time harder to assimilate anarchists, socialists, communists and the other abnormal food sent to it from Europe. It is time to discriminate, time to cease eating more immigration than we digest, time to redeem our commerce and industries from the control of the enemies of our institutions. Therefore let greater kindness go into our invitation to the orderly foreigner, who will appreciate the asylum offered by our laws; but let it be known that we have not even standing-room for our imported enemies.

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NITROGENOUS SUPERPHOSPHATE.

UNIVERSITY OF CALIFORNIA, Nov. 3, 1886.

DR. J. KOEBIG—Dear Sir: I have analyzed your sample of "Nitrogenous Superphosphate," with the following result:

Soluble Phosphoric Acid.....	12.90 per cent
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Insoluble Phosphoric Acid.....	2.83 "
Potash.....	2.23 "
Ammonia.....	1.87 "
Nitric Acid.....	2.95 "

The above amount of Nitric Acid is equal to 0.85 per cent Ammonia, therefore, total of Nitrogen calculated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vineyards, orchards, gardens, farms, and I recommend its use by the cultivators of the soil generally, in California. Yours truly, DR. E. A. SCHNEIDER.

University of California, College of Agriculture.

BERKELEY, Nov. 20, 1886.

DR. J. KOEBIG, San Francisco—Dear Sir: I take pleasure in adding my testimony to that of Dr. Schneider as to the high quality of the "Nitrogenous Superphosphate" Fertilizer, analyzed by him at your request. It is a high-grade article, and as such returns the user a better money value than a low-grade

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fertilizer. It is especially well adapted to use in California, on account of the predominance in it of Phosphoric Acid, which is generally in small supply in our soils. Yet it is desirable that "complete" fertilizers be used in our orchards and vineyards, and yours is of that character in furnishing Potash and Nitrogen as well. Very respectfully, E. W. HILGARD.

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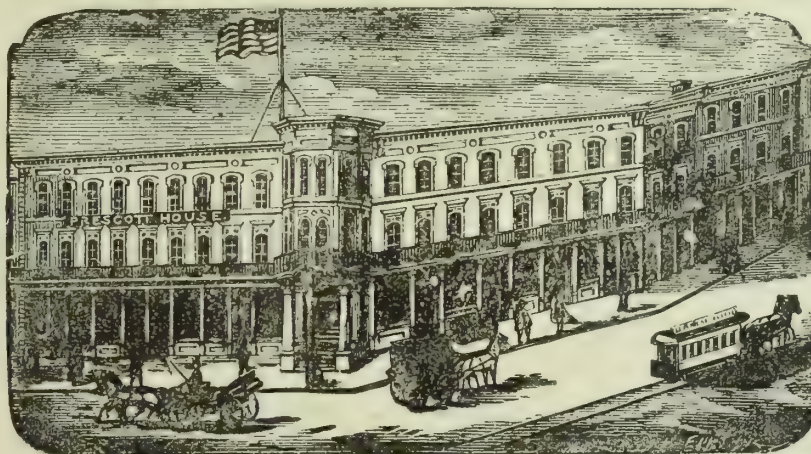
In ordinary soils the following quantities will be found sufficient: For Wheat, Barley, Corn and Oats, 300 to 350 pounds per acre. For Grass, Sugar Beets and Vegetables, 250 to 300 pounds per acre. For Vines, Fruit Trees, from 1 pound to 5 pounds each. For Flower Gardens, Lawns, House Plants, etc., a light top dressing, applied at any time, will be found very beneficial.

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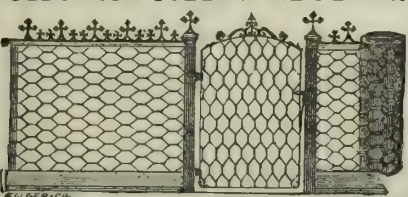
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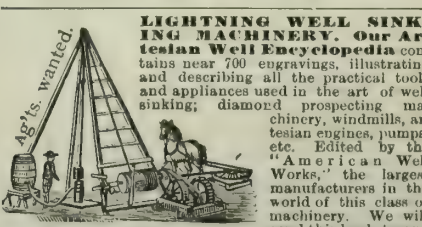
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We have been shipping this material for years to our Agents, Messrs. SCHRODER & MICHAELSON, HAMBURG, and under date of January 4, 1887, they wrote:

"The demand for your phosphates continues very good, as you will see from our having sold so far ahead as September and October arrival, at full prices, and we could to-day place a much larger quantity if we only had them to offer."

Under date of January 26, 1887, Messrs. SCHRODER & MICHAELSON, alluding to letters acknowledged, write as follows to H. M. NEWHALL & CO.:

"They referred partly to the quantity of Mexican Guano which we may expect to receive in the course of the present year, in regard to which our repeated inquiries addressed to the Company had so far brought no reply. We are glad to note from your telegram that Mr. Halsey has now written us on the subject, but we are, on the other hand, somewhat disappointed at the SMALLNESS of the figure you name (8000 to 10,000 tons) which we hope is exclusive of the 'Tranmere' and 'Saigon' cargoes. We have, in fact, in consequence of the numerous inquiries for this guano, been placed in an awkward position, through not being able to give any reliable information to our buyers in regard to the quantity of Mexican Guano forthcoming during the present year."

Its Introduction into California has been marked with the most gratifying results.

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AND IS TOTALLY INOFFENSIVE TO TOUCH OR SMELL!

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TWENTY-PAGE EDITION.

Vol. XXXIV.—No. 24.

SAN FRANCISCO, SATURDAY, DECEMBER 10, 1887.

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American Senna.

If our readers have not developed a hatred of the whole senna family through memory of the liberal potations of "senna tea" which was one of the mainstays in the old system of household medication, we beg a few moments' attention to the subject of American senna which is described by Dr. Vasey, Government Botanist, in one of his recent reports. The engraving is reproduced from this source, the main figure showing a branch in bloom, natural size, Fig. 1 being an enlarged flower, and Fig. 2 representing the mature pods, which, even to the popular mind, shows that the plant belongs to the large order *leguminosae*. The botanical genus of senna is *cassia*, which includes about 400 species, mostly herbaceous, but some shrubs and trees. The commercial senna consists of the leaves of two or three species which grow in Egypt, India and Arabia.

In the United States we have about 20 herbaceous species, only one of which, *Cassia marilandica*, has obtained reputation for medicinal use. This is a vigorous plant, having a perennial root, the stalks, many from the same root, growing four or five feet high, with numerous alternate large pinnate leaves, six or eight inches long, and composed of about eight pairs of oblong-lanceolate leaflets of a light-green color, which are about one inch to one and a fourth inches in length, smooth, tipped with a very short, bristle-like point. Near the base of the leaf-stock is a small dark-colored stalked gland of unknown use. The flowers grow at and near the top of the stem in short racemes from the axils of the upper leaves and are each about one-half inch long. The sepals are five, oblong, thin, shorter than the petals; the petals are five, bright yellow, half an inch long, rather curved, obtuse, and broadest near the top. There are ten stamens, which are unequal in length, and some of them imperfect, the anthers opening by two pores at the apex. The young germ or pod is quite hairy, but becomes in age a smooth, linear, curved pod, four to six inches long, and containing 20 or more seeds, a depression of the pod occurring between each of the seeds.

Our plant is related to the Eastern senna in its botanical habit and resembles it in its medicinal virtues, but requires about one-third greater quantity to produce the same effect. The Eastern senna is so cheap that there is little inducement for the gathering or use of our native one.

PORK-PACKING IN OAKLAND.—A meeting of the trustees of the lately incorporated Chicago Packing and Provision Co. was held Dec. 6th, and the following officers were elected to serve one year: W. Selover, Pres.; J. S. Emery, V. P.; A. Gerberding, Sec.; P. N. Schlesinger, Supt.; First National Bank of Oakland, Treas. Plans for a large packing-house have been received from Chicago, and work on the new structure will be commenced at once in Oakland. It is expected that the building will be ready for business within 90 days.

A CHANCE FOR INVENTORS.—R. W. Cameron of New York City has received a communication from the Government of New South Wales, offering a reward of \$125,000 to the inventor of any process that will exterminate the rabbits which overrun Australia and New Zealand.

POSTAL TELEGRAPHY commends itself to Congressman Vandever's approval. A dispatch from Washington says he expresses the opinion that if Congress is to act in the matter, a bill

CITRUS FAIR AT SAN JOSE.—The Santa Clara County Horticultural Society will hold a two weeks' citrus fair at San Jose, beginning Feb. 22, 1888. All the counties of Northern and

Renewing an Old Orchard.

A subscriber in San Rafael asks us how to proceed to renew "an old orchard which has for 12 years lain unplowed and unplowed and is infested with three or four kinds of insect pests." It is hard to tell what to do with such a case without seeing it. If it is in as bad shape as some old neglected orchards we have seen, the cheapest and best way to renew would be to cut down the trees, grub out the roots and burn every vestige of the old growth which could be collected. Then break up the land deeply, following in the furrow with a sub-soiler, cross-plow in the spring, and leave the land fallow during the summer—plowing under the weeds as long as there was moisture enough near the surface to start weeds. Another good plan would be to put in potatoes, corn or some other crop which would need cultivation during the summer. In this way the land can be brought into good condition for replanting next winter. This is the heroic way of renewing an orchard, and in many cases it is the best way. Whether this would be the wisest thing to do in the case of our correspondent one could only tell by seeing the trees.

Supposing the trees are of good varieties, not so badly gnarled and stunted and diseased and brushy as to make their renewal unprofitable, the first thing to do is to employ a skillful pruner, one who is not merely a wood-chopper, but really has some eye for a tree, and start him in at once. If he is a good hand he will know enough to take out all dead or dying wood, to head back or remove other branches as needed, to re-form the tree, to cut so as to develop branches where they are needed, etc. All large cuts should be pared smooth, and covered with paint or shellac, or a liquid grafting preparation. All brush should be carefully collected and burned, and when this is done, the trees should be well sprayed with one of the washes recommended by the State Board of Horticulture, as printed in another column of this issue. When this work is thoroughly done, put on all the well-rotted manure that can be found in the neighborhood, and plow as deeply as any plow will go. Plow again before the weeds become too high to turn under, if the land does not become too wet for plowing. If so, as may happen in a region of heavy rainfall like San Rafael, the weeds must be mown and then the land plowed as soon as it comes into proper condition. After the rains cease, and the last spring plowing is done, use the cultivator and keep the surface mellow during the summer.

If the varieties are not good, new sorts may be grafted in this spring or budded into the new shoots next summer. The after treatment will be constant attention to plowing, spraying and cultivation. If any one can advise any better or easier treatment for an old orchard we should like to hear from them.

A CHECK ON HORSE-THIEVES.—A correspondent of the Tulare Register, who has suffered at the hands of horse-thieves, suggests the enactment of a law requiring from every person who desires to sell a horse a permit under the sheriff's seal, the blank to be filled out by resident officers. These blanks should contain a description of the horse and the name of the party, and when a horse was offered for sale the intending purchaser might ask to see the permit.



AMERICAN SENNA—*Cassia Marilandica*.

should be introduced in both houses at an early day, else when the session gets advanced it will be next to impossible to secure any result, as other important matters will absorb all the attention of Congress. The people on the Pacific Coast, more than any others, feel the need of postal telegraphy.

THE CALIFORNIA FRUIT-GROWER, a much-needed book, as noted on another page, is to be published by the firm of Dewey & Co. at as early a date as possible. Address orders to this office.

Central California will be asked to make displays. The American Horticultural Society will also be invited to attend in a body, and excursions will be arranged from Los Angeles and Riverside.

BIG TOMATOES IN OREGON.—W. H. Maule, the Philadelphia seedsman, offered a prize of \$100 for the largest tomato raised this year from seed sold by him. A Wallowa paper says that the largest reported were from Indiana and Eagle valley, Union county, Or., and weighed 3½ pounds.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Napa County Notes.

EDITORS PRESS:—Of repeated promises of rain during the last month or more have proved false, and anticipations and longings of our farmers have come to naught. While other sections of the State have been visited with showers, we look forward with hope for the first of the season, which, maybe, will come before this letter appears in the RURAL. [It has.—EDS. PRESS.] Harvest over, the fall work done, the vintage concluded, many farmers have commenced seeding for next season's crop, and at this date considerable hay land has been cultivated and sown generally to black oats, the little summer-fallow we have in this valley to wheat and considerable dry plowing is being done for different varieties of grain. Ground devoted to corn this last summer was seeded some time ago.

Black oats, for hay, are in large demand, and find increasing favor with our farmers from year to year. What seed is raised in this valley is usually engaged—sold—early in the season. Our barley crop will, as in past years, be, as compared with the wheat crop, small. Bald barley is raised to some extent, but generally for hay rather than for thrashing.

More summer-fallowing is done in Berryessa valley than in any other portion of the county. There the farms are large, the soil productive. These summer-fallowed fields have been already sown to wheat, that they may get the benefit of all the rains. This valley, the second largest in this county, is beautifully situated, possesses unexcelled climate and has a grand future. It cannot be long before a railroad will traverse the valley, when we may look for a division of the large farms, an increase of population and a rapid appreciation of real estate.

But, as frequently noted in the past regarding the agricultural progress of our county, but more especially of Napa valley, grain-raising is giving way to the cultivation of fruit; the upper valley was long since almost entirely devoted to grape culture; in the lower portion orchards are increasing in number. Our local nurseryman, L. Coates, reports the demand for trees this fall much larger than in previous years, not only here, but in all portions of the State, prune trees being especially in request. Our finely equipped cannery, located in Napa City, the railroad running by its front doors, the river flowing past its rear—now closed, awaits the coming of some good manager who can easily do a very remunerative business the coming season. The fruit of our orchards is eagerly sought by cannerymen of localities far and near, and many of our orchardists made much money this season.

The excellent showing our county made at the last Mechanics' Fair in San Francisco, and the handsome awards received, served a two-fold purpose. Not only did it call the attention of the general public hitherward, giving us a notoriety we richly deserve, but it served as a stimulus to our farmers and fruit-growers, who, next year, will endeavor to make a far better showing and capture the first prize. We mean business and therefore that our award will head the list is a foregone conclusion. I think many of our own residents were astonished when the first award for nuts in variety was given this county at the exposition named. Although we raise so many fruits, vegetables, grains, nuts, etc., we are just beginning to realize the marvelous productiveness of our soil and its adaptability for a very varied husbandry.

Olive culture is receiving considerable attention, and not only are many trees being planted, but large orders for trees are being received from all portions of the State. Mr. A. Flamant is the leading local spirit in this branch of horticulture, and others are catching something of and will profit by his enthusiasm.

What the citizens of this county most desire now, particularly those residing in Napa valley, is the location of the National Veterans' Home at Yountville. Until the committee who visited the Home a few days ago, and who are now visiting the southern part of the State, there inspecting sites offered by different communities, shall have announced their choice, we shall be in hopes ours will be the favorite locality. The distinguished committee, upon their visit of inspection, were, apparently, favorably impressed.

To better advance the interests of our county, Boards of Trade have lately been organized in Napa, St. Helena and Yountville, and the advantages our county offers to persons intending to locate in the State will be more widely and systematically made known, and, at the same time, concerted action will be taken upon internal improvements. Our real estate dealers make many sales; the inquiry for land is growing. Noteworthy improvements are being made in the country districts, and in the towns there is great activity. In Napa City mechanics are with difficulty obtained, and that speaks well for our prosperity. One contracting firm has had from 20 to 26 men at work for them during the entire summer.

It will not be long before our entire State, like those in the distant East, will be gridironed with railroads. In this county, the road now building from Napa City to Lake county will be

a long-desired and a very beneficial improvement which we hope will be completed in the near future. These things seem to indicate the construction of a railroad from Napa City to Point Tiburon or vicinity, along the north side of the bay, thus bringing us into much quicker communication with the metropolis.

For many years there has been no Grange in the lower Napa valley. A decade or so ago one was organized and for a time flourished in Napa City, but it was short lived. Now the farmers here have no organization of the kind. The grape-growers' and horticulturists' semi-monthly meetings have been of great benefit in the past. Progression is the order of the day, and all along the line there are evidences of greater prosperity in the future than in the past.

R.
Napa, Nov. 28, 1887.

San Joaquin West-Side Notes.

EDITORS PRESS:—Winter work is going on briskly in this neighborhood. Notwithstanding we had a total failure the past season, not even raising hay, not an acre of land, goes begging for a renter.

The past dry year was taken more cheerfully than any I have previously known. Not a word of complaint or regret have I heard, from which I infer the settlers are better situated to endure the loss of a crop than formerly.

Indeed, there are many evidences that farmers here are gaining in financial stability, and we seldom hear the expression, so frequent in years past: "I shall sell out and move away the next good crop." We are learning slowly the best implements and machinery to use, and the most profitable grains to sow, thereby making the cost less and production greater. We are learning also to better appreciate the advantages of this locality, and are coming to the conclusion that for a poor man with small capital to make a living with reasonable hopes of competence in the end, this portion of the State will compare favorably with other much-bepuffed places.

The fact that so many who once farm on the west side find their way back after trying other places is an evidence in its favor. They often find a climate that disagrees with them, or find that with harder work they make no better living. Nearly all land is sold to old residents, who prove their faith in its future by buying all that is for sale.

Without any boom (may one never come this way) land has steadily risen in value, having nearly doubled the past five years. Several farms changed hands the past year at \$25 per acre, but holders are not anxious to sell.

Tracy continues to grow. The past year has witnessed the most gratifying improvement since the location of the town—the erection of two churches—a Catholic and a Presbyterian, the latter costing about \$2400 and having a large, sweet-toned bell, the gift of an Eastern friend. Both town and country are improving in windmills, fences and buildings; but the fact that so many are living on rented land is a great drawback to real improvement. We are hoping the new railroad that crosses the others at Tracy will do much to build up this locality. Indeed, we hear hints of many things—water-storage, irrigation enterprises, etc.—and wait patiently to see what the future has in store for us.

At present, land is certainly very cheap, considering locality, richness of soil and fine climate. Indeed I look for the time when well-appointed sanitariums will be built here, where those who find their neuralgia, rheumatism and bronchitis aggravated by the fogs of the coast can flee for temporary relief, to bask in the bright sunlight and dry atmosphere. True, it is rather warm for comfort in midsummer, and too much wind in the spring, but a great portion of the year the climate is almost perfection.

We hear prophecies of both good and evil for the season. Some are saying plenty of rain; tule rats are building their nests high. Others are shaking their heads at the early cold weather, ice having formed several nights lately. If the old moon sign—dry year when the moon is well on its back, so you can hang a powder-horn on it—holds good, we have had two very good moons lately, well on end. I never had faith in lunar signs, but have noticed this to have been true the past two years. Another dry year now would indeed be serious. The more so to ourselves, as we lost our barn, containing grain for seed and feed, last spring. However, there is plenty of time for all needed rain yet, and we will go forward with hope.

Mrs. J. M. K.

Tracy, San Joaquin Co.

Labor and Liquor.

EDITORS PRESS:—I notice that our fraternal labor organizations are having trouble with the liquor traffic. Just what might be expected! Whisky never was a peace-maker, and in this "unpleasantness" my sympathies are with the labor interests, for I regard labor as generally promotive of prosperity, excepting, of course, labor invested in liquor. That I consider an investment in general loss. Labor is the foundation of wealth. Nearly all assessable values are the products of labor. All values in improved lands above that of their wild condition, all agricultural products, all buildings,

all manufactured goods, wares and implements, all commerce and literature, are labor's productions. Money, the representative and measure of values, is one of labor's productions, yet labor may be misdirected and turned to loss. For illustration, let us suppose two cases and compare results. Suppose a carpenter employed to build a house receives \$500 for his work. That \$500 is so much added to his assessable valuation. His employer received as equivalent for the money he paid a house assessable at \$500 or more. The county assessor finds the same amount of money to assess as before, and a \$500 house besides that had not existed before. The county is that much richer and nobody poorer by the transaction. That \$500 invested in labor has duplicated its value. Thus well-directed labor creates wealth.

Now suppose another carpenter turns saloon-keeper. (All saloon-keepers have left better employment.) His neighbors pay him \$500 for liquor. Do they get an equivalent? They pay for the liquor and drink it, and with the drinking all semblance of value vanishes forever.

No duplicated value there to assess, but in its stead the common results—demoralization, idleness, crime, and consequent expenses. The drinkers have bought an injury and laid up a loss; a loss to themselves and a loss to the commonwealth. The labor that made the drink and that of him who sold it was loss-producing work. By transforming industrious, wealth-producing laborers into idlers, tramps and criminals, it lessens the labor product of the country; thereby undermining the very foundation of wealth. Yet we are told of the good the traffic does in furnishing "employment" to laborers. As if employment could never be otherwise and useful, or industry ever fail to be a virtue. I believe Satan has a reputation for industry, but not much for good works; and I know of no "employment" that seems to me more thoroughly devilish in general characteristics and results than the liquor traffic.

THOUGHTOGRAPH.

Nov. 18, 1887.

Santa Barbara Notes.

EDITORS PRESS:—In resuming my notes taken during a recent tour of some of the counties of the southern portion of the State, I have first to say, that, for more than two months, from effects of bad health and consequent suffering, I have been incapacitated for the business of correspondent. As my health seems to be gaining ground again, I resume my correspondence with a hope of being able to at least briefly give you some items of interests from observations.

During our stay in the county of Santa Barbara, we found all astir, in both town and country, and flushed, because of the successful building of the coast extension of the S. P. R. R. The completion of the road to the city of Santa Barbara dates a new era in the history of that celebrated watering-place. It has long been a resort for tourists and health-seekers. All are charmed with its delightfully mild days and pleasantly cool nights. The Santa Barbarans prides himself upon the well-recognized climatic condition of the place. Other places may believe they may have the best climate in the world, the Santa Barbarans know they have.

Now that the glorious climate of these western shores is attracting attention abroad, and so many of the first-class families east of the great Rockies are pouring into various parts of California a new population, many of whom are capitalists, it is confidently predicted that Santa Barbara will be one of the counties to be particularly favored by a flood of immigration, which may further enhance the value of lands, already high in public repute, and bring renewed life and activity into all channels of business.

Carpinteria Valley.

On our way from San Buenaventura by way of the beach road, alongside the railroad, after rounding Rincon point, we enter the Carpinteria valley lying along the coast, east of Santa Barbara, the same being a section of the coast valley extending from Rincon point westwardly to Gaviota pass. This valley is rather level about the town of Carpinteria, but in the main quite undulating, finally rising toward the north and terminating at the foothills of the rugged Santa Inez range of mountains.

The most of the Carpinteria country is well watered, and the soil is principally formed by alluvial deposits. The cultivation of beans is the most extensive business here, and that of corn is also considered a matter of importance. Potatoes of good quality are raised. Grain in many places is grown to fine advantage.

We notice that so far as observation extends but comparatively few persons pay much attention to stock-raising, but what we see shows very favorable conditions for the rearing of fine horses and cattle. We will mention that Mr. Thos. P. Callie, three miles west of Carpinteria, is interesting himself in the rearing of Jersey cattle. His Jersey bull, Romeo, calved Jan. 1, 1886, registered in the Pacific Coast Cattle Club, No. 394, was bred by C. K. Lawton of Santa Barbara, bought by Mr. C. at six months old, is of good size, color, a beautiful dun, the shade becoming lighter on the back, legs, and muzzle.

Higgins' Ranch.

Among the many valuable places in this valley we will mention that of P. C. Higgins, less

than a mile below town. This is a most delightful residence and farm. The principal crop is lima beans. It is uniformly good, the production being about three-quarters of a ton per acre on all his grounds. There are exceptions in favor of higher figures, as much as 2500 pounds per acre, but the first named quantity is the ordinary average yield.

The young orchard at this place looks very well. Success with the soft-shelled European walnut is quite encouraging. Nectarines do not succeed every year.

Rincon Canyon.

At the extreme eastern end of the valley the surface is considerably elevated, and thence we descend into the wooded canyon of Rincon creek. Up and down the rather narrow confines of the "canyon," we find very rich alluvial soil, very productive of strawberries and other fruits thus far tried. Among the few places here we will mention that of J. E. Shepard, five miles northeast of Carpinteria. He has 140 seedling orange trees 11 years old and in fine bearing condition. He has two acres strawberries, varieties being Monarch of the West and Charles Downing. He considers the first-named best for market, as it bears transportation well. The last-named pronounced best for home use. On the rich fields near Carpinteria we see much that is interesting in the way of tree and plant growth. H. C. Ford, artist of Santa Barbara, has a country residence here on the main coast road, and has adorned the grounds by the introduction of many of the most ornamental plants, shrubs and trees, most of which are exotic, many of which are quite rare and must have been procured at both trouble and expense. It would seem from the success attending this, and we may say somewhat similar experiments about Santa Barbara, that we might have to search the world over to find a more favored spot for a wide range for the growth of vegetation, if the natural locality of the same is within the temperate or semi-tropical zones.

McD.

POULTRY YARD.

Practical Hints for December.

Do not neglect the water fountains. Keep them sweet and clean and filled with fresh water. During the rainy season, keep the yards well drained, so that no impure water will stand where the fowls may drink it.

If eggs are the main desideratum in keeping fowls, avoid short-legged fowls of any breed. They rarely lay well the second year on account of laying on too much fat, while a fowl with good length of leg will ordinarily lay well until three years of age.

Keep only as many fowls as your time will permit you to attend to well in every particular. When 50 fowls well cared for will pay a good profit, 100 somewhat neglected may be kept at a loss. Feed judiciously, keep the water fountains pure, look out for vermin, avoid overcrowding, give the fowls a chance to scratch, provide shade in summer and a dry shelter in winter. Think of these things once a month.

Give the September hatched chicks a bed of straw, but do not allow too many to huddle together.

Collect the eggs often, and wash all dirty eggs at once, that they may look well when sent to market or sold for hatching.

As a rule, short-legged fowls will fatten more rapidly than those "well up on their pins." This is important to the broiler-raiser, as his object is to get a nice plump chick as soon as possible.

This is generally a month of abundant rain on the Pacific Coast. See that the poultry-yards are well drained, and that all depressions where muddy, filthy water may collect are filled up.

A good supply of dry earth and fine gravel will be found a great convenience during the winter months. The gravel supply should not be neglected until the creeks are running full of water, and it is impossible to get it.

A damp roosting-place is an abomination, and yet fowls prefer a wet roost free from lice to a dry one covered with vermin which sap their blood and strength. This will explain why some people's chickens prefer to roost in trees.

The straw-stack may be put to a variety of good uses in December. It means bedding for the cows and horses, dry floors for the poultry-houses and for hiding grain in for the fowls to scratch after, bedding for the pets, and feed for all kinds of stock in a greater or less degree.—*The California Cackler.*

Gas Lime for Poultry Vermin.

EDITORS PRESS:—When I moved to Morro bay last winter, the fleas were an awful pest; they appear to propagate in that sand. I remembered that gas laid me to sleep once for several hours, and I concluded to experiment on the fleas. I got some gas lime at San Luis and sprinkled around the yard, chicken-house, stable and barn, with the happiest results. While it has checked the flea nuisance, it appears to have laid the chicken lice also to rest. I only sprinkled the bottom of the chicken-house, and it didn't affect the chickens at all.

True, it must not be sprinkled thicker than an inch or so. If the lairs are not too close, it will not hurt the chickens.

The gas treatment for scale insects, I believe to be the very thing for fleas and chicken lice wherever practicable.

CHRISTIAN E. SCHNEIDER.

Ballard, Cal.

HORTICULTURE.

Fruit in Southern California.

The following is the report of Commissioner A. S. Chapman to the State Board of Horticulture, for an early copy of which we are indebted to Secretary Lelong:

The past season in this part of the State has been a very prosperous one. Owing to the wonderful rise in real estate, many fine orchards have been abandoned, to be replaced with beautiful homes, and many new orchards have been set out.

Insect Pests.

Black Scale.—The black scale infesting the citrus and olive trees has this year ceased to be a pest, owing to its parasitic fly which has kept it in subjection.

Red Scale.—The red scale infesting the orange trees is very bad. Mr. D. W. Coquillett, however, has found scales with internal parasites, therefore we may look to nature for relief, we hope. The larvæ of the twice-stabbed ladybug does not increase as fast as we might expect, yet there are spots in our own orchard where the red scale is scarce where before it was plentiful.

Fluted Scale.—This scale has been steadily increasing, notwithstanding all efforts to keep it in subjection. While Mr. Klee, State Inspector of Fruit Pests, was here a short time since, we found a larva feeding on the egg in the sac of a female. I have since succeeded in hatching out one of these larvæ, which Mr. Coquillett pronounces to be *Scymnus marginicollis*. He further says that he bred specimens of this same beetle in Sacramento in 1883, where he found it feeding on plant lice on a thistle. I have also found in the sac of a female where it had eaten all the eggs, a small worm about one-quarter of an inch long; it being the first and only one observed by me, I left it to multiply.

Deciduous Fruits.

The apple crop this year was a very heavy one, many trees breaking with their loads of fruit; and the same might be said of all our deciduous fruits. The woolly aphis and the codlin moth do not as yet seem to have worked material injury. While the former may be kept in subjection with proper fertilizing and care, the second needs more costly bands and poisonous sprays, which every farmer should remember, and unitedly they should forever keep it in check.

The Nut Crop.

The English walnut both yielded and sold well this year, though the price has since receded from nine to seven cents on buyers' hands. On our own place, these trees have been copiously matured, and the crop is double as much as last year. These trees have not been plowed for two years, the manure being placed broadcast over the surface of the ground, and the trees irrigated during the summer. The seeds were kept in subjection with a hoe. It seems as though this tree enjoys thorough drainage and plenty of manure and water. The tree is subject to the *Icerya purchasi*. The pecan nut does well in this end of the State, making a beautiful ornamental tree, but I have never seen the nut attain the size of the Texas pecan.

Lemons.

There is a great future for the lemon in California. It is a fruit that keeps well, sells well and is ripening in fruit every month in the year. Yet it is a prey to the scale insects and to the fluted scale, the king of scale insects. But the tree itself is hardy, growing from the cutting, and will resist much drouth. It is said to be shorter-lived than the orange, but it is a more rapid grower and fruits sooner. No tree responds more quickly to fertilizers. With each new start in growth come flowers on the same new wood. It is true the major portion of the crop matures in December and January, yet we have sold on our place December lemons in June.

Oranges.

In Los Angeles county, the crop of this fruit is behind, owing to the ravages of the red and fluted scales. In many orchards, the song of the hammer is the echo of the plowboy's song. In particular spots that have been fertilized, the crop is above the average in quality and quantity. In San Diego and San Bernardino counties, the crop is said to be above the average—clean and bright. In San Diego county it may be owing to virgin soil and isolation from insects, whereas in Riverside it is free use of fertilizers and a quarantine guardian against insect pests.

The Olive.

It seems that each fruit is to have its run in California, the olive being more prominently before the people than any other tree both north and south. It enjoys exemption from the fluted scale, but is a prey to the black scale. If, however, the parasite of the black scale can continuously keep it in subjection, then so long is the

olive master of the situation. But, however well the olive may thrive on poor soil, no man should expect remunerative returns unless he can properly take care of, fertilize and irrigate. Mr. C. H. Dwinelle, now in the town of Fulton, in Sonoma county, says that the olive should not be trained as a tree, but rather as a bush with extending limbs, so that the fruit may be gathered by hand without bruising, and this idea with him is not theory, but his observation of facts in Europe.

Figs.

Figs have done well this year, some varieties fruiting for the first time, the most prominent among which are the Smyrna and the White Adriatic. In the San Gabriel valley the Adriatic takes precedence, the fruit not falling off the tree but drying thereon, and though it commences to ripen somewhat late, it ripens its fruit continuously until stopped by cold weather. The Smyrna has dropped its fruit this year, some at maturity and some before. However, another year may make a great difference in the Smyrna, and only speaks for this locality.

Fruit Culture in Several Countries.

Reports from the consuls of the United States in answer to a circular from the Department of State on the cultivation of oranges, lemons, olives, figs and raisins in their several districts, No. 413, June, 1884, is a book of which every fruit-grower should have a copy.

A. SCOTT CHAPMAN,

Commissioner for the State at Large.

San Gabriel.

Success in Berry Culture.

EDITORS PRESS:—My attention has been called to farmers, who, while growing a blackberry patch sufficient to supply the village, gather scarcely enough for their own family use. Their plants are thrifty, ground is well manured, cultivated and irrigated. An examination of the bushes shows that the plants have been allowed to grow to a height of eight or ten feet; then the tops were cut off about six feet above the ground; during the balance of the season no attention was given to the bushes, and, in consequence, they throw out branches six feet long in the fall or spring. These branches were cut back to within a foot of the main bush, the bush tied up to stakes, and a big crop of berries expected the coming season. As the season advances the grower finds that while the bushes of other berry-growers are white as a snowball with blossoms, his plants have but a few scattered over the top, and when the scorching heat of midsummer comes his berries all burn and fail to mature.

The main fault in this instance is improper pruning. The bushes for want of heading back when four feet high made their bush between four and six feet above ground, leaving the stalk below the bush unshaded. By cutting high but half the bush was formed that would have grown had the tip of the main stalk been pinched off at four feet. An examination of the branches cut off will show that the majority of the bearing buds were beyond the place of separation. The natural result is no bush and no berries. If in this article I can so simplify berry-culture as that "the way-faring man though a fool need not err therein," I shall feel that I have saved the berry-growing reader years of experimenting to attain the highest degree of success.

Having determined upon setting out a heap of blackberries, we first examine our supply of fertilizer; if it is stable manure we estimate what amount of surface we can give a yearly dressing three inches deep. Inexperience will benefit us to plant beyond that, but experience will show that one-half the number of plants, well manured, will yield berries in a greater quantity, of double the size, and superior sweetness and flavor to those grown on a poorly manured soil.

In the selection of ground for the berry patch, preference should be given to a rich, loamy, damp soil.

The best berry to grow is a disputed question, but as the Kittatinny is the largest and heaviest bearer, preference should be given to it, with Wilson's Early for the first cross.

See to it that the plants are entirely free from rose scale. If this pest is found, burn every plant, and seek a more conscientious dealer.

As the plants should be six feet apart each way, and but one plant should be set at a place, an acre will require 1210 plants, which should be cut down to the last or lowest bud, covered with moist soil, and sheltered until wanted for planting.

Look the intended patch over carefully to see in which direction the water for irrigation will run, and yet not wash, and set your rows in that course. First dig the holes, then drive a six-foot cedar stake well into the ground in the center of the hole; or, if stakes are expensive, set a stout post, well braced, at each end of the row, and at five feet above ground stretch a wire, supporting it by occasional stakes between the posts.

Set one plant to each stake, pressing the soil well down with the feet. If the planting is done in the late fall, very few plants will fail to take root by springtime and make a good growth.

With the plants in we cover the ground to a depth of three inches with manure and turn

the chickens in to pulverize and spread it. The winter rains will level out the manure, and the soil by spring be mellow as an onion bed.

Very early in the spring plow up and pulverize the soil thoroughly, at the same time striking out the irrigating ditches. From the time that the first bud shows until the last leaf has withered, see that the soil never becomes dry. It is a common practice to defer irrigation until the berries begin to fill out, which is wrong, as no irrigation gives as large returns as the water supplied in the early part of the season. It is then that the bush matures and forms its buds, and the plant will only make what the moisture at the time would supply to the plant throughout the season.

When the plants have grown to four feet above the ground, pinch off the tips; if allowed to grow higher they will burn from the sun's rays; if lower, the reflection from the ground will burn as well. With the top off, the bush will now throw out laterals or side branches. These should be pinched off when about 18 inches long. These in turn will throw out other branches, which should be pinched off at a foot's length. This will give you a stocky, well-branched and broad bush carrying all of its bearing buds so dense in foliage that the berries will not burn and branches be well braced that they will not break, and the bush so compact that it can be cultivated and its immense yield gathered with a minimum of profanity on account of weeds from the briars.

The first season is devoted entirely to growing the plants, the labor required consisting of irrigating as often as the ground becomes dry, and following with cultivator to break up the brush after irrigation. During the season the bushes are tied up securely and our labor for the first season is completed with the fall dressing of manure.

Our second season is but a repetition of the first, with the addition of gathering the reward of our labors in luscious berries and in the fall cutting out the former season's dead wood, which operation can be made pleasant if a long-handled pitchfork is used to lift out the bushes, when cut loose at the ground, and then carried to the mulch or burning pile.

Raspberry

Culture is almost identical with that of blackberries, save that the bushes can be set a little closer, and more plants set to the hill, and the tops should be pinched off at 18 inches high instead of 4 feet. If quick returns are desired, four plants can be given to each hill. If the same attention is given to secure a bushy growth that has been directed for blackberries, four times the usual quantity can be picked on a given piece of ground. Raspberries give a greater yield of larger berries, if in tying up the bushes they are well spread out along the wire so that the sun can get at every part of the bearing part of the bush.

This long but I trust explicit article would not be complete if I did not add that berries should be picked directly into the shipping baskets, which should never hold more than a quart. Any other method will result in crushed and sour berries. When possible, the berries should reach the consumer on the same day that they are gathered, as lying over night in closed baskets softens and detracts from the appearance of the berry.

Murphys, Cal.

E. H. SCHAEFFLE.

THE DAIRY.

Close Cropping of Pastures.

EDITORS PRESS:—It is generally admitted that a great part of the substance of plants is derived from the atmosphere. They imbibe water, air, all manner of gases, and so grow and mature. It would be a curious study to determine how much of a great cornstalk, when complete, is taken from the earth, and how much from the air. We imagine the better half comes from the latter. But let us suppose one-half.

A grain of corn, put in the ground, begins its work very slowly. The plant will mature in 150 days. It will then weigh five pounds, ear and stalk. This may be 1000 times the original grain. At some time in its life it grows very fast.

For the first ten days, earth and water alone nourish it, and it has not doubled in weight. But as its leaves are spread to the sun, wind, rain and dew, it grows apace. The larger it is, the faster it grows in one day. If it weigh 1000 times the first grain in 150 days, that is an average of six times a day, all the way through. But as its baby growth is so slow, the last growth is accelerated, till it must add 20 or 30 corn grains a day. It probably doubles in the last month.

What makes this difference? The size of the plant, the spread of roots and leaves. They are all workers. The baby plant does baby work, and the great plant works in proportion. For the plant to grow it must have its leaves catching nutriment.

Now, hereby hangs a tale. If you keep clipping the plant all the time and keep it bare of working leaves, it will make only a baby growth all the year, 10 days to double itself. In 150 days it will have made the weight of 15 corn grains, whereas if you let it keep all its working leaves it will make 1000 instead of 15.

Now, all the plants of grass, clover, etc., in

your pasture probably follow these same. Turn on your cattle and sheep, nip them down to the ground and almost pull up the roots, and you have a poor baby growth all summer. The weight of vegetation is 15 instead of 1000.

Should you have two, three or four pastures and let each one grow uncropped till it touched maturity, till all its working surface was at work, the ground shaded, the moisture, electricity and gases had full play, and the swiftest growth attained, would not your grass crop be vastly improved?

We have seen California six inches deep with rich herbage almost everywhere. We see it bare now. The ground is exposed to the blazing sun and dry as a burnt brick. Is not this close cropping the reason? Men have kept vast herds that have eaten every green thing and then starved to death. They served the pasture just as they did the cattle and lost both.

We feel satisfied that in California no pasture should ever be eaten down to the bare ground. The plants should be spared while they are still big enough to do some good growing; and we shall have more cattle and better beef when the pastures are all fenced and never grazed till the crop is thick and plenty.

A. B.

October, 1887.

Views of a Yolo County Butter Consumer.

"Consumer" writes to the Yolo Mail a letter on butter-making, etc., which contains some practical and valuable suggestions. We quote as follows: Having lived in Woodland some years and finding but little if any first-class butter brought in, I have been inquiring into the causes, and am satisfied that it is wholly because of either a lack of knowledge or painstaking, for Yolo county around Woodland abounds in the best of feed for first-class butter, and thinking perhaps an article from a practical butter-maker who has made butter for years for the Boston market, and received first-class prices for the same, might be acceptable also with the view of helping those who wish to learn how to make a strictly first-class article. In treating upon butter-making we say first that it is impossible to make first-class butter without the cows are properly fed; that alfalfa is good we admit, but that alone will not produce the best results either in quality or quantity. The best and most practical butter-makers of the East have given up the idea that the natural grasses even in their most perfect state are sufficient to obtain the best results. Grain is necessary not only for quantity but especially for quality of butter. The grasses will make very fair butter, but if you are looking for something fine that has a good grain and will stand up in warm weather, grain must be fed. The best kind of grain is cornmeal mixed with bran or shorts. Barley is fair, but will not add so much to the quality as cornmeal. Bran or shorts always produces good milk and much of it, but will cause the cow to lose flesh, hence enough of cornmeal or barley should be fed to keep the cow in proper condition, for poor cows are always fed at a loss under any condition whatever. So much for the feed.

To make first-class butter even of first-class milk requires a great deal of hard work, and, in fact, eternal vigilance is the price. Everything must be perfectly clean, not only the dairy utensils but the surroundings. Milk and cream are very easy to become tainted from impure air. The perfect temperature for milk to raise good cream is 62°; as near this as possible will produce the best results. Cream should rise in 30 to 36 hours, and great care should be taken that the cream shall be properly raised, and it is a mistake that you will incur a loss by skimming a little too soon, for what is lost in quantity will be made up in quality, as the last to rise is poor. The best globules of cream rise first. The cream must not stand over 12 hours after skimming before churning, and if churned sooner it is better. A great mistake is often made in churning too much. Churning should always be stopped as soon as the butter is the size of grains of wheat; this will leave the butter in nice shape for the salt to strike in; the butter-milk strained off and the butter placed in a dish and salted from one-half to one ounce to the pound or to taste, and should only be worked enough to get it together in one long loaf. Then let it stand eight to ten hours and work until the milk is out, and stop as soon as it is out; also great care should be taken in preparing it for market. Neat, attractive packages go a long way toward suiting a customer.

I am sure by following the above the butter-maker will not have streaked or salty butter, and can always find a ready sale, even when the market is glutted with ordinary butter. That the best of butter can be made in Yolo has been proved by one particular dairyman to the knowledge of the writer, who has a standing offer the year round in Sacramento (where much coast butter is used) of two cents a pound above the best Point Reyes butter. The dairy interest is a great one and should be looked into by our people. We know of a few dairies that now make good butter and that is very reliable, and get satisfactory prices, while others make butter that is not fit to cook with.

THE Colorado brand-book contains the names of 7200 Colorado owners of cattle.

WHITE or gray horses are, it is said, rarely prostrated by heat.

PATRONS OF HUSBANDRY

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Hon. J. V. Webster.

We take pleasure in presenting, with almost photographic accuracy, the outspoken face of one of the best and most favorably known members of the Order of Patrons of Husbandry on this coast.

Jonathan Vinson Webster was born in Coffee county, Tennessee, July 31, 1830, and is now 57 years old. Bro. Webster at the age of seven lost his father, and was put to work on the farm to assist an elder brother in obtaining a subsistence for his mother and sisters.

He manfully dug away, going to a common district school, when the labor of the farm would permit, until he reached the age of 18, and then, seeing nothing before him but continual toil and little remuneration, he bade the friends of his childhood adieu, and, with a company of strangers, started West. Arriving at White river, Kansas, he remained 18 months engaged in the cultivation of cotton and corn. Finding himself a sufferer from chills, he again moved his gripsack to Western Missouri, where he remained until his health was recovered, and then joined a company of engineers who were surveying a railroad route through Missouri to Red river, Arkansas. The survey completed, he started for Texas via the Mississippi and the Gulf of Mexico; but after reaching New Orleans he turned back and made for Illinois.

In the early part of 1853, he started from Quincy to cross the plains, and reached California in the October following. He settled first at Placerville and then at Poverty bar, the name of the locality being appropriate, since his belongings had by that time dwindled down to an old red shirt, a pair of old pants and a longtailed, black coat of antediluvian origin. Commencing work in the mines at one-half ounce (\$8) per day, he saved money, and by and by he removed to Alameda county. More recently he has taken his family to Creston, San Luis Obispo county, where he is at present residing.

Bro. Webster has been identified with the Grange ever since its organization in this State, and has been one of its foremost members, his interest being that of a hard worker in the ranks of the Order. He has always endeavored to advance the cause of education by all just means within his power, ever acknowledging the broad principle that difference of opinion is no crime. He was elected Worthy Master of the California State Grange in 1875, and filled the chair at the Fourth Annual Session, at San Francisco, October 3 to 8, 1876, succeeding Worthy Master J. M. Hamilton. At the Sixth Annual Session, held at Sacramento, he was elected Treasurer of the State Grange, and filled that office till the Ninth Annual Session, at Santa Rosa, when he was chosen Secretary.

Although holding the highest State offices in the gift of the Order, his qualities as a leading member have been no less conspicuous through his connection with the *California Patron*, of which he was associate editor when first issued, May 17, 1876, by Dewey & Co. After two years' service as Master, he closed his editorial connection with the paper. On March 6, 1880, he again assumed the management of the *Patron*; and that he was thoroughly imbued with the importance of the work was made apparent in the development of the journal by gradual advances to the favorable position his fearless, animated and sound editorials and able management brought it through hard work.

The Brothers and Sisters who were present at the organization of Temescal Grange, in 1873, will remember that it required some urging to get Brother Webster to accept even the office of Chaplain of that Grange, he being a charter member.

In the old California Farmers' Union, organized before the Grange movement in this State, Brother Webster was placed upon the Executive Committee and acted well his part. From that time to this he has been one of the foremost men in the Farmer's and Grange cause.

When the non-partisan movement was started at Haywards with the avowed object of electing honest and capable men to the State Constitutional Convention, regardless of parties, Brother Webster was one of the strong men who led the movement that secured the election of several good members from Alameda county. When in the Constitutional Convention, he was a stalwart position in warding off the attempts to make the Constitution one that would favor the interests of money and monopoly rings rather than afford equal rights and justice to the great majority of people. He was also in the lead in heading off those who were willing to sell their birthright for a mess of pottage, by preparing for adoption such a Constitution

as would have been rejected by the people, and therefore continued in force the old Constitution. It required a man to guard the work successfully who could command the confidence of other good men, and one who had the intelligence and ability to make his power effective against the destroying wolves in that Convention. Such qualifications Brother Webster proved to possess.

It was through his sagacity and persistent effort that provision was made for mailing an official copy of the new Constitution to each and every voter in the State, and in our judgment, that was an all-essential point in giving it success on the day of election. Each voter having an official copy in his hands, upon reading the hired newspaper lies which flooded the State, the money-power influence proved powerless, and, in many instances, no doubt, reacted against the old Constitution and in favor of the new.

Patrons who have stood side by side with Brother Webster since the beginning of the

A Good Anniversary Day.

Although the weather was very threatening on Saturday last, a goodly number of Eden Grangers met with the Temescalites at Oakland, and thus jointly, with a small representation from other Granges, had another good old Grange time.

Brother and Sister Coulter from Santa Rosa were welcomed in due season, and Brother and Sister Deming of Vallejo, Don Mills of Bennett Valley, Sister Dorman of Valley Grange, Brother Moore of Danville and Brother Frazier of Alhambra were also present.

Brother Russell, by request, kindly relieved Brother Dewey, who was suffering from a severe cold, by presiding during the afternoon; and he did it most gracefully.

Upon being requested by Worthy Master Dewey, Bro. Coulter spoke of the meeting of the State Grange at Santa Rosa, saying that

pleasant things appreciative of young Grange women which, had he spoken in season, might have made him Governor before this time. Brothers Goodenough, Perham, Klee, Chester, Renwick and Deming also made brief speeches. At the Harvest Feast and in the hall quite a number of Brothers spoke eloquently and in a manner to make the whole occasion joyous and profitable. Several Sisters also made pertinent suggestions.

By request, Brother W. T. Jones of Benton Harbor Grange, Michigan, gave two songs, which, as well as his remarks, were excellent. Sister Roxy Dennis sang several beautiful solos, which were well received. Sister Blackwood was also fortunate in pleasing the audience with her singing. Sisters Jessie Weed and Nellie Webster both recited with well-recognized success.

Brother Coulter alluded to the birthday of the Grange and its organization at Washington by the seven men, noble, good and true, but humble and without special notoriety. How well they planned, and what incalculable benefits have their works brought forth in the short space of 20 years! He beautifully compared the banding together of these men in their work to Christ's gathering together the poor fishermen as His apostles, and how the world has been moved and uplifted in the 1887 years that have intervened! He spoke of the things which we shall accomplish, but laid more stress upon the failures which have been made, and which admonish us of the true way and the good work which stick-at-it-iveness on the part of the Patrons will yet accomplish. We hope Brother Coulter, as well as other speakers, will furnish as nearly as possible the substance of their remarks, as they should go upon record.

Brother Blackwood spoke with his usual ability, and was also requested to furnish his remarks for publication. This is the first occasion on which Temescal Grange has ever celebrated the anniversary of the Order. It was the first Grange to move in the matter of celebrating this year, and to its early action, and the publications relating to this and other matters, in the Grange papers, we think is due the result of securing various good gatherings throughout the State. Let us always henceforth make as much as possible of such occasions in keeping up the true spirit of the Order in active Granges, and in reviving and enthusing the lukewarm.

Had the weather been pleasant, the attendance would have been more than double; but as it was, the occasion was so well enjoyed that the following resolution, moved and seconded by Brothers Dewey and Blackwood, was unanimously adopted:

Resolved, That we will endeavor to meet in full numbers, on the next anniversary of the birthday of our noble Order, (the Patrons of Husbandry, Dec. 4, 1888.

ANNIVERSARY CELEBRATIONS.—Among the Granges of the Golden State that observed with feasting, culinary and intellectual, the Order's attainment of its majority, were Alhambra, Eden and Temescal, San Jose, Stockton and Santa Rosa. Yuba City also elected officers on that day; and we suppose there were a good many other celebrants, yet to be heard from.

BUTTE MOUNTAIN POMONA GRANGE will hold a regular meeting in Yuba City, Saturday, Dec. 17th, at 1 P. M., when it is expected that the fifth degree will be conferred upon a large number of applicants. The charter is still held open for new members, and all fourth-degree members in good standing in Sutter or Yuba counties are cordially invited to join.

MERCED GRANGE, according to a fraternal letter just received from Worthy Master Elliott, is doing finely. What with ten new members initiated since Nov. 1st, change of quarters, Harvest Feast, work in the third and fourth degrees, and fresh applications, the Order at Merced must be wide awake and prospering.

BRO. D. WOODMAN of Paw Paw, Michigan, whose visit to this coast many Californian Grangers recollect with lively pleasure, attended the recent session of the National Grange and will have a communication about it in the next issue of the *Patron*.

By late amendment the quarterly dues from Subordinate Granges to the State Grange are to be increased from 10 cents to 20 cents for each member of a Subordinate Grange in good standing.

BRO. I. C. STEELE of Pescadero, W. T. S. G., has been occupied since he returned home from the city preparing to start a water-motor to supply power for cutting hay, grinding grain, etc.

SAN JOSE GRANGE will complete the election of officers this Saturday, and discuss "Pruning the Peach" and the "Best Varieties to Plant."



HON. J. V. WEBSTER.

Grange movement to the present time, have never known him to flinch or turn away from what he believed to be right, and just, and true to the welfare of the Patrons of Husbandry.

The famous Stockton Grange Convention proved that Brother Webster had the "courage of his convictions" every time. It was a bold stroke, and although it failed of entire success, it was not Brother Webster's fault. It furnished many good lessons to Grangers, and our legislative halls have, through its influence, been since profited by the presence of more than one Granger who would never have passed its threshold as a member except through the lessons that J. V. Webster's self-sacrificing agitation taught.

While Brother Webster sacrificed thousands of dollars in valuable time and money while Master of the State Grange and as editor and manager of the *California Patron*, he has received a large reward in the education wrought upon himself and others by his good works. He has also gained a rich inheritance in the friendship and esteem by which he has engrafted himself in the hearts and confidence of his fellow-Patrons.

ALHAMBRA GRANGE has for the 14th time elected the venerable Dr. Strentzel Master.

not only the Patrons of Santa Rosa and vicinity were much gratified with the company present on that occasion, but the leading citizens and people generally spoke in warm commendation of the class of farming and household representatives who attended. Among all the different State associations that have met in Santa Rosa, none could receive higher praise for ability and good behavior. Bro. Coulter's remarks were excellent.

The Harvest Feast, prepared by the sisters of Temescal Grange, was one of the handsomest and best of the kind for which they are celebrated, the refreshment tables being abundantly loaded and beautifully decorated. They were completely filled; but with the exception of the sisters who served, all were finally accommodated with seats.

Sister Dennis in her good, quiet way, furnished a quantity of fresh home-made butter that could not be excelled. We want no gilded premium ranch butter for our palate when Sister Dennis' gilt-cream butter is in sight! This Eden butter was accompanied with some Eden mince pies, also of rare quality.

Brother Alfred Perkins, being called upon, made some very thoughtful and excellent remarks, which we should like to have him write out for publication. Brother Russell said some

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

RECLAIMING LAND FOR BEETS.—*Examiner*: Owners of 19,400 acres of tide land on the Oakland side of the bay, situated partly in Alameda and partly in Santa Clara counties, have contracted for a \$50,000 dredger with which to reclaim these lands, the object being to put them down in sugar beets. "We will have about 60 miles of dyking," said Charles F. Burrows, one of the owners, yesterday. "Each dyke will have a 60-foot base, a 20-foot crown, and be six feet high. There are six different estuaries, and the lands extend from Alvarado to Alviso. We recently reclaimed about 3000 acres of this tract, but we needed more powerful machinery, and this is why we are having this great dredger made." W. W. Montague, W. H. H. Hart and others are owners with Mr. Burrows.

Butte.

COTTON.—*Chico Enterprise*, Nov. 25: J. B. Thrower, a prominent rancher near Nord, about eight miles from Chico, brought to town this morning two cotton bolls of good size grown on his ranch. One of the bolls had burst and displayed a fine quality of cotton ready for picking. The seeds were planted late last spring in a mixed soil of adobe and sandy loam. Mr. Thrower is of the opinion that cotton can be successfully grown in Butte county, but thinks it should be planted early in the spring to give the plant a sufficient amount of moisture.

A MODEL NURSERY.—*Oroville Register*: A gentleman who lately visited the fruit nursery of General Bidwell at Chico tells us that it is conducted in the most systematic manner. The rows are marked with the name of the fruit, what stock they are grafted on, who did the grafting, the date of grafting, the age of the trees and all other particulars that can be used in keeping an accurate record of the trees. This is all entered in one book kept by the nurserymen and in a second book kept in the business office of the general. The utmost care and attention is exercised by Gen. Bidwell and Mr. Roach, the nurseryman in charge, in order that parties purchasing trees may obtain the fruit true to its name.

Contra Costa.

ALFALFA.—*Concord Sun*: On Senator Stanford's place, three miles from Concord, Jos. Silva Perez has leased a piece of land, barely 35 acres, from which he has cut this year 175 tons of alfalfa. The crop has yielded him \$1750, an average of \$50 per acre. Although this crop is a large one, a good season, such as Contra Costa usually has, will almost double this yield.

A NICE LITTLE VINEYARD.—*Antioch Ledger*, Nov. 26: We have received from Mr. Plumley's vineyard, at Point of Timber, generous samples of grapes of the Empereur, Sultan, Tokay, Muscatel, Muscat and Black Prince varieties. One cluster of the Empereur of the second crop weighed 3½ lbs., and a single bunch of the Sultan, a grape usually grown in small clusters, 3 lbs. Mr. Plumley's vineyard comprises 10 acres set to raisin and table grapes. All have not yet come into full bearing, and this year the crop has not been so abundant as was expected; but little, if any, less than \$100 per acre will be realized from the fruit, most of which has been sold in the vineyard. The samples received are all well ripened, finely colored—the Tokays are especially handsome—and highly flavored. A considerable amount of fruit still remains upon the vines.

Fresno.

ORANGES.—*Fresno Republican*, Nov. 25: Dozens of orange trees are to be seen in different parts of this city loaded with fruit now turning slightly golden. Fresno oranges are two weeks earlier than the same varieties grown about Los Angeles and Riverside. Pet-covich has on exhibition at his fruit-store several limbs from orange trees that have on them from 10 to 50 oranges. The limbs were cut in the orchards of Mr. Jos. Burns and Mr. Hazelton, near Centerville, and the fruit is as fine as that grown in any other section.

FINANCIAL SUCCESS.—*Republican*: The past year was Mr. F. H. Ball's first experience in farming of any sort, and he does not seem to be at all discouraged by the result of his summer's work. The fruit was all sold to Geo. W. Meade & Co., the peaches and pears as they came from the trees, and the raisins in the sweat-boxes. From ten acres of peaches he received \$2522.60; from three and one-half acres young pear trees, \$101.05, and from 55 acres of raisin vineyard of three-year-old vines, \$8700; a total of \$11,323.65. The net returns are something over \$8000, a neat sum to lay away for a modest investment of capital for one season's work.

Humboldt.

THRASHERS' TOTALS.—Mr. Ferrill has furnished the *Watchman* with figures of grain handled by six different thrashers in the Eel River valley this fall, with two machines at Mattole yet to be heard from. Oats, 329,286 bushels; barley, 96,993; wheat, 12,408; peas, 6551; rye, 902; birdseed, 61; grass-seed, 206; lentils, 104; total, 446,511 bushels. The grain was all remarkably clean and heavy.

Inyo.

FOR IRRIGATION BONDS.—The *Inyo Index* heartily congratulates the people of Irrigation

District No. 1, the people of Owens River Valley, and all the people of all Inyo county, upon the happy result of the bond election of Nov. 29th. The votes as canvassed in the five divisions forming the district gave a total of 38 yeas to 23 nays.

CANAL-MAKING.—*Inyo Independent*, Dec. 3: Good progress continues to be made on the east side canal. During the week the ditching machine has been kept at work toward the head of the canal, about three miles above Independence Station. The machine continues to work as well, indeed better, than at the start, as the men and horses get more accustomed to the work. From where the machine was at work a day or two ago the distance to be made to the river is a little over a mile. The soil turned up is of the finest quality; it is mellow and rich as an ash-heap, and will be very fertile when irrigated. If the work goes on as well as up to the present time, water will be conveyed in the canal for a large amount of land early in the spring.

Lake.

PLANTING CRANBERRIES.—*Avalanche*, Dec. 1: E. C. Riggs has received 1000 cranberry plants from Z. K. Jewett of Sparta, Wis., and will set them on some marshy ground he has. If successful, he will plant several acres to cranberries. We think this may prove a paying industry in some portions of Lake county, and hope Mr. Riggs will succeed in his experiment.

Los Angeles.

WESTMINSTER ITEMS.—*Cor. Times*, Nov. 28: Affairs in Westminster are quietly prosperous. Corn-husking and cribbing and potato-harvesting have kept the farmers busy, and field-hands have been scarce. Hay-balers have yet many tons waiting for them. The rainfall was .65 of an inch, and the roads are now in good order.

Marin.

HEAVY GRAPE CROP.—*San Rafael Journal*: The most prodigious yield of grapes we have ever heard of is recorded of six acres on the Novato ranch, from which Mr. DeLong this year gathered 102 tons of Mission grapes, not in two or three crops, but all in one. The grapes were sold at \$12 per ton on the ground—a yield of more than \$200 per acre.

Mariposa.

EDITORS PRESS:—On the dinner-table at the ranch owned by Marshall Harris, Thanksgiving Day, were green corn "roasting ears" and new potatoes. This place is over 3100 feet above sea level, 36 miles from the Yosemite valley, and is noted for the fine fruit raised there, especially apples, for which Mr. Harris finds a ready market in Merced and Fresno. Some that he shipped to S. F. brought \$4 per 50-pound box.—W. L. M., *Grant Springs*, Nov. 25th.

Monterey.

EDITORS PRESS:—Since the rain, the grass has started, and it is already green in places. Plowing will commence this week. There has been some dry seeding done. We have a great advantage in our soil here; unlike the adobe, when our harvest is over it is ready to plow again. Some of the farmers plow in the fall when their land is not foul. Summer-fallow always proves the best here. There are quite a number of people camped in the vicinity, looking for land to buy or take up. There is very little land worth taking up left now, unless it would be for vineyards. I think most of the hills would bring very good grapes, but it requires some labor to clear brush and prepare the ground. Grapes will grow on very dry soil when properly cultivated; they will grow between rocks where there is any moisture at all. This is a very poor country for feed; it was pastured with sheep so long that they almost destroyed it for feed. Sheep in traveling over the land bring all the gravel to the surface and make it look worse than it really is.—E. E. M., *Jolon*, Dec. 5th.

SAN LUCAS PROSPECTS.—*Cor. Salinas Index*, Dec. 1: San Lucas, although young, is a stirring burg with a promising future. It is surrounded by thousands of acres of first-class land, especially adapted for fruit and grain, on all of which excellent water in unlimited quantity can be struck at from 10 to 50 feet from the surface. Upward of double the acreage seeded last year will be brought under cultivation this season if times are any way propitious, and the plains, two years ago roamed over by sheep and cattle, will in a few months, by the hands of industrious settlers, be transformed into a vast expanse of waving grain.

Napa.

OLIVES BEARING.—*Register*, Dec. 1: At Napa Soda Springs there are 75 or more olive trees growing. They were planted out four years ago, and 10 of them are already bearing. A branch from one of them, loaded with ripe olives, has been placed upon our desk. A gallon or more berries per tree can be gathered from some of the trees. This is something remarkable for trees of that age. At Mr. Estee's "Hedgeside," there are a large number of olive trees in bearing, and their fruit will be seen with Napa's exhibit in the State Board of Trade rooms, S. F.

San Diego.

SUPERIOR SPUDS.—*San Jacinto Register*, Nov. 24: Last Saturday G. D. Spittler brought to this office some Irish potatoes of the White Elephant and Peerless varieties, which were raised on the mountain ranch of M. M. Onstott, five miles east of A. Sherman's mill. The potatoes are the best and largest that it has been our lot to behold. Mr. Onstott has a bonanza

in his mountain ranch if only for raising Irish potatoes. . . . Hardly had Mr. Spittler left when Robt. Shaw appeared with a half-dozen or more sweet potatoes which almost filled the wheat sack in which they were carried, they were such monsters. J. N. Huston took one to Kauffman & Haas, and it was found to tip the scales at six pounds. A much larger one had already been carted away by the "devil." Mr. Shaw planted the sweet potatoes just the same as he did his Irish potatoes, although the general rule is to first plant in a hot-bed and then transplant.

ARTESIAN WATER.—*San Diego Union*, Nov. 18: Less than three weeks ago the San Diego & Coronado Water Co. commenced boring an eight-inch artesian well at their works, about half a mile east of Old Town. After the sand of the river-bed had been passed, a stratum of clay was reached. Then came a layer of boulder and gravel, after which one of micaceous sand was reached at a depth of 70 feet. At this point the drill became clogged with the fine sand that continually fell in, but as soon as this was removed a flow of 24,000 gallons per day was obtained. Since then the flow has increased steadily, until now a stream of pure water is running from the pipe at the rate of 400,000 gallons every 24 hours. The water is soft, limpid and delicious to the taste. The two other eight-inch wells are being sunk at the water works, one of which is nearly completed, and work on the other is well under way.

VINEYARD COMPANY.—Articles of incorporation of the El Cajon Vineyard Co. were filed at San Diego, Dec. 2d. The capital stock is \$240,000. C. M. Johnson, S. M. Marshall, S. B. Bliss, H. F. Johnson and A. R. Bliss are the directors. The company is formed for the purpose of developing and maintaining vineyards.

Placer.

LATE PEACHES.—*Auburn Republican*, Nov. 30: Down on the Greeley ranch, below Newcastle, are some ripe peaches hanging on the trees. They are of the variety known here as the Winter Freestone. There are not many trees in this locality, and the fruit rarely ripens.

Sacramento.

PICKING GRAPES AFTER THANKSGIVING.—*Record-Union*, Nov. 28: John McNie of Florin to-day brought to this office a box of fine Muskat, Flame Tokay and Rose de Peru grapes, picked from the vines yesterday. They were of mammoth size and delicious flavor. This will be a hard story for those who reside in the regions of "six months winter and six months mighty late in the fall," but it is true, nevertheless. In fact, the markets of Sacramento are now supplied with grapes fresh from the vines.

San Joaquin.

PREPARING FOR FRESHETS.—*Stockton Mail*: Repairs are now being made on the island levees. On Union and on the main levees of Roberts' islands dredgers are employed. Mr. Ferris has had a dredger at work on the lower division of Roberts' island almost constantly for a year and a half. The expense of getting ready for the regular winter freshets is a heavy tax on the owners of reclaimed land, as the levees must be repaired annually. Last year over \$12,000 was expended in protecting Rough and Ready island, and this year the expense will be \$3500. The money is raised by a tax which is levied on the 1685 acres benefited.

S. L. Obispo.

OSO FLACO POTATOES.—*Arroyo Grande Cor. Tribune*: Phillips Bros. have on exhibition at their store some spuds from Oso Flaco, that beat the record. Three Burbanks weigh nine pounds and two White Elephant seven and one-half pounds. These are not potatoes with warts on, but good smooth ones. Those with small growths on run up as high as 10 and 12 pounds.

Stanislaus.

MODESTO JOTTINGS.—*News*, Dec. 1: A band of about 2000 sheep passed through town to-day, going south. . . . Major James Burney has been appointed agent at Modesto for the Capital Nurseries, Sac., W. E. Strong & Co., proprietors. . . . Several large pears raised on the ranch of J. E. Stewart, adjoining the city on the north-east, are on exhibition in Clayes' show window. They are fine specimens. . . . C. C. Baker brought to town a nine-pound potato, which from all sides represents heads of potent animals and various articles. It is a curious freak of nature. . . . In the Turlock Irrigation District, T. G. Yancey of Modesto and Mr. Fife of Stockton have purchased the Otis Perrin ranch five miles southwest of Keys Switch, consisting of 400 acres, for \$8200. Also 200 acres on the Stanislaus river, two miles this side of Oakdale belonging to Andrew Olsen has been purchased by W. A. Stuart of Sacramento; consideration, \$10,700.

Tulare.

CALVES DYING.—An unknown disease broke out among the Holstein calves of Sheriff Parker last week and two of them were found dead in the alfalfa pasture a few mornings since, while a calf of another breed died before a remedy could be administered. Mr. Parker says the disease was never known here until the introduction of alfalfa.

MIXED MENTION.—*Visalia Times*, Dec. 1: Numerous "bee-trees" are to be found in the timber belt surrounding this city. The first of this week Rev. and Virg. Sparks and Walter Barnes cut a limb from a tree near the cemetery that yielded about six gallons of honey. . . . Wherever almond trees have been set out in this county they have made a good growth and

proved very productive. . . . On the 23d ult. Thos. Kelly brought into Porterville a fine sample of turnips raised on his ranch. One of them weighed 5½ pounds and measured 25½ inches in circumference. . . . Several ranchers in this vicinity have signified their intention to plant small patches of sugar beets this season, and after their ripening have them analyzed and ascertain the percentage of saccharine matter they contain.

BROOM-CORN.—V. P. Ludlow, the broom manufacturer, before leaving the East, procured broom-corn seed in Indiana for use in seeding land in California, entertaining the idea that as Indiana broom-corn was the best raised in the Middle States it would prove the best for cultivation here. Last season he sowed his Eastern seed and also some that was raised here. The Indiana seed produced a straw 12 to 14 inches in length, while the California seed furnished a straw 18 to 20 inches in length and of extra quality. Everywhere in the county that broom-corn has been planted it has yielded abundantly, the straws being of good length, strength and fineness—the latter quality being one of the requisites in the manufacture of a first-class broom. As broom-corn brings from \$60 to \$90 per ton in S. F., its cultivation should pay, even with the high freight charged for its transportation to that market.

ARIZONA.

PEARS AND ALMONDS.—*Phoenix Herald*, Nov. 22: Maj. G. W. Ingalls to-day exhibited at the *Herald* office a basket of pears gathered at the ranch of E. O. Slocum, just north of town, of which eight pears averaged 17½ ounces each, and the largest weighed 20 ounces. They are of the Winter Nelis and Vicar of Winkfield varieties. He also gathered at Mr. Slocum's place a peck of elegant soft-shelled almonds, which he showed us, and they were fine both in size and flavor.

TOMBSTONE is organizing a fair association, and why not? Tombstone has a good stock country about her and the San Pedro valley to draw from in an agricultural way, while her mines are yet among the best in the Territory.

OREGON.

WILD FIRE.—A *Chronicle* dispatch from Portland, Dec. 2d, reports a disastrous fire in Grand Ronde valley, Or. Sparks from a passing locomotive set fire to an immense body of dry tules, and the flames swept over a large portion of the valley. In that neighborhood are several extensive cattle farms who have thousands of tons of hay and many hundred head of cattle in winter quarters. The fire destroyed all the hay, and the cattle were in danger of being burned to death. A strong wind was blowing at the time, and the flames spread very rapidly. The loss falls heavily on the stock-owners of Grand Ronde valley, especially at this season of the year. It will be impossible to replenish the stored hay, and should the winter be severe the loss of stock will be enormous.

The Oroville Citrus Fair.

We have received a card of invitation to the Oroville Citrus Fair and a circular relating thereto, which shows that the exhibition will have novel features, some of which have, however, been previously mentioned in the *RURAL*.

The fair will be held at Oroville, in Butte county, in a canvas pavilion, commencing Tuesday, December 20, 1887, and will continue five days. Full and varied collections of oranges, lemons, limes, olives, persimmons, pomegranates, olive oil, raisins, vegetables, cereals, etc., all products of Butte county, will be placed on exhibition, and no doubt the display will be a notable one. The holding of a citrus fair in a canvas pavilion in the month of December may appear to be novel, yet it is hoped thereby to demonstrate "that in Northern California can be found a climate as mild and equable as that of sunny Italy or balmy Spain," as the circular puts it. As stated last week, there will be a cheap rate on the Southern Pacific railway from San Francisco during the fair.

THE WOOL INTEREST.—A meeting of woolmen was held in this city at the office of Christy & Wise on Monday morning of this week. A full discussion was held, showing that the local wool interest is most strongly opposed to any reduction in the tariff on wool, and proposed to do all that can be done to bring their influence to bear upon Congress to that end. P. B. Flint, John H. Wise, Gardner Ball, John Shober, R. F. Parks and T. L. Whitney were appointed a committee to draft resolutions expressing the views of those who were present, to be forwarded to the Wool-Growers' Association and our representatives at Washington. It was also resolved to appoint a committee of five to represent the California wool-growers in Washington, to be appointed by the chairman at a subsequent meeting.

ANTI-DEBRIS.—The Sutter county Grand Jury, at their recent session, tendered a vote of thanks to George Ohleyer for presenting before the body the various phases of the anti-debris war. The actions of the Board of Supervisors in all such matters were heartily indorsed, and the advice was extended to them to carry on all suits until victory is secured.



Mushrooms.

Amid the pearly mists of rain,
Last night in dashes pouring,
I, watching from our window-pane,
Saw troops of fairies soaring.

Poor things, they meant to give a ball,
For grief they all were weeping!
I left the sight at nurse's call,
She said I should be sleeping.

And now across our door-yard's green,
Its velvet turf adorning
With dainty dots of snowy sheen,
Umbrellas lie this morning.

Wee, wee umbrellas lined with pink,
And still with moisture dripping,
They sheltered restless fays, I think,
Who longed to be a-tripping.

—Florence Brown, in the American Magazine.

Making Over Dresses at Home.

[Written for the RURAL PRESS by FRANCES M. PAYSON.]

There is a great deal of "knack" about this branch of dressmaking, and in no direction does natural taste and tact show for more than in trying to make "something out of nothing," as I heard one little woman put it.

It is a great mistake to slight the making of a suit and think it unnecessary to take pains because it is old, for often old material, properly cleaned and "revamped," comes out in a new and charming costume with little or no expense, and it certainly gives a vast amount of satisfaction to make a pretty new suit out of something otherwise worthless. The first step in the making over is to rip carefully all your material. It is a good plan to spend spare moments when you have no new work ready to take up in ripping old garments ready for the wash.

When the stitching is done on a lock-stitch machine, it pays better, unless you are short of material, to run the scissors along close to the seam and cut rather than rip the pieces. Having ripped or cut all your pieces and picked out all threads, examine the goods carefully to find all the spots, so that you may be sure to get them out in the wash, for after the goods are wet it is impossible to tell the soiled from the clean.

Try washing a little piece of your goods first to see if it will change color. If it is too delicate, clean it by a thorough shaking, brushing, or whipping, after which sponge it over carefully, rubbing the spots well with the following preparation for cleaning, which is a most excellent recipe and seldom harms the most delicate colors even in silks and ribbons.

Rusty black goods should be dipped after cleaning in strong coffee, which will freshen it and take away its greenish look.

Press heavy goods while damp—not wet—on the wrong side, with a hot iron. More delicate materials, or those which you do not wish to make shiny on the wrong side, press on the right side, laying a damp cloth over the goods. Never rest your iron on the right side, as it glosses the goods. Sometimes a hairy, woolly piece of material looks better to be ironed on the right side without the cloth, as it lays the nap, but it is usually unsafe to try it.

Unless, however, your material is of a very delicate and fading nature, it will look far better to be put right into a washtub of hot water in which a handful of borax has been dissolved, and thoroughly scrubbed, piece by piece, on a washboard. If greasy, add fine white soap, and even if a durable color, rub it directly on the greasy spots. Most all wool goods come out of the wash looking like new, and I have even seen the treatment repeated two or three times without detriment.

Having now gotten your material ready, decide how you will make your suit, or in selecting a style bear in mind the general shape of your pieces. Don't plan shirring when your goods are all on the straight way of the cloth, nor pleats when it is mostly bias. Try to pick out a pattern which admits of using the shape of the piece you have to advantage.

Select the best pieces for the front or side breadths and save the poorer for the back draperies, as these, on account of their looping, may be pieced a good deal. If you already have a piece used for drapery, turn it end for end, or bring the worn and faded parts up in the gathers. If material is scanty, you can piece it widthwise, just underneath where the main loopings come, and the part which hangs may be matched and pieced lengthwise several times. Piecing can be carried to a great extent if you carefully press every seam flat. Let me beg of you not to neglect this and think it of little moment; it makes all the difference between neat and slipshod work. It is so little trouble to have an iron/setting on the stove and a pressing-stand ready, and 'tis so much easier and quicker

to work over nicely pressed work. Wet every seam and press it dry or it will rise again.

Pleating may be made out of the little bits, as piecing may be done here very nicely, indeed, if you have patience inexhaustible, you may run a seam under every pleat and it will never show when pressed.

Select the strong parts for sleeves and don't piece your uppers except under a cuff. The unders, if very narrow, especially if the goods is of a mixed pattern, may sometimes be pieced two or three times without being noticed, though 'tis best to piece them only down the middle lengthwise, as the edges are the noticeable part.

If your basque fronts are too small or the buttonholes are worn out, set in a vest (or a simulated one) or put on trimming to hide a seam down each side of the front. If the bottom of the basque is too tight in the back for the now fashionable bustles, split it up the back seam, face it and finish with buttons, or set in a straight piece and boxpleat it up underneath to a postilion back, or set in a fan of the same. If the basque is too short, lengthen by trimming with a bias fold put on smoothly.

There are endless ways which ingenuity suggests for using old material, and if care is taken it is often hard to tell that a suit has ever been in the washtub.

THE LABOR QUESTION.—Edison, the electrician, in reply to the question, "When motive power gets to be four times as cheap as it is, what will become of the laboring man?" said: "He will be enriched by it. Machinery will be his slave. See how machinery has multiplied in the past 50 years. As a direct result, workmen get double the wages they did then, and the necessities of life cost only half as much. In other words, a handworker can to-day buy four times as much with 10 hours of work as his father could 50 years ago. For the first time in the world's history, a skilled mechanic can buy a barrel of flour with a single day's work. The machinery in the United States represents the labor of a thousand million men, or 50 times as much labor as that of all the men in the country. When motive-power is still further cheapened—say in another generation—I believe that the unskilled laborer, if sober and industrious, can have a house of his own, a horse and carriage, a library and a piano. It is terrible stupidity that leads some laboring men to suppose that machinery is their foe. It is the thing that gives them independence and even freedom. Without machinery society would drift into the condition of master and slave. The multiplication of machinery means for every worker more food, better clothes, better house, less work. In fact, I believe that the indefinite increase of machinery is going to solve what folks call 'the labor question'—that is, the desire of hand-workers to get a bigger slice of the margin of profit."

A HINT FOR HOUSEKEEPERS.—The *Indiana Farmer* tells how a lady put to flight a tramp who called a few mornings ago and asked for cold victuals. He was given a plate of oatmeal mush, some raw, dried prunes, a tomato, and a saucer of hominy, the whole without seasoning of any kind. "I—I—can't you let me have some milk and sugar, salt and pepper?" inquired the embarrassed tourist as he surveyed the spread. "Milk is not wholesome," replied the lady of the house, sweetly, "and we never use condiments. I can let you have some cracked wheat if you like." "Haven't you any meat?" "Oh, no! we never use meat; it is not fit for the human stomach. Would you like some gruel?" "Is this the kind of stuff you live on?" "Certainly, my friend. Meats, seasonings, gravies, condiments of all kinds, and heating foods have a tendency to injure the coating of the stomach, impart an unnatural condition to the system, and—why, here, let me read a chapter of this book to you. I can show you in half an hour—" With a yell of consternation the tramp fled. As he went through the front gate he paused long enough to write on the gatepost with chalk these words, for information of other tramps: "Krank! Keep away!"

HE OBEYED ORDERS.—The *Santa Cruz Courier-Item* gives an example of literal and unreasoning obedience to instructions. A gentleman who lives on Beach Hill, and has a fine lawn and flower garden, hired a Chinaman a few weeks ago to work about the house. Among other things he was instructed to sprinkle the flower garden with the hose at 5 o'clock each evening. This duty was faithfully performed—very faithfully. Last evening, when the owner of the lawn went home, he found the Chinaman standing in the rain, holding an umbrella over his head, and sprinkling the flowers.

A LIAR PUNISHED.—A Nova Scotia woman went out into the field to bring in a horse. She held out her hat, as if she had some oats for him; but it was empty. When the animal discovered the fraud, he turned and kicked, his feet striking her in the forehead. She was unconscious for two days, and it is doubtful if she will recover.

JAVELLE-WATER, used to remove tea and coffee, grass and fruit stains from linen, is made thus: Mix well in an earthen vessel one pound of sal-soda, five cents worth of chloride of lime and two quarts of soft water.

How to Learn About Entomology.

Now that the law requires instruction in entomology in the public schools, we trust that every effort will be made to make the study inviting and profitable. Much rests with the teacher in the way the subject is presented and interest awakened. We have not seen anything more hopeful for the study than the report which we give below from the *Register* of San Jacinto, San Diego county.

PUBLIC SCHOOL, Nov. 4, 1887.—According to previous adjournment, the last meeting of the Agassiz Association was devoted to entomology. After the calling to order, roll-call, reading of minutes, committee reports and other routine business had been transacted, the president called upon each member in succession to bring his contribution to the day's exercises. Each member, as his name was called, exhibited a mounted insect specimen, collected, classified and labeled by himself since the last meeting. Each of these specimens was accompanied by a short essay, explaining and classifying the specimens, giving in many cases detailed drawings of the insect as a whole and of its parts. These essays were all written upon uniform paper, and were preserved by the Curator for future reference. Many of the members also made large blackboard drawings with colored chalks to illustrate their essays. Some of the exercises were as follows: Milton Bates brought in a specimen of beetle and made a large drawing of its leg, showing the scientific name and use of each part. Minnie Cree read an essay calling attention to the value and attractiveness of entomology, illustrated by a blackboard full of large drawings showing a typical insect in the larva form, the pupa form, and in its final perfect condition, a beautiful butterfly. Mand McCormick presented a fine specimen of wood-borer with drawings on blackboard and paper. Charley Stoddard's specimen was a grasshopper, very neatly drawn on paper in different positions, with detailed drawings of its parts. Thomas Fairchild showed a large green tomato worm, then exhibited the same insect in its pupa form, and finally called attention to a blackboard drawing several feet square of a magnificent moth, the perfect form of the same insect. This was considered to be the finest drawing of the day. William Russell brought in and exhibited to the society a series of comic drawings of grasshoppers. They excited much merriment. Miguel Estudillo brought in a butterfly, and created a great deal of amusement by describing the adventures that befell him while capturing it. Mr. Hyatt gave a short lecture showing the difference between good specimens and bad ones, and explaining in detail the four forms of insect life. Mary Anderson explained the difference between butterflies and moths and showed drawings of the scales on the wings of butterflies. Fische Foote, Carrie Clark and Minnie Todd sang a song about the charms of "Gathering up the bugs from the green fields." The secretary's table at the close of the meeting showed a remarkable collection of insects to have been made in one place within the space of three days. Every one of the order of insect life was represented. More than 50 specimens, belonging to more than 25 different species, were there. The number of species from each order was as follows: Hymenoptera, 5; Lepidoptera, 9; Diptera, 2; Hemiptera, 3; Coleoptera, 1; Orthoptera, 5; Neuroptera, 1. The society was assisted in making its collection by several members of the intermediate departments, especially Una Atwood, Willie Cresmer, Albert Reinhardt and Ernest Jenkins. A lack of space prevents mention of the many points of interest and information contained in the essays and remarks accompanying the specimens.

WILLIAM FOWLER, President,
CARRIE BATES, Secretary.

The Home or the Saloon?

The following notice, headed "To the Public," and signed with the woman's full name, appears in one of our California exchanges:

"It sometimes becomes necessary for a woman to protect herself, and when such a state of affairs exists she must use the best means of defense at her command. My husband, when at himself, is a gentleman, a good mechanic, a liberal provider for his family, and a good husband and father. When under the influence of liquor, he is the reverse in almost every respect. His habits of conviviality are such of late that he is fast becoming a wreck; and while I regret the necessity of the course I am compelled to pursue, I say now that I shall fully enforce my rights under the law against any and all of those who disregard the following notice:

"From and after this date I will prosecute to the full extent of the law any person selling, furnishing or causing to be sold or furnished any intoxicating liquors to my husband, —"

Is a man, who would for lucre's sake disregard such an appeal as the above implies, fit to cast the ballot of an American citizen, or deserving of the protection of our laws?

FEATHER CARPETS.—The Japanese make carpets of feathers, said to be both durable and beautiful.

Athanasia.

The ship may sink
And I may drink
A hasty death in the bitter sea;
But all that I leave
In the ocean-grave
Can be slipped and spared, and no loss to me.

What care I
Though fall the sky,
And the shriveling earth to a cinder turn?
No fires of doom
Can ever consume
What never was made nor meant to burn.

Let go the breath!
There is no death
To the living soul, nor loss, nor harm.
Not of the clod
Is the life of God—
Let it mount as it will, from form to form.

—(Chas. G. Ames)

Fannie H. Avery.

Thousands of our readers, who never looked into her bright, brown eyes, have made pleasant acquaintance with Mrs. Fannie H. Avery, in our "Home Circle," through her contributions in prose and verse; and many will share the sorrow with which we announce that she will never lift the pen again. Her lungs had long been troublesome, and her friends concerned about her, but she was up and out of doors until a fortnight before her death, which occurred quite unexpectedly the last day of November.

She was born in San Francisco in 1860—being a daughter of Peter Job, whose restaurant was somewhat famous in its day—and was brought up and given a common-school education here; but twice in the course of her girlhood she made trips across the Atlantic and visited Great Britain and Paris.

At the age of 18 she married Geo. H. Avery, whom she leaves with their two little children, George and Fannie. They lived for a considerable time in Arizona; but she returned to her native city before her husband, and there was a period of many months, during which he was there, while she was here, regularly employed in proof-reading. For the past year and more, however, the family has been together in San Francisco.

Of Scotch extraction on her mother's side, Mrs. Avery combined with French vivacity the energy and grit of the Caledonian. Her mind was active and inquiring. She had lively intellectual ambition and aspirations, and beside her contributions to our columns, wrote a good deal for the *S. F. Post* and the *News Letter*. At one time, we remember, she was an eager and enthusiastic reader of Thoreau; then ardent in the study of astronomy; and at Mrs. Sarah B. Cooper's bible-class she was a frequent attendant and a fearless questioner.

On the afternoon of Friday, Dec. 23, a few friends gathered around the casket, and two of those whom ties of kindly interest and personal affection had drawn thither conducted a brief and simple funeral service of prayer, scripture and spoken word. One read Mrs. Avery's own verses, "His mother made him a little coat," which appeared in the *RURAL* of July 16, 1887.

"Tis long since Samuel's mother wrought
A little coat for him to wear,
In token of her loving thought,
Her tender, unforgetful care.

Strong emblem of maternal love!
Sweet story from a distant age!
We mothers prize it far above
More striking themes on history's page.

For we, too, fashion little coats
For loved ones of our own to-day;
While Fancy many a banner floats
Above our needle's gleam and play.

The prophet's mother's hopes and fears,
Her love, are changeless links that bind
Our hearts to hers through all the years,
And ebb and flow of humankind."

And the closing stanzas of her later "Mamma":

Who always is at hand to hear
Their little troubles, saying, "Dear,
I'm sure 'twill be all right, don't fear?"
Mamma.

Who loves them with a wondrous love,
That is all earthly love above,
Which she would every moment prove?
Mamma.

And the thought came quickly that the great Father-Mother Love, wherein we are all embodied—the Love out of whose soundless depths spring all the loves of parents and children and brothers and sisters and friends—does not fail to clothe upon a right the life which so lately informed the beautiful but lifeless form, now forever discarded as an outworn garment.

She had in her 27 years a varied and sometimes sore experience, but on that dead face the departing spirit left a look that was more than peaceful, a look that seemed almost ready to break into a smile at the remembrance that any of those trials, forever past, had seemed hard and heavy in the passing, and as there came to mind Elisha's question to the Shunammite mother: "Is it well with the child?" there rose up also, with strong inward assurance, the same old answer: It is well.

THERE are 60,000 women farmers in Ireland.

YOUNG FOLKS' COLUMN.

Edith.

(Written for the RURAL PRESS by AGENT SUSIE.)

"O mamma! I have a letter from aunty, and she wants me to go and make her a visit; do you think I can?" exclaimed Edith Brown, as she ran in from the postoffice, where she had stopped for the mail, on her way home from school.

Mrs. Brown thought a moment, then said: "Yes, dear. I think you can go, when school closes next week, but you will have to go on the cars alone, for I can't leave home to go with you."

"O well, mamma, you know I am 13, so of course I can go alone."

Edith counted the days, and they seemed to pass very slowly, she was so impatient to visit her aunty, who lived on a ranch. At last the long-looked-for day and hour arrived for her to start on her journey. To be sure she only had an hour and a half to be on the train, but it seemed quite a journey to her, as she was going alone. She amused herself looking out of the window, and saw lovely woods with a merry stream running along over stones, that in some places dashed the water into white foam, and then again she saw in the distance beautiful hills and mountains, then all at once the train plunged into a long, dark tunnel. It made her heart beat a little faster, still she wasn't afraid, though she felt very glad when they came out in the sunshine again.

There was a lady near her who had a little baby-girl. Whether she was sick or only cross, nobody knew, but she cried and fretted till her mother was worn out. Edith loved babies, and she asked the mother to let her take the little girl, which the poor tired mother was very glad to do. Edith amused her, and she was soon laughing and crowing in her baby glee. Edith was so taken up with her, the time passed quickly, and her journey seemed very short.

When the train reached the station, her aunty was there to meet her, and they had a pleasant ride out to the ranch, about six miles right up into the mountains, and through shady nooks part of the way. As soon as they reached the ranch, she began a tour of the place and found plenty to see.

One day the men were thrashing wheat for the hens. They spread it on a clean place, where the ground was hard and smooth, then took four horses to tread it out. The two front ones had bridles and one had a saddle. The two back ones were tied to the tails of the front ones and looked very funny indeed.

Edith longed to ride the leader, and at last she got on and had a fine time riding round and round, guiding the four horses nicely. As her aunty watched her, it seemed very much like work, but Edith thought it was great fun. She found something new to interest her every day, and did not spend her time in play, either. She helped her aunty peel great, luscious peaches to make preserves of, fed the chickens, and helped in many ways, and was as happy as a busy little girl should be. I don't believe idle girls are ever very happy. They tire of their constant play, and need some real duties to keep them happy and cheerful. You know it is said: "All work and no play makes Jack a dull boy," and I don't doubt it is true, and think I can suggest a line that is also true: "All play and no work makes Jane a dull girl." Girls long to reach womanhood, and when in their "teens" feel very grand, and think they know a great deal more than they really do, and are not always willing to share with mamma little cares, duties and burdens of life that each day brings to any and every home, and that a girl of 13 can take, with no harm to herself, and be a great help to mamma.

One day Edith and her aunty went down to the beach, where they found a long stretch of smooth sand that was nice to walk on. They watched the waves as they came tumbling in, making a line of white on the sand. It was a lovely warm day, so Edith and her aunty went in the surf bathing. Both could swim; but Edith with her fresh young strength far outswam her aunty, who had to call her back for fear she would go too far out. Her swim on her back and side and tumbled about, having a fine time. After their bath they sat on the beach and ate their lunch, with appetites sharpened by their exercise. They watched the flocks of little tiny birds called "Mother Cary's chickens," which ran along the sand and when a wave came in would scamper back like so many children. They looked black as they ran; then all at once the whole flock rose and flew off, and as they did so looked like a sheet of white, and as they turned and swayed about would show the black side of their wings again.

Edith wanted to go in the museum, so they did, and saw many beautiful shells, sea mosses and curiosities that had been taken from the "mighty deep." Then they had a pleasant ride home in the cool summer twilight.

Edith had the promise of staying two weeks, and her mamma wrote for her to go on a certain day and that she would meet her at a station a few miles from the one nearest where they lived, but did not say she was going to take the train at that station, so Edith and her aunty supposed Mrs. Brown wanted her to get off at this station; so when she took her to the train, checked her little trunk there, and sent her off well pleased with her visit, and when the train reached that station she jumped out as

quick as she could to find her mamma. But alas! things get dreadfully mixed up and crooked sometimes in this world. Mrs. Brown meant to have written that she and papa would get on the train at that station, so they did get on, missing Edith as she jumped so quick. They hunted all through the cars for her, while she, poor child, was hunting for them outside. At last the train started on. They comforted themselves with the thought that she had not started for home, and that a letter would tell them all about it, so went home, not very much worried, while Edith was left alone in a strange place, and began to be very anxious as to how she should get home. At last a kind gentleman, who saw her walking about with a troubled look, said, "Little girl, are you waiting for some one?" Edith told him she had somehow missed her parents and did not know how she could get home. Just then a man who heard what she said, stepped up and told her he would take her home in his wagon for five dollars, but she thought that was too much to pay. Then the gentleman who spoke to her first, said she had better take the freight train to the station nearest her home, and then she could walk the four miles from there to her home, if no other way could be found. So with a very lonesome feeling she took the train which soon came along, fortunately, and when she got out, was much relieved to see a man who lived not very far from her home. He asked her if her papa was coming for her, and when he heard about her trouble, he very kindly said she could ride as far as he went, and then would only have one mile to walk. So she gladly climbed up into his wagon. She had some lunch that her aunty had given her, but was too worried to eat. Though her head ached, she did not realize that a little food would make her feel better and stronger to take the long walk. She was thoughtful enough to leave her little trunk with the baggage-man.

When they came to the crossroads she thanked the man for her ride and started off on her long walk. It was summer, but was after seven o'clock, so was not very light, and as she plodded on through the dust the tears would come. Now and then a belated bird gave a little chirp as it flew to its nest; but she did not heed it, just hurried on as fast as she could. He who watches even a sparrow fall watched over her, and she reached home safely but very tired, and it seemed a sad ending to her pleasant visit. Her parents were so surprised when she walked into the house that they hardly knew what to say. Her mamma said: "Why, Edith, where have you been?"

She replied amid her tears: "I've been walking home."

"Walking home from where, child?" asked her papa.

Then she told them all about it; and, after they had talked it over, it did not seem strange. They thought they wanted her to get off where she did. They were very glad she had met kind people, and said she was brave and thankful to have gotten home, and felt very thankful to the Good Shepherd who had watched over His lost lamb.

What Became of Uncle John's Rubbers.

(Written for the RURAL PRESS by TOM WILLIS.)

Susie found this in an old note-book in mamma's trunk, and brought it to me to read, and, at her request, I have given it to the public, word for word.

In the first place, just after Uncle John (that's grandpa now) had brought them home from the store, Lulu wanted to know what they were for. Lulu was told, but she resolved to do something else with them. When Uncle John had retired to his room for an after-dinner nap, Lulu, a mother of 19 dolls of all kinds and both sexes, carried the rubbers into her play-room, put all of her dolls in them that could be crowded in, found the scissors and cut holes in the rubbers, then putting the arms and feet of the unlucky dolls through. Tying strings on the rubbers, she drew them, one by one, through the hall and around the porch. Suddenly the tea bell rang. Lulu left both the dolls and their queer carriages by the nursery door, and hurried to the dining-room, little thinking when she would see her dollies again.

After lunch, four-year-old Tommie came through the hall, and spying the rubbers and their odd carriages, he thought what excellent boats they would make; he then carried them upstairs. Luckily for him, Lulu and her mother were out riding, and the hired girl had company in the parlor, so he passed out unmolested. There was a tub of clear water on the back porch, and in this he sailed his queer craft. Suddenly one of the rubbers sank and faithful Tommie reached after it, but in the endeavor, sank the other, and tumbled in himself. First pulling out himself, and then the rubbers, he threw Lulu's pets in the sink, and carried the overshoes out in the garden. Carlo, Tommie's pet dog, seized them, buried one and chewed the other. When Uncle John came home at night, no one knew what became of the rubbers, not even Carlo, who wagged his tail and barked as brisk as ever. But the doctor *did* know that Tommie had the croup, and papa knew that there was a long doctor bill. But some time after, there were some very ragged pieces of rubber found in the fence corner, and Uncle John guessed that they were once his rubbers. Cloverdale.

GOOD HEALTH.

Cigarette Smoking.

A champion of the weed says: "The Cubans, who smoke all their lives, live as long as we do." To this statement there are several points to be made in demurrer. In the first place the Spanish race is constitutionally temperate. The cigarette is preferred because it contains less tobacco than the cigar. In the next place the cigarette smoked by the Cuban is not the cigarette of the cheap cigar shop. It is not made of sweepings adulterated with drugs, poisoned with "perique" and rolled up in paper which preserves the flavor of the chemicals used in the paper manufacture. "Perique," by the way, is a Louisiana product, in which is preserved and concentrated, by the method of curing, the most intense properties of nicotine. A pipe full of it, smoked by one not accustomed to this particular tobacco, would throw even an old smoker into a swoon. A little of it goes a great way. Genuine perique, or its drugged imitations, enters into the most popular and costly brands of cigarettes. Their effect is instantaneous until the habit becomes fixed, and then the effect is a chronic evil. Opium or even hasheesh may often be suspected. The Spanish epicure in cigarettes often, if not usually, rolls up his own. The deft performance of the operation is as much an accomplishment as the flitting of a lady's fan. The exquisite produces from his pocket a square bit of rice paper or corn husk, or paper of an approved manufacture. Delicately he doubles this and sifts into the fold a modicum of the best tobacco, clean and pure. With the skill of habit he finishes the cigarette, and turning it up at both ends, then produces his "machero," lights, puffs gently, and in a few minutes tosses the end away. He waits a long space before he takes another. And that is Spanish cigarette smoking, in which the paper or bulk envelope is scarcely moistened by the lips—not sucked as if the smoker would drain out the last drops. Some cigarettes may be considered an improvement on the heavy, strong cigar. The men who manufacture them for sale for home consumption conform to the delicate tastes of their customers. The cigarettes which fill our streets and houses with their noisome stench are things entirely of another sort. They are as bad as bad whiskey to pure brandy, which are not necessities of life any more than tobacco is. A decent respect for the proprieties of manhood might keep those who call themselves men from fraternizing with the dilapidated street urchins, who can outsmoke the tallest man on the street. And a proper regard for the duty of example should deter men from leading boys to create the fumes which resemble—King James in his "Counterblast," will tell you what.—*Philadelphia Ledger*.

TO REMOVE FRECKLES.—The following ointment was recommended by Dr. Heitzman and others at the late Greenwich-meeting of the American Dermatological Association, being an ointment recommended by Wertheim, of Vienna: White precipitate, subnitrate of bismuth, each one drachm; glycerine ointment, one ounce. This was to be applied in a thin layer every other night, and in from four to six weeks the result would be found to be highly satisfactory. Another remedy is given as follows: Horseradish grated into a cup of cold sour milk—let it stand 12 hours, then strain and apply two or three times a day—will, it is said, remove freckles from hands or face in a short time. Or, one ounce of lemon juice mixed with a quarter of a drachm of pulverized borax and half a drachm of sugar, will also remove them. Keep the lotion in a glass bottle, corked tightly a few days before using, and apply to the freckles occasionally, and they will soon disappear.

ANCIENT VIEWS ON TEMPERANCE.—Nearly a century ago Johnson said: The water-drinker glides tranquilly through life without much exhilaration or depression, and escapes many diseases to which he would otherwise be subject. The wine-drinker experiences short but vivid periods of rapture and long intervals of gloom. He is also more subject to disease. The balance of enjoyment, then, turns decidedly in favor of the water-drinker, leaving out his temporal prosperity and future anticipations, and the nearer we keep to his regime the happier we shall be. Here, however, as in all other things, there is a certain latitude within the range of health and happiness which the wise man and the philosopher will occasionally traverse round, but not exceed. The native fountain is in the center of this circle, and from it our eccentric divergences should be narrowly watched and carefully limited.

THE CAUSE OF INFECTIOUS DISEASES.—It is generally believed at the present time that the peculiar poisonous matters, the immediate cause of infectious diseases, are living germs or organisms, which are introduced into the body through the mouth or lungs. Consonant with this theory, it is accepted that these germs exist in nature; are always somewhere, awaiting, as it were, conditions favorable for their continued development. If this is believed, then it

follows that for each infectious disease there is a specific germ or poison which is capable of giving rise to that disease and no other. The germ theory has been established by facts in several diseases, and it seems highly probable that further investigation will yet prove that it is properly accepted for all infectious diseases.

DOMESTIC ECONOMY.

Washing Oilcloth.

To keep oilcloth looking nice it is essential that proper attention shall be given to the washing of it. Nothing will ruin it quicker than carelessness in this, and it will take but very few washings of this kind to do it. A good housewife is more careful of her oilcloth than of her best carpet, for the latter, not being in use as often, she knows does not require as much care; while the former, being in constant use, needs to be looked after very carefully, in order to have it present as good an appearance as possible. An oilcloth that has been neglected, aside from its not looking as well, will not last as long as the one that has been cared for carefully.

Too frequent washing, no matter how well it is done, will not improve oilcloth in the end. Usually this is the kind of treatment it receives, for few housewives seem to recognize the difference between a dusty oilcloth and a dirty one, and treat both the same. After it has had a thorough sweeping, if it looks dull and dusty, go over it, a little at a time, with a dry mop cloth, frequently shaking the cloth outside to relieve it of the dust collected in its work, and it will look as bright as though washed, and will wear a great deal longer. Frequent dustings of the oilcloth will save it many washings, and the housewife also some extra time and strength. A long-handled mop is just the thing for this work, for with its aid the floor can be gone over in one-half the time, or even less, than if done by hand, and look every bit as bright and clean.

Never use soap in the water when washing oilcloth; it is good for a great many things, but this is not one of them. It will, to be sure, remove any grease or dirt there may be; but with it, it will also remove the paint and fade the colors. An oilcloth that has been always washed in soap and water is easily discovered by its faded look. Ammonia should never be used in the water, which is one of the few things for which it cannot be recommended, although some women use it for this work. It may not injure the colors nor remove the paint, but it deadens the luster and gives to the cloth a dull, dead look. There are very few housewives that do not know that a brush should be used on oilcloth only on rare occasions, and that only a very soft one should be used then. When an oilcloth has been neglected, and by faulty washings or dryings the water or suds has been allowed to settle and dry between the rough surfaces, a brush is the only thing that will thoroughly remove it; but it should be a soft one and used as lightly as possible, but just enough scouring done to loosen and remove the sediment.

Use clean, warm water, or milk and water, which is much to be preferred when it can be conveniently obtained. With a clean flannel cloth wash as large a space as you can without doing much reaching. Have a dry cloth of flannel or coarse crash for a wiper, and after wiping as well as the wrung-out damp cloth will admit, go over it again with the dry cloth, being careful that no sediment is left in the corrugated surface, and wipe thoroughly dry. Go over the whole floor in this way, then let it stand until all the dampness has disappeared and it is perfectly dry. Warm some linseed oil, and with a flannel cloth apply it while yet warm to the oilcloth. The trouble with most housewives when using oil is that they use too much, when a little is all that is necessary. Rub a very little into the oilcloth, just enough to give it a nice gloss. If too much is used it will be worse than none, for the cloth will be sticky, and catch and keep every particle of dust touching it. If linseed oil is not convenient, kerosene will do very well, but even this should be used sparingly, or like the linseed it will do more harm than good.

In the country, skim-milk is often used for washing oilcloth, and is an excellent thing for this purpose, as it gives the cloth a beautiful gloss and dispenses with the use of oils altogether.

COLORING WHITEWASH FOR INTERIOR WALLS.

—Coloring matter may be stirred into white wash to make any desired shade. Spanish brown will make a red-pink, more or less deep according to quantity used. Finely pulverized common clay mixed with Spanish brown makes a reddish stone color. Chrome yellow for yellow color, and if small quantity is used, a cream. Use indigo for different shades of blue, and indigo and chrome yellow for green. Green pigments cannot be safely used with lime, as the lime will injure the color, and the green will cause the wash to peel off. For different shades of red, mix Venetian red and Spanish brown in various proportions. Lampblack will give a pretty gray if used in proper proportions with the whitewash.—*Atlanta, Ga., Southern Cultivator*.



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The Week.

Rains have continued at intervals and locally since our last issue, but the precipitation on the whole has been light, though in many places sufficient for present uses. Indications are for a recurrence of the storm, and the general outlook has revived confidence in all lines of trade and production. Our Northern friends in Oregon and Washington Territory report the prospect of a hard, long winter, and the stock-growers congratulate themselves on the storage of abundance of provender for their animals. What they call a hard winter will mean for us a wet winter, as we get in this State what the Northern folk have left over in the way of weather. Such a prospect is especially pleasing after the 2½ years we have passed through.

Arrangements are complete for the celebration of the railroad wedding of California and Oregon, as is stated elsewhere. The event will be of notable historical importance, and many will no doubt be eager to participate.

Congress is in session again, and we give elsewhere a few paragraphs from the President's message. His anti-protection doctrine will not please the wool and fruit and wine interests of the Pacific Coast. It looks much as though the tariff would rise as a leading political issue which will make a sort of a geographical fight, as

the tariff is in the main a question of local producing interests. The President certainly has "the courage of his convictions," and probably knows that he will have to encounter the most earnest and organized opposition thereto. What the message says about the menace to national prosperity through the gigantic aggregations of power and capital called "trusts" will command the approval of all good citizens.

Land Tenure.

Let us make a diary of land tenure! Let us set out how it began and how it grew to its present condition. The past may enable us to understand the present and more intelligently divine the future.

We may divide the history of the world into ages and mark the successive steps by figures. The figures will not indicate any precise time in history, but only the condition of the people in that nation, tribe or locality.

1. Utter savages, and only two or three to a township of 36 square miles—mere ramblers, with neither name nor local habitation. Land possessed only as they stood upon it, and left without an intention to return. No land tenure here, no ownership.

2. Population increased to one or two to a square mile in places. Certain spots desirable for fish and game, claimed, fought for and lines formed. It was done after the manner of Abraham and Lot. A line was made between two hills or two trees; and it was said, let this be the line between thee and me, thy hunters and mine. Still there was no ownership of the soil, but only a forbidden line.

3. We may suppose that other families on other sides would tie Lot and Abraham up in the same way. These lines, when all the sides were filled, would include a space which the head of the family could begin to map out in his mind and call his.

4. The cattle-keepers, with sheep, goats and swine, horses or camels, became 8 or 10 to the square mile. They lived on smaller areas and became attached to still waters, rich pasturage, and made local homes. The land touched them more nearly, because it was more immediately useful. They could define its bounds by visible objects close at hand, and a sort of sense of ownership sprang up. "This is mine!" was first heard, and why not? The young man took his wife, his flocks and herds and journeying till he came to a choice place, he found no owner, no one to say nay. Henry George was not there, so he pitched his tent and made his home. Had he been the most conscientious follower of the modern prophet George, he knew not how many people there were in the world, or how many acres there were, or whether he held more than his share or not. He got no deed, patent or papers. He had no consent of any one. Indeed, there was no one with a right to consent. If a stronger family came along and drove him away, he sought another place, that was all.

5. Then came the farmers, the planters of groves, orchards, gardens and fields. They lived 20 to 50 to a square mile. They fenced and built houses. The land took a new value, and became indeed a private property. It was measured and bounded. It was bought and sold; yet, perhaps, a mere giving of possession was all the title had. All was held by law a year. It was all force. He who would not fight could hold nothing in those days, and the stout robber took house, land, wife, family, and slaves when he made a conquest.

6. As the best locations were occupied, the rich harvests invited marauders, who were still hunters or herders, and men of war, and found themselves hedged in by these inclosures, and enticed by what they contained. They came singly or in bands. The farmers united against them. They made common cause against these barbarians. They elected captains. They built strongholds, or castles, to flee to for safety. They laid up stores there, that when bands of savages came they could make war upon them with their families in safety. Often the domain was desolated by fire and sword. The foe subdued or fled, each Granger betook himself to his own home and began life anew. But the lines were all down. They had disputes. Then the captain became a judge. He heard the evidence, fixed the lines, and gave papers and landmarks for a perpetual memorial. New settlers came to him, got his consent, paid a fee for the trouble, made his home, and became

one of the compact. In this way the captain became the feudal lord. He declared himself the landgrave or owner, and all the rest renters or vassals. So easily do men placed in power magnify their offices and assume even a crown.

7. Then came the conqueror. He might lead a savage tribe or be the feudal lord of the next valley. He overran the farms. He took the castle. He assumed to be the lord. He increased the rents or dues, and enriched himself at the expense of the farmers. And he did not hesitate to declare that all the land was his, because he had conquered it. Nay, very often he would kill the farmers and put his followers in their places. Thus did the Romans everywhere. Thus did Charlemagne in France. He gave the Kingdom of Rome to the Pope, and this title he claims to-day. Thus did William the Conqueror in England. Thus did the English in Ireland. The English landlords there have this title, and no more. When the English black prince entered France, he took castles and placed his captains in them, to hold castle and estate, by mere conquest. It was a good title if they could hold it. No one in those days had any better. The burly villain who did not scruple at murder, became a lord, if not a king.

8. This age of murder passed away. The great kings appeared in France, Germany, Spain and England. Laws were made and written. Parliaments were called. Records were made, and metes and bounds, heritages and successions, fixed. There must be a purchase or heirship. These robbers managed to make vested rights of their claims, hereditary ever. Fighting for land was at an end. Unless born to it, you must buy or rent forever. Thus Europe took shape, with nine-tenths of the soil the property of great nobles, so-called, the heirs of the war chiefs.

9. The United States were settled under these ideas. The kings of England, and other powers, gave mere paper titles, often from the Atlantic to the Pacific, to leading men. These grants have given a world of trouble to the republic and to many of our States. The patents were so framed that it was difficult to say what they did not include; and the owners always claimed a very broad construction. The State of New York was convulsed, almost to revolution at times, on account of these extravagant and dangerous claims. Happily the people found means to demolish them all at last.

10. The American land system was in some sort an offshoot of the English, but yet much modified to meet the requirements of the republic. Land does not go to the eldest male heir, but by will, or by a regular law of partition, made by each State. The great wilderness came to the possession of the Government, and it devised a land system by which it was to pass to the settler, in small quantities only, at a small price. This was the decree of the whole people. It had the common consent, we may say, of all mankind or of all who had a right to consent.

It is true that of late years some large grants have been made, and the lands have fallen into the hands of alien holders. As to these, some legislation will be had to restrict and return to the people. But as to all the rest, no man who holds only a fair share need ever fear that the people of the United States will go back on themselves and disturb his quiet possession. Even on Mr. George's own showing, each one might fairly claim such a share, because he leaves the same to all the rest.

Then we are pledged to this, that all laws shall be just and equal, and if any new land theory is to be accepted, all who are disturbed will be fully compensated out of the public purse. We cannot do less, as the scheme was of our own invention.

DEATH OF G. W. COWLES.—Many of our readers will hear with regret of the death of G. W. Cowles of San Diego. Mr. Cowles was known in his own county for his activity in a number of important local enterprises, but throughout the State he has won a name for his devotion to the raisin industry, and his product from his ranch in El Cajon valley has achieved prominence as one of the best in the State. He began in El Cajon ten years ago, and at the time of his death he owned 4000 acres on which he had fine fruit plantations and herds of horses and cattle. Mr. Cowles was but 52 years old at his death, and his demise was a great shock to the community.

A Demand for Honest Lard.

The dairymen have secured a law against putting lard into butter without telling the purchaser, and now the honest lard men call upon Congress to make similar provision that debasing substances be kept out of lard. Dietetic reformers have long tilted their lances against the lard barrel, proclaiming even honest lard the cause of many of the ills which flesh is heir to. How their ire will rise at the thought that even commercial lard is unspeakably worse than they have dared to paint it.

Be it known, then, that the Butchers' National Protective Association, with a membership of 10,000, representing the live-stock breeders, the butchers and retail dealers of the country in the pure live-stock product, duly convened in second annual session in the city of Chicago, by resolution, determined to present this matter to the attention of Congress, asking that a law be enacted, similar in effect to the Oleomargarine Act, levying a special tax on all manufacturers of and dealers in adulterated lard, compelling a specific name to be given to the article so manufactured and adulterated, and requiring the labeling and marking of this manufactured product in such a manner, by such a device and under such a name, that the consumer will not be deceived in the article purchased.

And what can there be in lard worse than the qualities which the hog puts into it? Much every way, for the powerful association which we have described above declares to Congress that the evil which they would do away has become so wide-spread that the great product known in commerce as lard has for some time past been, and is now, so counterfeited and adulterated that the consumer rarely, if ever, is able to procure the pure article. The ingredients used in this counterfeit are of such a cheap and inferior grade that they have practically driven pure lard from the market.

What can be the debasing materials which deceive even the great American pie and doughnut expert—experts in those lines than which the world cannot furnish better? The manifesto to Congress declares that the use of vegetable and mineral oil, often of a deleterious nature, compounded with other ingredients, such as starch, caustic lime, alum, carbonate of potash, salt, potatoes, potato flour, chalk, plaster of Paris, baryta, cotton-seed oil and sesame oil, and various other articles, ingredients, mixtures and compounds, has produced an article sold and bartered in commerce under the name and appellation of lard, so nearly like the pure article in appearance that few save experts can distinguish the difference.

This is indeed alarming, as indeed are the facts wherever we look in the line of food adulteration. We are of the opinion that the United States Government has perhaps its greatest future work in such enactments as will secure to the people honest materials in the nation's food, drinks and medicines. In the matter of lard it is claimed that annual production in the United States is now estimated at 600,000,000 pounds, of which more than 35 per cent is an adulteration. The 60,000,000 people of the United States are thus compelled to pay for a counterfeit and adulterated article, which they are led to believe is the pure, unadulterated rendered fat of the hog.

Congress should listen to the lard men. As they are prohibited from putting their product into butter, they should be protected from the host of despoilers which prey upon them. The American hog has a hard time of it on the whole at home and abroad. Congress should see to it that his rich juices should not receive injections from the petroleum barrel or from other base sources. Congress should give the lard tub a chance to stand squarely on its own bottom.

FRESNO RAISINS.—The first trainload of California raisins, borne in 20 cars and valued at \$45,000, reached New York last Monday, and the second was expected to arrive on Friday of this week. Another (the fourth) raisin train of 15 cars, shipped by Geo. W. Meade & Co., left Fresno on the 5th, making 75 carloads direct to New York, besides 35 carloads shipped one or two cars at a time. Meade will yet ship 25 carloads to different points, which will close the season's pack.

CANADA is now furnishing more sheep for the Boston market than any State in the Union.

Notes on Pacific Coast Seedling Fruits.

[No. I.]

(By EDWARD J. WICKSON, Berkeley, Cal.)

[NOTE.—During the preparation of my book, "The California Fruit-Grower," which is now approaching completion, I have been collecting information concerning the origin and value of California seedling fruits, with the idea of presenting as good a list as possible in the book. For the purpose of correction, and to elicit further information, my notes were presented in part at the last meeting of the State Horticultural Society, and are now offered to the readers of the RURAL PRESS, with the same end in view. The matter as presented below is not at all in the form which I expect it will permanently assume, and I invite the fullest correction of the notes given and information of all other seedlings which are entitled to entry in the lists. I shall esteem it a special favor to have correspondence with any reader who takes an interest in the subject.—E. J. W.]

Seedlings at our State Fairs since 1856.

It will be interesting as an introduction to the subject to run over hastily the records of seedlings brought forward at our State Fairs. I shall be very glad to have the subsequent history of any seedling which is included in any of the exhibits mentioned, and hope any who can trace down any of the premium seedlings of the early time will do it:

The committee on fruit awards for the Fair of 1856 in their report* note the multitude of seedlings which are brought forward, and urge that at least three years bearing of a seedling be closely observed before the variety is proclaimed as valuable. There had evidently been disappointment in purchasing seedlings after their first year's fruiting, and when the trees "had been stimulated by every means that science could dictate or ingenuity invent." They suggest that all seedlings shall be exhibited for three successive years, and be examined each year by a competent pomological committee, and the several examinations carefully and accurately compared before the seedling receive the indorsement and sanction of the Society. They report upon three seedling peaches:

First—A seedling cling grown on dry ground without irrigation by John S. French of Santa Clara; size, 6½ by 7 inches in circumference; deep yellow, slightly oblate, with small projecting apex, and suture indistinct: flesh bright orange, uniform, very firm, crisp, but little acid and slightly astringent, ripening very late, probably Oct. 20 to Nov. 1. This was pronounced worthy of cultivation.

Second—Two clings by Major S. J. Hensley of San Jose, first 9½ by 8½ inches, white, roundish, white flesh, red at the pit, juicy, sweet: middle to end of October; second: 9 by 9 inches, light orange color, globular, flesh bright orange, very rich and excellent: last of October. For these peaches a premium of \$25 was awarded.

Third—Lot of freestones by A. P. Smith of Sacramento, 7½ by 8 inches, globular, deep orange color, flesh soft, juicy and melting, with very rich apricot flavor: first to middle of October.

The Society awarded a prize of \$25 for the seedlings of Major Hensley and premiums of \$10 each for the seedlings of Messrs. French and Smith, so that all the seedlings shown were honored with awards.

The Committee of the Fair of 1856 favorably mention a seedling-apple by J. C. Yount of Napa, "12 by 12½ inches in circumference, oblate, angular, skin smooth, pale yellow striped with red, flesh yellowish-white, flavor generally good, altogether worthy of attention."

At the place of J. Cook on the Alameda, San Jose, some very "fine seedling peaches" were noted by the Visiting Committee of the Agricultural Society in 1856. This committee also saw at the place of A. H. Meyers in Alameda "a seedling-peach which promises to be one of the very best varieties." This peach is mentioned in the annual address before the fair of 1853 as "Meyers' Rare-ripe—perhaps the best peach in California."† This variety is mentioned as free from curl in San Joaquin county in the statement of West & Brother to the State Agricultural Society in 1861.‡ [At the meeting of the State Horticultural Society November, 1887, Dr. Gibbons said the variety was still to be seen about Alameda, but it was now subject to curl. James Shinn said it had ceased to be of value. Being of the serrate glandless class, it suffered from mildew and general debility.—W.]

At the fair of 1857 a premium was awarded to A. P. Smith of Sacramento for the best seedling-nectarines.

At the 2 ranch in Ione valley, Amador county, the committee found Col. Alex. Bolton with 50 seedling peach trees, "of several fine varieties." At Wolfskill's place in Los Angeles they note some seedling peaches of fine size and flavor which well deserve to be added to the catalogue of cultivated varieties. Mr. Cardwell also had seedling peaches and nectarines "of many fine varieties."

At the fair of 1858 premiums were awarded for seedling peaches to G. W. Henshaw of Butte county, O. Covillard of Yuba county and G. W. Brooks of Butte county, but no name or description of the fruit is given. The "visiting committee" of that year found, however, at the farm of Major P. B. Reading, 22 miles from Red Bluff, a seedling freestone peach of excellent quality, ripening November 1st and keeping two weeks; another freestone ripening in August, having the deep blood-red appearance of the Indian cling and of much more delicious flavor. Major Reading had at that time

fructed over 600 seedling peaches, and considered himself repaid for all his outlay by securing the variety first-named, ripening in November. They also found at Major Reading's a "seedling fig of uncommon size."

At the fair of 1859 a special premium was awarded to Frank Keller of Butte City, who exhibited a collection of 21 seedling grapes from vines which he secured by planting the seed of the Los Angeles grape in 1853. The committee declared that Mr. Keller was on the "right track for originating varieties of the grape that may prove of value to California." At the same time George R. Moore of Sacramento showed a cane of a seedling of the Black Hamburg eight feet long and bearing over 50 bunches of grapes, which could not be distinguished from the parent variety.

At the fair of 1859 J. J. Swart of Sacramento is credited with yellow seedling peaches, "which compared in size and good appearance with any peaches on exhibition, and the same, shown again in 1860, were said to "bid fair to take a prominent place."

The report for 1859§ has an account of the Merrill Seedling apple, large, irregular oblate, greenish yellow, striped and mottled with red, flesh, greenish white, brittle, lively and juicy, sub-acid with rich, vinous flavor; ripens August 20th to September 1st. Originated with J. Merrill of Sacramento county, and pronounced by the Examining Committee to be "a good summer variety, early, and of an agreeable flavor."

At the fair of 1860, J. H. Nickerson of Placer county exhibited a white-grape seedling from the "California grape," which he named "Malvina," and which is described as "giving promise of becoming a desirable wine grape, having a sharp, pungent flavor." (Rep. 1860, p. 315.)

The report for 1860 mentions a nameless seedling apple by S. C. Tyler "of pleasant, sub-acid flavor, moderate size and said to be a good keeper."

In 1860, also, the committee recognized a large number of seedlings by different growers, "some of them beautiful and highly flavored."

At the fair of 1861, the award for the best seedling peaches was made to Dr. Bateman of Stockton.

A seedling almond by W. P. Miller of Stockton is mentioned in the statement of West & Bro. in 1861 as having borne three crops and as being of undoubted value. This variety received the premium for the best soft-shell almonds at the State Fair of 1861. (Rep. 1861, p. 324.)

For ten years or more following 1860, the plan of securing carefully written reports from fruit committees seems to have been abandoned. This is unfortunate, because we find no comments whatever upon the hosts of seedlings which must have been brought forward during that period. The early idea of testing seedlings for three successive years, and then formulating a report upon the results, was never carried into effect. The changes in administration of State societies, and consequent change in policy, is certainly unfortunate when the change is for the worse, as in the case of exhibition and trial of seedling fruits.

At the State Fair of 1872 E. Dane of Sonora showed three varieties seedling plums, but there is no report of their character. He also showed five varieties seedling pears, but there is no judgment of value recorded. An exhibit of three varieties seedling pears by T. K. Stewart of Sacramento also stands without comment.

In 1872 Robert Williamson showed 11 varieties seedling apples, and for these and other seedling fruits already noted, he received a premium, but no account is given of the varieties, nor were they named.

At the State Fair of 1872 there was a notable display of seedling peaches. E. Dane of Sonora showed 19 seedlings and won a special premium, but there are no comments or descriptions of the fruit. Robert Williamson of Sacramento showed three seedlings, named, "Orange Free," "Accident," and "George's Late," and the next year Mr. Williamson showed also "Smith's Late Cling," a seedling.

At the State Fair of 1873 there were at least seven seedling peaches shown by different growers, but there is no record of their quality. The following year Ira S. Bamber of Placerville exhibited 18 varieties seedling peaches, and G. R. Grant of Roseville, one variety, a cling-stone. [At the Horticultural Society meeting, November, 1887, Senator Buck said this was the first appearance of the peach now known as the "Roseville Cling." He saw them at the fair and was so favorably impressed that he began to grow them. It is very prolific; a large, smooth, round peach, a little red at the pit. Mr. Hatch said it is a first-class white peach. The red at the pit is hardly observable. It is better than McKevitt because bruises on it do not show, hence it ships well. It does not curl at Vacaville. Mr. Coates remarked that in some places the Roseville Cling would curl so as to lose its crop, while the McKevitt was not injured.—W.]

In 1874 W. S. Manlove of Brighton showed a seedling apple unnamed.

In 1875 Mr. Robert Williamson showed two varieties seedling peaches and four varieties seedling apples, and won a prize for a display of seedling fruits, and in 1876 did the same thing again. In 1877 he showed 16 varieties seedling fruit and won the prize again.

In 1878 there were four entries for the seedling fruit award: D. C. Young, Sonoma

county, I. S. Bamber, El Dorado county, Mrs. R. Blacow, Alameda county, and E. M. Smith, Coloma. The prize was given to Mrs. Blacow. At the same fair Mrs. R. K. Wick of Sacramento showed what is called the "October seedling peach."

In 1879 Mr. Williamson entered the lists again with his seedling collection, and wins the prize over two competitors, one of them being Mr. Bamber. The record does not even say how many varieties were shown. The next year Mr. Bamber, who had been vanquished by Mr. Williamson for two years, seems to have become aroused, for he came down from the mountains with 28 varieties of seedlings, and laid out the valley champion, for Mr. Bamber took the prize, and the committee gave Mr. Williamson an anodyne in the form of a recommendation for a special premium.

In 1880 Mr. Williamson returned to the front and won the general seedling prize and the gold medal for general fruit display. A new exhibitor, however, appeared in the form of L. Rosier of Placerville, who showed the "Wilcox cling" and "Tripp's seedling" peaches. No comments are made on these varieties.

In 1881 no entries of seedlings were made, but Mr. Williamson pocketed another gold medal on the general fruit display. In that year Thomas Hardie and I. S. Bamber captured seedling premiums at the Placerville fair, and G. R. Hinde at Los Angeles.

In 1882 and 1883, no entries of seedlings.

In 1884 the interest in exhibiting seedlings seems to have revived. In peaches, J. H. Carrington of Sacramento showed a white cling-stone. C. R. Harlow of Auburn showed "Leak's Seedling" and "Thompson's Freestones," but won neither award nor compliment. Also, in 1884, A. D. Miller of Walsh Station showed Miller's Seedling and a general display of seedling apples, but no award was made.

In 1885 and 1886 there was no distinctive mention of seedling fruits, though some were shown.

Thus I have made a running review of 30 years' history of our State Agricultural Society, with a view to discover what has been done to advance the development of California fruit varieties. The conclusion must be that 30 years ago the work was taken up wisely and energetically. If the provision of 1856 had been carried out, that all seedlings should be examined and reported upon for three years consecutively and then described and named, we should have a record and history of seedlings which would be of great value, and every originator of varieties would have been eager to submit his fruit to such a cautious and scrutinizing tribunal. But this proposition was never carried into effect. The awards made afterward for displays of seedlings, unaccompanied by any critical estimate of value, were of comparatively little account. It is not too late for the State Society to return now to the ground marked out by the pioneers of 30 years ago, not only in reference to seedlings, but in awarding prizes for best exhibits of named varieties in display and in single plates. As the fairs are now, the fruit exhibit is merely a heterogeneous mass of fruit, varieties duplicated without limit merely for display, and hardly one sample in 50 named correctly, if named at all. It is high time we brought our horticultural displays upon a more scientific and more useful basis. At present there are "boom agencies" and in no sense pomological displays. No doubt the State Board of Agriculture would listen with pleasure to any suggestions which this society might make looking to a practical reform in this respect.

Apples.

In turning now from the records of the State Fairs to other sources of information, I shall present the seedling fruits, of which I have information, each class of fruit by itself. Concerning all these fruits I wish to know where they succeed and where they are considered of little account, as well as historical data enough to place each valuable seedling properly upon record:

Skinner's Seedling.—Name approved by Cal. State Hort. Soc. Nov., 1887. Synonyms: Skinner's Pippin: Santa Clara King. Originated with Judge H. C. Skinner on bank of Coyote, east of San Jose, and tree reported still standing in 1879. Recommended by B. S. Fox at Convention of Fruit-Growers, held in S. F. Sept. 8, 1859, and adopted for trial. Described by Com. of New Fruits American Pomological Society 1877 (p. 46) as follows:

Santa Clara King: Fruit large to very large; form, oblate, conic, slightly mixed: color, rich lemon yellow, faintly striped with bright red: flesh, yellowish white, very tender, juicy, sprightly mild sub-acid: quality, best. Season, September and October. This is the best very large apple we have seen. Said to be a good grower and productive.

Recommended by Southern California Nurserymen's Association for family use in 1886. Other descriptions as follows:

Skinner's Pippin: Considered here one of the best early fall varieties. Fruit, large, oblong; skin, thin, pale yellow, often with blush next the sun: flesh, very tender, juicy, sub-acid flavor: tree, a vigorous grower. September.—*John Rock's Cat.*, 1886.

Skinner's Seedling: Large, yellow, very tender, good flavor. Tree grows well, and comes early into bearing.—*Shinn's Catalogue*, 1885.

Santa Clara King: Large, roundish: skin, yellow, with red blush on exposed side: flesh, crisp and juicy: good for all purposes; ripens Aug. 10 to 20.—*W. R. Strong & Co's Cat.*, 1887.

Cook's Seedling (Name approved by C. S. H.

S. Nov., 1887.) Synonym: Sonoma Seedling. Brought to notice by O. B. Shaw of Sonoma, who sent specimens to the RURAL PRESS in January, 1872. Described in that paper January 27th as a seedling raised by Mr. David Cook from the seed of the Juneating: Above medium size, pale yellow striped with red, sharp acid flavor. Not decidedly rich, but flavor full and acceptable. Excellent keeping qualities.

Described by B. S. Fox (RURAL PRESS Dec. 29, 1887,) as "of the Esopus Spitzenburg class, with a little variation, and is a good, tart apple, just what is wanted at this season, when so many varieties get sweet and mealy. For market purposes, it is a good, firm, high-colored apple and well worth propagating, for all high-colored apples have a preference."

Other descriptions as follows.

Cook's Seedling promises well as a first-class winter apple. Size medium to large, striped and marbled with red on a yellow ground.—*John Rock's Cat.*, 1886.

Large, yellow striped with red; one of the best winter apples.—*Luther Burbank's Cat.*, 1886.

One of our best, keeps well, large, striped, rich flavor.—*Leonard Coates' Cat.*, 1886.

Pronounced superior to the Yellow Newtown pippin in the Napa valley, by Prof. W. C. Damon of Napa, in a letter to the RURAL PRESS Sept. 20, 1879.

I have an impression that this apple has been found unsatisfactory in some localities. Who will give experience of that kind?

Marshall's Red.—(Name approved by C. S. H. S., Nov., 1887.) Synonyms: Red Bellflower, Marshall's Seedling. Originated with J. L. Marshall, Browns Valley, near Napa, from seeds of Yellow Bellefleur, the branches of which interlaced with those of a Red June tree, and the seedling is presumably a chance hybrid between these two varieties. Fruited first about 1877, and generally introduced by Leonard Coates in 1884. The tree resembles Red June in habit of growth; fruit large, same shape as Yellow Bellefleur, but of same color as Red June; quality, very good; flesh, firm and fine-grained; aromatic, and slightly more acid than the Yellow Bellefleur; tree, a very heavy bearer, and the fruit ripens in October. Samples were shown at Horticultural Society meeting in San Francisco, and described by W. W. Smith as a committee, as follows:

A very large, deep rich-red apple—the red extending all over the apple, and covered all over with small whitish dots resembling those of a strawberry. A very beautiful apple.

Mentioned by Dr. Strentzel in his report to American Pomological Society in 1883, as likely to prove the best seedling apple originated in California.—*Report 1883*, page 138.

Beauty of Alameda.—(Named by C. S. H. S., Dec., 1882.) A red apple shown by the late W. H. Jessup of Haywards. Tree from seed planted by W. C. Blackwood. Color deep red, shape like Bellefleur, and averaging about the same size, very firm, mild acid, rich.

Steele's Red.—Shown at meeting of State Horticultural Society, Jan. 26, 1883, by J. M. Hixson. Said to have originated on a place owned by Mr. Newell, Granite Hill, El Dorado county. Color clear, bright red, size uniform, good keeper. Has been propagated considerably in El Dorado county, and known as Steele's red. Mr. Hixson conjectured that it was a seedling from Winesap or Baldwin. "Steele's Red," mentioned as a synonym for Winesap, by L. M. Davis of Mud Springs, El Dorado county, in his report to Hort. Society in 1880. I should like to know more about this apple.

Clyman's Pippin.—Originated in Green valley, Sonoma county, from seed brought from Oregon by Lancaster Clyman early in the fifties. He fruited a large lot of seedlings and two of them were propagated and distributed by W. H. Pepper of Petaluma and others. These two were shown at the first county fair in Santa Rosa some years ago, and one was named Clyman's Pippin and the other Clyman's Russet, although it showed no russet except a little at the stem. Mr. Pepper has the latter in bearing and calls it the "Clyman."

Clyman's Pippin, grown by A. B. Provines of Cozzens, Sonoma, was shown at Santa Rosa Convention, 1887, from trees furnished him by Mr. Smyth of Santa Rosa, who calls it "Orange pippin" or "Clyman's Seedling," and says it is supposed to be a seedling of Yellow Newtown pippin, a better keeper, and when ready for market very yellow.

I showed a sample of Mr. Provines' apples at November meeting of State Horticultural Society in comparison with both of the Clyman apples brought by Mr. Pepper, and it was evident that the variety they are growing in the upper part of the county as the Clyman Pippin is the one known in Mr. Pepper's neighborhood as "Clyman's Russet" or the "Clyman." This matter should be straightened out.

Calistoga.—An apple sent to be named by the State Horticultural Society by Samuel Kellett in March, 1883. Said to have been found in a garden in Calistoga. Pronounced by a committee to be well worth preserving, fine color, flavor and a good keeper. No fuller description is given. Apple named "Calistoga." At Horticultural Society meeting November, 1887, W. W. Smith said he had kept the Calistoga until June, and considered it valuable on this account, if not otherwise.

Sexton's Golden Seedling.—Originated with Joseph Sexton of Goleta, Santa Barbara county, and described by him in RURAL PRESS, Nov., 1883, as follows: A large golden fruit with a little blush on one side; inclined to be flat rather than long; with a thin skin and full eye; stem strong in medium cavity; flesh in-

*Cal. Agr. Rep. 1856, p. 36.

**Rep. 1858, p. 64.

†Rep. 1861, p. 322.

‡Rep. 1859, p. 397.

§The same, p. 220.

§The same, p. 259.

clined to be battery, and a sprightly acid flavor; fine table or cooking apple; a fall apple. Commented upon by S. P. Snow of Santa Barbara, in a letter to *RURAL PRESS*, Dec. 1, 1883, as follows: Sexton Seedling is the handsomest apple I raise, good size, good bearer; ripe in September, exceedingly tart, and one of the best cooking apples I ever saw.

Lucy's Red Cheek.—A fall apple originating with Joseph Sexton, Goleta, Santa Barbara county, described by him in *RURAL PRESS*, Nov. 17, 1883, as follows: Fruit medium; roundish, somewhat flattened; skin with a ground of pale, greenish yellow mixed with faint streaks of pale red on shady side, with a bright red cheek; calyx small and set in shallow, rather narrow basin; flesh white, tender, juicy, with a slight perfume.

Violet.—Originated with J. W. Violet of Ione. One of the largest apples known, averaging nearly as large as Gloria Mundi; conical shape, a beautiful red nearly all over; solid, firm and crisp, good flavor, fine shipper—September to January. Tree strong grower, with upright habit; bark on new wood smooth, glossy and light chestnut color; leaves quite peculiar—a rich, glossy green.—*W. R. Strong & Co.'s Cat.*, 1887.

Merkeley's Red.—Originated on farm of R. W. Merkeley, near Sacramento. Fruit large size, dark red, excellent flavor, crisp and juicy—a superior market variety.—*W. R. Strong & Co.'s Cat.*, 1887.

Excelsior.—Originated with O. N. Cadwell of Carpinteria, Santa Barbara county. Shown at Los Angeles Horticultural Fair, 1879. Pale yellow in the shade and in the sun wholly red, light red streaked with claret; four inches in horizontal diameter; oblate, base and apex deeply depressed; flavor good, fine for table and does well; ripens—?

Unnamed.—Originated with O. N. Cadwell; large, oblong, tapering like the Yellow Belle-fleur; dark red, skin rather unhandsome, flesh very tender and juicy; flavor peculiar, but pleasant; ripens—?

Esopus Spitzenburg Seedling.—At the meeting of the State Horticultural Society, April 3, 1880, Milton Thomas of Los Angeles showed a seedling from the Esopus Spitzenburg which he found a heavy bearer and excellent keeping apple, lasting until April or May.

Red Edwards.—Shown by James Shinn at State Horticultural meeting, Feb., 1883. From Cloverdale. Pure red, excellent quality. Is it a California seedling?

Unnamed.—A red apple. Tree purchased at nursery near S. F. for Red Astracan by S. Bristol of Ventura county. Larger than Red Astracan, more glossy, and brighter color, form flatter, does not become mealy, six weeks later: tree spreading and not compact, and a great bearer. Pronounced by B. S. Fox a "seedling of some variety not known to him." Said by S. F. fruit merchants to be unlike anything they had ever sold.—*Rural Press*, Dec. 8, 1877.

Unnamed.—Seedling by Mr. P. Welch of Aptos, large, light green nearly white, rich sub-acid, and superior for cooking; keeps well for a summer apple and bears handling well. Ripens midsummer. Reported by F. E. Owen in *RURAL PRESS*, March 21, 1885.

Gibbons' Seedling.—Originated in the garden of Dr. W. P. Gibbons, Alameda. Medium sized, light-colored apple with crisp flesh and agreeable flavor. Form quite variable. Chief claim was made on the exceeding productiveness of the tree. Three fruit spurs bore nine apples, all medium size. In November, 1885, the State Horticultural Society committee reported this apple as of good flavor, tender and juicy and as of passable value to the amateur, but too small and not ripening at the right season for the orchardist.

Cowles' Seedling.—Shown at Horticultural Society meeting, October, 1887, and reported upon by a committee as probably a seedling of the Red June. Described by the grower, T. Cowles of Watsonville, as a heavy, constant bearer, ripening two weeks later than the Red June.

Mock's Late Keeper.—Mentioned as one of the best winter apples by L. M. Davis of Mud Springs, El Dorado county, in report to Horticultural Society in 1880. Listed in *W. R. Strong & Co.'s cat.* Is it a Cal. seedling?

Other Fruits

Will be taken up as space permits, and the subject will be taken up again at meeting of State Horticultural Society on Dec. 30th. In writing about seedlings, please give season of ripening by month, and as compared with common standard varieties.

A ROYAL STOCKMAN.—The Prince of Wales is, naturally enough, deeply interested in "the roast beef of Old England." A dispatch to the *World* speaks of a coming new edition of the Sandringham catalogue of Shorthorns. His Royal Highness now owns upward of 150 head, which are divided into two herds, those of the Bates breed being kept at Babinely farm, while the Booth tribe are at Wolverton, nearer the Hall. The climate and soil of West Norfolk appear to be salubrious for Shorthorns, for they are healthy and breed freely, while there are cows aged 15, 13 and 12 years.

The Christmas number of *Scribner's Magazine* will contain double the usual number of illustrations, every one of which has been made from a drawing by some well-known and expert artist.

On the Coast of San Mateo County.

EDITORS PRESS:—It was with some reluctance that your correspondent turned his back upon the charming rural scenes of Woodside, where he was so pleasantly entertained at the residence of Mr. John Winkler, on the night of the 18th inst., but a sense of duty in the interest of your journal impelled him to take leave early on the following morning. Following down the Palarcitos creek several miles, I observed many orchards and vineyards, which gave evidence of skillful culture and bountiful returns for the outlay, though planted at but comparatively recent date. Finally, when within six miles of Half Moon Bay, more familiarly known as Spanish Town, I cross a low range of mountains and drop into a beautiful fertile valley, and am soon in the midst of a population of about 900 people. Half Moon Bay has an ancient appearance, many of the buildings being moss-grown with age.

The inhabitants anxiously yearn for railway connection with San Francisco, and are confident that such an accomplishment is all that is required to make it one of the most prosperous communities in the State. The soil is extremely fertile, and the climate, barring occasional fog, is most inviting, and there is no doubt that with an outlet by rail communication, many would seek homes here in preference to places they now occupy. At present, the hopes of the people are encouraged with the promise of a coast wagon-road, by which the distance to your city will be reduced from 34 to only 18 miles.

On Saturday night I drove six miles up the Half Moon Bay, and stopped over Sunday with Mr. J. F. Weinkie, proprietor of the Moss Beach House. Here we found good treatment, and readily became convinced that the place has many attractions for those seeking rest and recreation from the bustling scenes incident to city life. Opportunities for bathing, boating, and fishing are scarcely excelled anywhere, and guests may rest assured that the proprietor will spare no pains to make them comfortable at most reasonable rates.

Contrary to expectation, based upon information regarding the inhabitants of Half Moon Bay, many of whom are of foreign birth and uneducated in our language, I succeeded in extending the circulation of the *PRESS* considerably. Among those worthy of special mention on account of their enterprise and public spirit the names of R. J. Knapp, manufacturer of the premium side-hill plow; Levy Bros., merchants; Wm. Pringle, harness-maker, as well as others whose names we cannot now recall, are conspicuous.

On Tuesday morning following we proceeded along the coast, passing through a beautiful district of productive farming lands, extending from the water's edge to the mountain tops, much more of which was cultivated in former years than at present. In earlier times the certainty of crops regardless of rainfall along the coast, together with the high prices of grain, was an incentive for the cultivation of extensive tracts to grain. Now all is changed. Other sections of the State, though far less productive and certain for crops, have on account of railroad connection with the outside world superseded this region in the grain-raising industry, and the country is now devoted principally to the dairy business.

Six miles down the coast I arrive at Purisima, a small village, though graced with a few good residences, among which is that of Henry Dobble, and a creditable school building. Further on we pass the thrifty farms of Andrew Osterman, John Schleefer, and at noon we accept the hospitalities of H. Frie and family. Mr. Frie here owns a good farm of over 300 acres well improved and stocked with fine cattle, horses and hogs. He shows a colt, McLellan stock, but two years old, which measures 16 hands and weighs over 1000 pounds. Proceeding along the coast, the first raindrops of the season commenced to fall, and I concluded to raise the top of my buggy. Soon after doing so all indications of rain vanished. Notwithstanding that less rain is required along the coast than inland, it would prove a most welcome visitor. Dairymen are compelled to depend upon hay, pumpkins and beets principally to maintain their herds until new grass comes, which cannot grow without rain.

Passing up San Gregorio creek five miles, I halt in front of J. W. Bell's residence and pass a pleasant night with the proprietor and his kind companion. Mr. Bell has an excellent farm here—very productive—but he finds dairying more profitable than any other branch of rural life. William Watkins, one mile above, has also a fine scope of land well adapted to fruit-growing and for the production of grain and vegetables. Though the country along the creek is somewhat rugged, yet on account of the excellent land, pure water and romantic surroundings the section has many attractions for those who have a taste for country homes.

Wednesday night I spent at the homestead of R. H. Brown, Esq., $\frac{1}{2}$ miles north of Pescadero. This is a model dairy-ranch of 1250 acres. He keeps 160 head of cows, from which he makes an average of one pound of butter per day to each animal. Arriving in the town of Pescadero on Thanksgiving Day, I was pleased to find it so pleasantly situated between Pescadero and Butano creeks. The streets are regular and wide, and, though the place boasts

of no extremely costly buildings, the residences of many denote taste and thrift. Pescadero, it is claimed, was 20 years ago one of the most lively towns of its size on the coast. Many large sawmills, which have ceased operations, employed many men; besides, farming and gardening in those days employed much help. But long since the land-owners have turned their attention to dairying and stock-raising, which requires but a limited amount of laborers. As a consequence, the solitude of the place is almost painful at times, and is only occasionally broken by the visit of a traveling agent canvassing for books, newspapers, etc., or a company of tourists, for which the vicinity affords solid attractions. One mile below the town is a beach, two miles in length, of singing sand. The singing sand-beach of Manchester, Mass., was formerly supposed to be the only one in the world. I had not the time to spare to pay the beach a visit, but was authentically informed that the music arising from the sand when treading over it is similar to that of the sound produced by walking upon hard, frozen snow. There are also pebble and agate beaches near the town, where are found opals, agate, carnelian, onyx, turquoise and many other precious stones. There is fine hunting and fishing in the neighborhood. The red-woods lay but a short distance to the rear, and taken all in all, it can well be claimed that in seeking a resort, Pescadero should not be wholly overlooked. Those visiting the place will find two hotels, the Swanton house and the Pescadero house. The former is long established, while the latter is new and newly refitted. The proprietor, Mr. Jno. McCormick, seems specially adapted to the position he holds, and spares no pains to make his guests comfortable at very reasonable rates.

Mr. Chas. Wm. Swanton, who had owned and managed the Swanton house for 26 years, died on the 23d inst., and was buried under the auspices of the Masonic fraternity, of which he was a worthy member, on the 25th inst. The obsequies brought together a large number of people for miles around to pay homage to one they highly respected and esteemed. The town and vicinity boasts of a number of men whom it is not only an honor but a pleasure to know. Among these are B. V. Weeks, Esq., dairyman; Mr. Alex. Moore, one of the oldest settlers of Pescadero, owner of a large tract of land, and is engaged in dairying and fruit-growing. Eli D. Moore, his son, is distinguished as having been the first white male born in California, the date of his birth being Dec. 12, 1847. Mr. M. has been a constant reader of the *RURAL PRESS* since the first day it was published and still "stays with it."

Pescadero is well represented by fraternal societies as well as the other concomitants of civilization, such as schools and churches. The Masonic Order has long been established and is in a prosperous condition. The Odd Fellows have a thriving Lodge of 41 members. Their Noble Grand is Mr. Henry Dearborn, and secretary, A. G. Goulson. The Druids boast of a membership of 35, with Mr. A. C. Maxey, N. A., and A. Levy, secretary.

Saturday morning I wended southward along the coast and by evening found myself in front of the pleasant home of I. C. Steele, Esq., where I was courteously received and entertained until Monday morning, when I was reminded that another week's experience of travel lay before me, and I must gird on the armor of battle. Before taking leave of our host and his estimable family, a few observations regarding the lovely homestead they occupy may not be out of place. Mr. Steele's south line runs within a short distance of the northern boundary of Santa Cruz county. Looking to the westward from the site of his residence there stretches out before our eyes a large scope of grazing lands, while just beyond may be seen the foaming waters of the Pacific, whose roar, though some miles distant, may be plainly heard every hour. Gazing eastward, a magnificent panorama is thrust upon our vision. The evergreen Coast Range presents a beautiful contrast with the brown hills that intervene between them and the Pacific ocean.

The comfortable residence, fine gardens of flowers, vegetables and fruits of nearly every variety known to our soil and climate, the pastures stocked with some of the finest cattle and horses in the State, large and commodious buildings for every requirement, including barns and dairy buildings for the prosecution of butter and cheese making on the most approved plans—all these advantages and more we might enumerate, conspire to make this the typical home of a true Patron of Husbandry, an Order with which Mr. Steele has been long and prominently identified, and to which he has, with a self-sacrificing spirit, devoted much of his time and considerable money.

F. B. L.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and, as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription rate, \$3 a year. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

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Send 10 cents to the Capital Soap Co., Sacramento, and prove it.

SAM SMALL'S BROTHER.

Why Did God Make So Much Outdoors?
Two Women's Experiences.

"Sam Small, Evangelist!"

The proverbial philosophy of "Old Si," the venerable plantation darkey, who gave to the world through the medium of Small's pen maxims of worldly wisdom, clothed in a verbiage of irresistible humor, has found a permanent place in humorous literature.

Great surprise was shown when it was announced that he having been converted under the ministrations of "Sam Jones," would become an Evangelist.

At first thought a humorist in the pulpit seems incongruous. Is it really so?

No doubt the mere buffoon attempting to turn men's hearts to solemn truths would meet with only contempt. But truth is not hidden in gloom. Genuine humor frequently illustrates and fastens in the mind bits of wisdom that would otherwise pass unheeded.

In his eulogy of Henry Ward Beecher, Rev. Dr. Parker says: "Whenever he came among men, he brought June sunshine and music, and made even desponding and surly men feel that a tulle and warmer summer, 'the Kingdom of Heaven' itself, was 'at hand.'" That is genial Christianity.

Mr. Small belongs to a witty family. He has a brother connected with Arroyo Knox's and "Fat Contributor's" *Texas Siftings*, a paper which has had phenomenal success in the field of humorous literature. Mr. Frank A. Small is the present representative of that popular paper in England, and, like his distinguished brother, he takes a deep interest in the welfare of other people.

Under date of 48 Porten Road, Kensington W. London, Eng., Sept. 27, 1887, he writes: While at Yalding in Kent yesterday, I met Prof. S. Williams, Head Master of the Cleaves Endowed school. In the course of conversation about America, Professor Williams remarked that Warner's safe cure had been of great benefit to his wife, who had been troubled with a disordered liver. Warner's safe cure (an American preparation) was all she had taken, and she had experienced none of her old trouble for some months past.

Mrs. Annie Jenness-Miller, editor of *New York Dress*, and a very popular woman in the fashionable world, says in her own magazine for October: "Warner's safe cure is the only medicine I ever take or recommend. In every instance it gives new energy and vitality to all my powers." This distinguished woman also says that for ladies this great remedy is "peculiarly effective."

Sam Small is likely to succeed as a moral teacher. When we remember how near together in human nature lie the fountains of laughter and of tears, the deeper effect his discourses must have on the masses can easily be imagined.

"Why did God make so much outdoors?" exclaimed a little girl. We know not. He has made it and we should grow in it, broad, charitable and genial, judging everything by merit, not by prejudice.

Don't Fail to Write.

Should this paper be received by any subscriber who does not want it, or beyond the time he intends to pay for it, let him not fail to write us direct to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to anyone who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

Consumption Surely Cured.

To the Editor:—Please inform your readers that I have a positive remedy for the above named disease. By its timely use, thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy free to any of your readers who have consumption, if they will send me their Express and P. O. address. Respectfully,

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Cures all Diseases originating from a disordered state of the BLOOD or LIVER. Rheumatism, Neuralgia, Boils, Blotches, Pimples, Scrofula, Tumors, Salt Rheum and Mercurial Pains readily yield to its purifying properties. It leaves the Blood pure the Liver and Kidneys healthy and the Complexion bright and clear.

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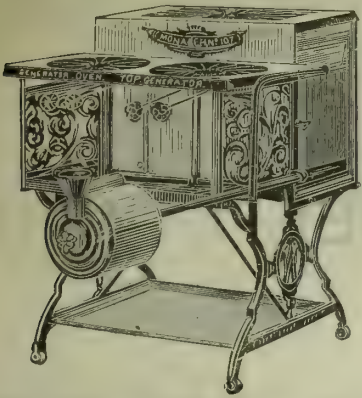
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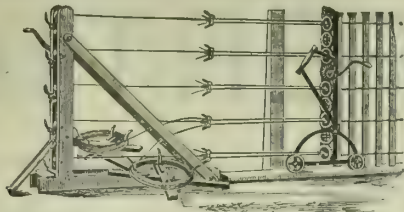
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The greatest fence on earth. Fully covered by patents. A sure impediment to the rabbit. Only weighs 30 pounds. Can be operated by a child as well as a man. You are not compelled to fence a cumbersome tract over the rough ground. All that is needed is a common board laid upon the ground. Estimates for material made when wanted. Correspondence solicited with hardware men generally. Price, \$40.

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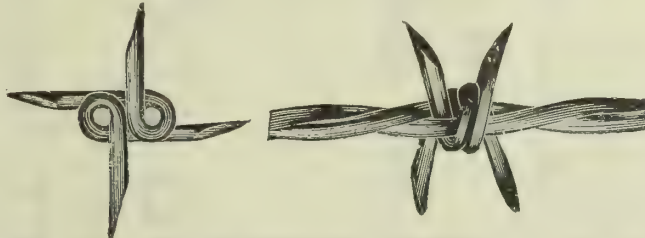
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A man to take charge of a farm in Contra Costa Co. containing an orchard, a small nursery, some live stock, and some grain land. Address as below, stating age, experience, nationality, and wages expected. References required.

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WITH ONE EXTRA SHARE TO EACH BOTTOM.



Its success has been unparalleled, and meets a long-felt want for a cheap and effective Gang Plow in a very satisfactory manner.

It has demonstrated conclusively that our plan of putting shares on the bottoms, instead of using what are called "reversible" molds, is the right one. We have proved that one of our small thick, cast-steel shares will last as long as both edges of a double-edged mold, and when it is worn out it can be replaced for less cost than a reversible mold.

A reversible mold is necessarily of an awkward, clumsy shape, being simply a concave piece of steel, just as a board would warp if laid in the sun.

By using shares on our bottoms, we are enabled to make the mold-boards of a form that will draw as easily, and turn as well as those used on any plow.

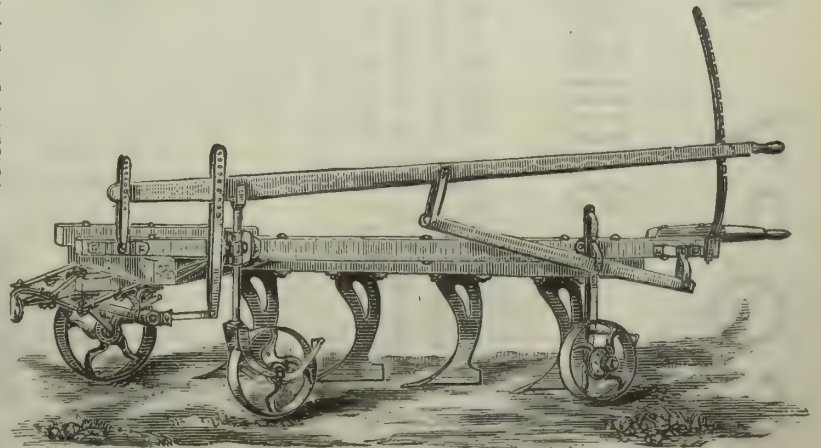
We put from three to eight plows in a Gang. They cut from 8 to 10 inches each, and will plow from two to six inches deep. This plow is made in a style never before attempted in this State. The frames, which are clear, well-seasoned lumber, are put together in the strongest manner, and are well painted. The wheels are provided with improved detachable hubs, that can be cheaply replaced when worn out.

One of the forward wheels is a castor, thus permitting the plow to run freely, and effecting a great saving in the draft. The bottoms are provided with our chemically-hardened steel molds, that will wear three times as long as the soft sheet-steel molds used by other manufacturers. The shares, which are of double thickness near the point, are cast-steel, and can be easily and quickly sharpened when necessary.

These Gangs do their work evenly, leaving the ground in light, friable condition. They have been thoroughly tested in the field, and the set of the plows on the frame carefully adjusted to secure the lightest draft consistent with good work. SEND FOR ILLUSTRATED CIRCULARS AND PRICE LIST.

The Improved GRANGER GANG, as now constructed, is conceded to be the best Bench Beam Plow in use. It has superseded the reversible Mold Gang wherever introduced; it being more durable, lighter draft, does not require the amount of team, and leaves the ground in much better condition.

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Fertilizers lessen the necessity for irrigation, increase the yield, improve the quality of crops, and keep the soil in a strong, healthy condition.

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Owing to the gratifying success our product has met with during the past season, we feel greatly encouraged in offering our Fertilizers, and can guarantee our patrons that our former standard of excellence will be fully maintained.

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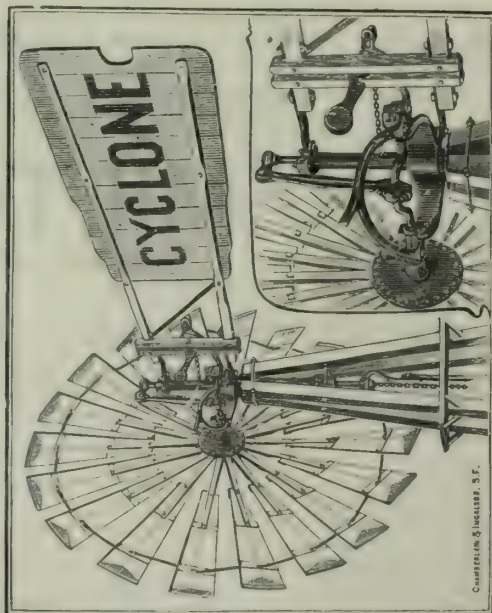
COPY OF LETTER

—FROM OUR—

SACRAMENTO BRANCH:

SACRAMENTO, Dec. 5, 1887.

"Brown informs me that the Cyclone stood the terrible gale of last week better than any mill around Davisville, and that several mills, mostly of Eastern make, blew down, and just on account of the Cyclone doing so well, he has sold two more 12-foot mills, which I shipped him yesterday."



Send for

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Catalogue

And Address of

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Local Agent.

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934 & 936 Mission St., San Francisco, Cal.

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OR TO THE

San Diego Implement, Commission &
Storage Company,
SAN DIEGO,

Wholesale Agents for SAN DIEGO COUNTY and LOWER CALIFORNIA.

ENTOMOLOGICAL.

Winter Washes.

Recommended by W. G. Klee, State Inspector.

For Scale Insects on Deciduous Trees.—The wide difference in the atmospheric conditions in the different parts of the State has proved, as might be expected, that different remedies will be found suitable to different localities. When comparing the efficacy of a wash used in one locality with that of another in another locality, we are apt to be misled. Only by trying the same remedy in different localities can definite conclusions be reached. As a general thing, the caustic remedies have been used with good success in the more cool and moist climates of the coast. When well applied, they must be considered among the best and most efficacious we have. On the other hand, they have been generally less successful in the interior of the State, where a dry atmosphere prevails for a longer time.

In using caustic washes, the following points must be especially taken into consideration:

1. Condition of trees.
2. Time of application.
3. Trees must be dormant; otherwise the fruit buds, especially when advanced, will be damaged.
4. A humid atmosphere, without being actually so as to cause water to run down the trees, is much more preferable than very dry weather; in fact, as was proved last season, actual damage has been done to trees when the wash has been applied during such weather, and the results in killing the scale have also been unsatisfactory under such circumstances.

While we still believe that the caustic, in the proportions given below, when used under precisely favorable conditions, is as sure and wholesome a remedy as we can apply to apples, pears and plums, the simple whale-oil and sal-soda remedy, especially for peaches and cherries, has proved very efficacious; but great care must be exercised in applying it, as the oil is apt to separate unless well stirred, and the compound kept warm.

For Pernicious Scale—(Aspidiotus Per-niciosus.)

For badly infested orchards we recommend: 1½ gallons of whale oil; 25 pounds of sal-soda. Dissolve the sal-soda in 25 gallons of water and heat it to boiling. When boiling, pour the whale oil in. Apply the wash when cooled to 130° F. The whale oil forms a kind of emulsion, most of the oil remaining free. After allowing this dose to act for three or four weeks, apply caustic solutions in this proportion: 1 lb. of concentrated lye (American), or 80 per cent; four fifths lb. of powdered caustic soda, or 98 per cent; 1 lb. of powdered caustic soda, or 76 per cent; 1½ lbs. of powdered caustic soda, or 63 per cent; any one of these to one-half pound of commercial potash, at 52 per cent; to be dissolved in six gallons of water.

Mode of Preparing Washes.

The easiest way to prepare the alkali washes, especially the solid concentrated lye, is by suspending the material in a barrel of water, either putting it on a perforated piece of tin or colander. Being thus suspended, the diffusion is quite rapid, and the material will require but little looking after. By using hot or boiling water, the action, of course, is hastened very much. When dissolved thoroughly, each kind having been kept separately, they are mixed and stirred well, so that they become thoroughly mixed. The liquid should be strained through a fine sieve (brass), or a cloth, so that no clogging is possible when the wash passes through the nozzle.

The San Jose nozzle has been and is very generally used, but for lye washes, it is, in my opinion, inferior to the Imperial and the Cyclone. The latter has the advantage of throwing the stream better on the underside of branches and foliage. When a pump with two outlets is at work, the two kinds of nozzles may be used to advantage. One man may work principally on the upper part of the tree with the Imperial (because its spray being thrown straight, hits the more vertical branches squarely), while the other man will reach the lower more horizontal branches better with the Cyclone spray, carrying, as it does, either upward or downward.

A very good nozzle is that invented by John Crofton, and sold by H. P. Gregory and Wood-in & Little. It has the advantage of clearing itself by a turn of the bib. Its spray is similar to that of the Cyclone nozzle.

Object of Caustics.

The object to be obtained by using the caustics after the sal-soda and whale oil is to saponify any oil that might have remained on the tree, and which would have a tendency to clog the pores of the bark. We believe this treatment will prove the most efficacious yet recommended.

The cost of whale oil is 30 cents a gallon, in 50-gallon barrels; 35 cents in cases. As to caustic, it must be remembered that the price will vary according to quantity, and that the purest product is the cheapest. The Greenbank caustic soda 98 per cent is considered the best and the least varying; next to this, American concentrated lye. Geo. F. Lerves, Menzies & Co. seem to be most reliable.

For a Lightly-Infested Orchard.

In the moist coast counties we would recom-

mend the caustic in this proportion, for pears, apples and plums, the trees to be perfectly dormant: 1 lb. of solid concentrated lye (American), or 80 per cent; 4-5 lb. of powdered caustic soda, or 98 per cent; 1 lb. of powdered caustic soda, or 76 per cent; 1½ lbs. of powdered caustic soda, or 63 per cent. Any one of these to ½ lb. of commercial potash, at 52 per cent. To be dissolved in 4 gallons of water; ½ lb. of whale-oil soap (80 per cent) to each gallon of mixture.

For peaches and cherries, and in the drier localities, whale-oil and sal-soda in this proportion: 1 gallon of whale-oil to 25 lbs. of sal-soda, 25 gallons of water. Prepare the same as above.

Next week we will give other washes, viz., the lime and sulphur, which is highly praised in the San Joaquin valley, and preparations commended by Sol Ranyon of Sacramento River.

The Last Spike.

Full details for the two great "last-spike" excursions have been prepared at the general offices of the Southern Pacific. It has been finally decided that the first excursion will leave here on Monday, the 12th inst., at 4 o'clock P. M., reaching Ashland on the afternoon of the 13th. This is a special excursion, to which invited guests only will be admitted. The second excursion, which is for the general public, will leave the city on Tuesday, at 4 P. M., reaching Ashland on Wednesday at the same hour. At Ashland the last spike will be driven. A stop over will be made at this point until next morning at 7 o'clock, when the journey north will be resumed. This schedule of time is adopted to enable the excursionists to view by daylight the grand scenery of the Rogue River valley, Grant's Pass, Crow Canyon and Yumacalla valley. Eugene City, at the head of the Willamette valley, will be reached by nightfall, the train to arrive at Portland by twilight. The party will remain in Portland until 1 P. M. on Saturday, thus making the run through the upper portion of the Willamette valley in the daylight. The special will reach San Francisco on Sunday morning, the 19th inst., about 8 o'clock. So far as the California end is concerned, the run through it will be made both ways by daylight, thus giving the amplest opportunity to see the scenery both through Shasta and the Siskiyou. The price of the round trip will be \$25, including sleeping-car berth throughout the entire journey.

Trouble with the Calves.

EDITORS PRESS:—A disease entirely new to me has started among my calves. They are first taken with itching about the anus and down to the udder and will rub themselves (if permitted) until they tear or lacerate themselves, and this is accompanied with a spasmodic jerking of the hind quarters. There is no loss of appetite for the first 12 hours, but after that the itching is more aggravating and the spasms more frequent, and comes as often as three per minute and accompanied with very intense pain, and proves to be fatal in from 36 to 48 hours from when first taken.

Can any reader tell me what the disease is and what is a remedy?—A. J. RIDER, Galt, Sac. County, Cal.

DIED INTO NEW LIFE.—Dr. O. F. Shaw has handed us a very singular specimen of vegetation. It is a blue potato which grew out of another potato lying on a shelf in a dark closet under the stairs in his house at Seattle. The old potato, which was but little larger than the new one, shrunk away as its life and material was transferred to the younger growth, and its brown and shriveled skin still adheres loosely to one side of the latter. These tubers, parent and child, thus connected afford an interesting example of the transmission of life "from form to form," and serve to illustrate, if not support, the doctrine of metempsychosis.

TO PARADISE BY RAIL.—A correspondent of the Dixon Tribune says that a Chicagoan, to whom had been sent one of the Solano county pamphlets, acknowledged its receipt, adding that he had read it with great interest, and it was only fair for him to acknowledge that for 50 years he had harbored a wild delusion. Heretofore he had always believed that the only way to enter paradise was to shuffle off this mortal coil and cross over Jordan, but that unpretending little book had informed him that that greatly desired realm can now be reached by rail.

THE S. F. Pure Milk Trust Co. has filed articles of incorporation with the county clerk to dispose of milk in this city, construct refrigerating cans and erect cold-storage houses. Capital, \$100,000, divided into 100,000 shares. Directors—Gerald M. Fennell, J. W. Borche, Herold D. Mitchell, W. M. Brown and Jas. C. Lecony.

THE GREAT TELESCOPE.—A car containing tubes, clockwork and mountings for the Lick Observatory arrived at San Jose last Sunday, and was conveyed to Mount Hamilton on wagons the following day. Another car is expected to arrive during the present week.

THE freights of John P. Squire, the Boston hogman, are said to be worth \$1,000,000 a year to the railroad which secures them.

The President's Message.

The Congress of the United States having re-assembled at Washington on Tuesday, Dec. 6th, President Cleveland sent in his message, which was read in both houses. The document deals almost entirely with questions of national finance—surplus revenues and tariff reduction, free trade and protection. It is said to be regarded at the Capital as fixing the Democratic position in the next Presidential campaign and laying down the lines on which will be fought the battle of 1888.

The part which interests California farmers more especially and immediately is as follows:

The farmer and agriculturist who manufactures nothing, but who pays the increased price which the tariff imposes upon every agricultural implement and upon all he wears and upon all he uses and owns, except the increase of his flocks and herds and such things as his husbandry produces from the soil, is invited to aid in maintaining the present situation, and he is told that a high duty on imported wool is necessary for the benefit of those who have sheep to shear, in order that the price of their wool may be increased. They, of course, are not reminded that the farmer who has no sheep is by this scheme obliged, in his purchase of clothing and woolen goods, to pay a tribute to his fellow-farmers as well as to the manufacturer and merchant; nor is any mention made of the fact that the sheep-owners themselves and their households must wear clothing and use other articles manufactured from the wool they sell at tariff prices, and thus as consumers must return their share of this increased price to the tradesman. I think it may be fairly assumed that a large proportion of the sheep owned by the farmers throughout the country is found in small flocks numbering from 25 to 50. The duty on the grade of imported wool which these sheep yield is 10 cents each pound of the value of 30 cents or less, and 12 cents if the value be more than 30 cents. If the liberal estimate of six pounds be allowed for each fleece the duty thereon would be 60 or 72 cents, and this may be taken as the utmost enhancement of its price to the farmer by reason of this duty. Eighteen dollars would thus represent the increased price of the wool from 25 sheep and \$36 that from the wool of 50 sheep, and at present values this addition would amount to about one-third its price. If on its sale the farmer receives this or a less tariff-profit, the wool leaves his hands charged with precisely that sum which in all its changes will adhere to it until it reaches the consumer.

When manufactured into cloth and other goods and material for use, the cost of wool is not only increased to the extent of the farmer's tariff profit, but a further sum has been added for the benefit of the manufacturer under the operation of other tariff laws. In the meantime the day arrives when the farmer finds it necessary to purchase woolen goods and material to clothe himself and family for the winter. When he faces the tradesman for that purpose he discovers that he is obliged not only to return, in the way of increased prices, his tariff profit on the wool he sold, and which then, perhaps, lies before him in manufactured form, but that he must add a considerable sum thereto to meet a further increase in cost caused by a tariff duty on the manufacture. Thus, in the end he is aroused to the fact that he has paid upon a moderate purchase, as a result of the tariff scheme, which, when he sold his wool seemed so profitable, an increase in price more than sufficient to sweep away all the tariff-profit he received upon the wool he produced and sold.

When the number of farmers engaged in wool-raising is compared with all the farmers in the country, and the small proportion they bear to our population is considered, when it is made apparent that in the case of a large part of those who own sheep the benefit of the present tariff on wool is illusory, and above all, when it must be conceded that the increase of the cost of living caused by such a tariff becomes a burden upon those with moderate means, and the poor, the employed and the unemployed, the sick and well, and the young and old, and that it constitutes a tax which, with relentless grasp, is fastened upon the clothing of every man, woman and child in the land, reasons are suggested why the removal or reduction of this duty should be included in a revision of our tariff laws.

In speaking of the increased cost to the consumer of our home manufactures resulting from a duty laid upon imported articles of the same description, the fact is not overlooked that competition among our domestic producers sometimes has the effect of keeping the price of our products below the highest limit allowed by such duty. But it is notorious that this competition is too often strangled by combinations quite prevalent at this time, and frequently called "trusts," which have for their object the regulation of the supply and price of commodities made and sold by members of the combination. The people can hardly hope for any consideration in the operation of these selfish schemes. If, however, in the absence of such a combination a healthy and free competition reduces the price of any particular dutiable article of home production below the limit which it might otherwise reach under our tariff laws, and if, with such reduced price, its manufacture continues to thrive, it is entirely evident that one thing has been discovered which should be carefully scrutinized in an effort to reduce taxation.

The necessity of combination to maintain the price of any commodity furnishes proof that some one is willing to accept lower prices for such commodity, and that such prices are remunerative, and lower prices produced by competition prove the same thing. Thus, where either of these conditions exists, a case would seem to be presented for an easy reduction of taxation.

BUENA VISTA RANCHO.—Messrs. Tyler Beach and J. C. Hagg, who are selling this desirable property near Salinas City, have issued a neat circular with a map of the tract, of which the circular says: "The finished and artistic map on the first page was made by the Dewey Engraving Co., 220 Market street, S. F." This company has extra facilities for doing such work, and the fact will probably be of interest to those who are mapping tracts for sale in subdivisions.

Rainfall at Sacramento.

We present once more the tabular statement of rainfall at Sacramento which we have been accustomed to give from year to year. It is very valuable, not merely to those who live in the great valley of California, but also to the general student of meteorology, as it affords the means of comparing the rainfalls in the interior and upon the coast as recorded in this city. We are again under obligations to Sergeant Barwick for his kindness in furnishing revised figures to date.

Table with columns for months (January to December) and years (1849 to 1887). It contains rainfall data in inches for each month and year, with a total row at the bottom. The table is arranged according to seasons, showing the amount in inches of each month, during thirty-four years, and for each rainy season, to Dec. 1, 1887; also the quantity for every month, and the annual amount of rain.

Rain Table for Sacramento, Prepared to 1884 by the late Dr. T. M. Logan and the late Dr. F. W. Hatch, and since 1884 by Sergt. J. A. Barwick.

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

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J. H. WHITE, Lakeville, Sonoma Co., Cal., breeder of Registered Holstein Cattle.

R. J. MERKELEY, Sacramento, breeder of Norman, Percheron Horses and thoroughbred Shorthorn Cattle.

HOLSTEINS—New lot Eastern-bred animals, including Netherlands, Aagie's and Case Strains. Punch for ringing bulls, \$1.00 postpaid. Berkshire Swine. Catalogues. F. H. Burke, 401 Montgomery St., S. F.

M. D. HOPKINS, Petaluma, Cal. Eastern imported registered Shorthorn Bulls and Heifers for sale.

SETH COOK, Danville, "Cook Farm," Contra Costa Co., breeder of Aberdeen Angus, Galloways and Devons (Registered). Young stock for sale.

PETER SAXE & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 16 years, of every variety of Cattle, Horses, Sheep and Hogs.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

BRADLEY RANCH, San Jose, Cal., breeder of recorded thoroughbred Shorthorn Cattle. A choice lot of young stock for sale.

J. R. ROSE, Lakeville, Sonoma Co., Cal., breeder of Thoroughbred Devons, Roadsters and Draft Horses.

THE BEST HERD OF JERSEYS, all A. J. C. registered, is owned by Henry Pierce, San Francisco.

J. A. BREWER, Centerville, Alameda Co. Short-horn Cattle and Grades. Young stock for sale.

T. E. MILLER, Beecher, Ill. Oldest and best herd Hereford Cattle in U. S. Cattle delivered in California.

COTATE RANCH BREEDING FARM, Page Station, S. F. & N. P. R. R. P. O., Penn's Grove, Sonoma Co., Cal. Wilfred Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

W. J. MARSH & SON, Dayton, Nevada. Registered Shorthorns of choicely bred strains.

POULTRY.

O. J. ALBEE, Lawrence, Cal., breeder and importer.

O. H. EVERETT, 1616 Larkin St., S. F., importer and breeder of Thoroughbred Langshans and Wyandottes.

CALIFORNIA POULTRY FARM, Stockton, Cal.; send for illustrated and descriptive catalogue, free.

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THOS. WAITE, Perkins, Sacramento Co., importer & breeder of thoroughbred fowls of all leading varieties.

W. C. DAMON, Napa, \$2 each for choice Wyandottes, Leghorns, Lt. Brahmas, Houdans. Eggs, \$2.

T. D. MORRIS, Sonoma, Cal. Toulouse and Embden Geese, Bronze and W. Holland Turkeys, and all leading varieties of Thoroughbred Poultry.

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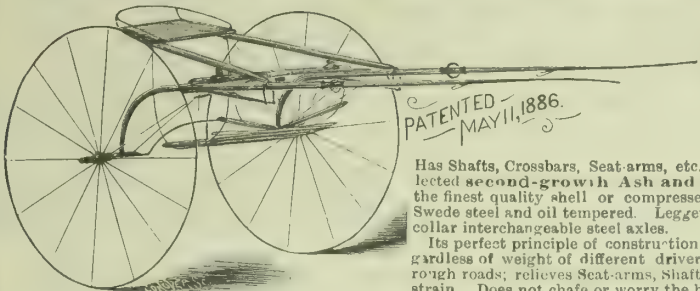
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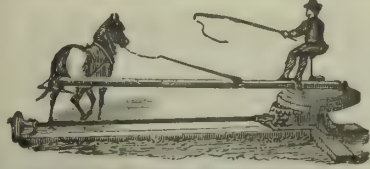
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S. F. MARKET REPORT

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Dec. 7, 1887.

The past week has been quiet in all lines of produce, but the tone of the market was firm. It is claimed that in many sections more rain is required to set the plows to going freely. A good, general-soaking rain will be followed by free plowing and seeding. The Eastern and European wheat markets have ruled very strong throughout the week, although Chicago broke on Tuesday, but then prices there were above English parity, owing to a short interest buying. To-day's cable is as follows:

LIVERPOOL, Dec. 7.—Wheat, weaker, California spot lots, 6s 7d to 6s 10d; off coast, 34s; just shipped, 34s 9d; nearly due, 34s; cargoes off coast, quiet; on passage, not much demand; French country markets, tone generally firmer; flour and wheat in Paris, steady; weather in England, frosty.

Foreign Review.

LONDON, Dec. 5.—The *Mark Lane Express* says: Trading in English wheat is dull in London, values steady and deliveries small. Provincial markets are weaker. Sales of English wheat for the week were 67,450 quarters at 31s 3d, against 52,455 quarters at 32s 7d for the corresponding week of last year. Flour is depressed, owing to large arrivals. Foreign wheat dealings are restricted. The excitement in American options failed to affect spot trade here. Reports of the wheat harvest in Australia and the Argentine Republic promise a large increase of shipments. Flour is dull. Corn is scarce and values are rising. There were four arrivals of wheat during the week. Two were withdrawn and two remain. At to-day's market wheat was in steady demand and unchanged. Corn was 6d @ 1s dealer. Oats are in good inquiry and 3d higher. Linseed declined 6d. Flour, beans and peas were unchanged.

Eastern Grain Markets.

S. S. Floyd & Co.'s telegraph of the 7th, from their Chicago house, is as follows: Wheat market strong, active and higher to-day; outside buying orders were too much for the local bears and they got tired out trying to hold the market down, and turned around and were busy covering their shorts, which closed market firm at about top price of the day. Corn market also strong and higher, in sympathy with wheat together with active demand from the country bulls. Receipts of wheat at 7 primary points to-day, 248,307 bu.; shipments, 66,750 bu. Wheat, Jan., opened, 76½; highest, 78½; lowest, 76½; closed, 78½; May, opened, 84½; highest, 85½; lowest, 83½; closed, 85½. Corn, Jan., opened, 48½; highest, 50½; lowest, 48½; closed, 50½; May, opened, 53½; highest, 55½; lowest, 53½; closed, 55½. Pork, Jan., opened, \$14.25; highest, \$14.80; lowest, \$14.20; closed, \$14.77½.

NEW YORK, Dec. 7.—12 M.—Wheat, 91½c for cash, 90½c for Jan., 91½c @ 91½c for Feb., 92 3/8c for March, and 94½c for May.

Eastern Wool Markets.

NEW YORK, Dec. 5.—The stock of wool here is still light. Holders are not seeking buyers and there is no active outlook. Free receipts from South America are expected. Sales are reported of 35,000 lbs. ¼ @ ¾ blood, washed, 37 @ 37½c; 4000 lbs. X @ XX, 32 @ 33c; 20,000 lbs. unwashed, ¼ blood, 28c; 10,000 lbs. fine unwashed, 22 @ 23c; 50,000 lbs. scoured Texas, 44c; 14,000 lbs. scoured California, 49c; 50,000 lbs. Eastern Oregon, 20 @ 24c; 60,000 lbs. Territory, 18 @ 20c; 175 bales of foreign on private terms.

The Philadelphia market is quiet and Boston steady.

California Products in Chicago.

CHICAGO, Dec. 3.—Lately packed California fruits are moderately active and rule low and steady. The following prices were received for fruit in good condition: Muscat grapes, in double crates, \$3.75 @ 4.25; Vordell grapes, in double crates, \$3.50 @ 3.75; cold-storage grapes and half cases, \$1 @ 1.25; Vicar pears, \$2; Winter Nelis pears, \$2 @ 2.50; Giant Marcon pears, \$2.25 @ 2.75; Late Red plums, in 20-lb boxes, \$1.25 @ 1.75.

California dried fruit and raisins are steady at late quotations. Peaches, sun-dried, in sacks, ½ lb, 11½ @ 12½c; peaches, evaporated, unpeeled, in sacks, ½ lb, 15½ @ 16c; do do, peeled, in sacks, 21½ @ 27½c; apricots, sun-dried, in sacks, per lb, 13½c; apricots, evaporated, in sacks, 14½ @ 16c; plums, pitted, in sacks, per lb, 13 @ 14c; nectarines, according to quality, in sacks, per lb, 13½ @ 15c; raisins, London Layers, per box, \$2.10 @ 2.25.

A quiet and slow market is quotable for hops. The demand is limited; common grades especially are not only exceedingly slow, but they are also very weak. Pacific's new crop, choice, 16 @ 18c; Pacific's new crop, medium, 14 @ 16c; Pacific's new crop, common and low grades, 12 @ 13c; Pacific's 1886, good, 10 @ 12c; Pacific's 1886, medium, 9 @ 10c; Pacific's 1885, 5c.

The feeling in the market for beans is firm. There is a very good trade in California beans. Some foreign beans also sell, but they are not giving the best of satisfaction, for the reason that they run uneven, both in size and quality. Choice Eastern beans are wanted, and they are firm, but there is an absence of stock. Quotations are, California, according to quality, \$2.15 @ 2.30.

California strained honey brings 7 @ 8c.

Hops.

NEW YORK, Dec. 5.—Hops are dull, with some export inquiries, but no suitable qualities are on hand. Brewers are using cheap State. The best German are quoted at 27c, and Pacific 16c.

California Raisins in New York.

A telegram from N. Y., Dec. 7th, referring to the recent arrival of California raisin trains, reports the demand for the best grades greater than the agents can fill, and says most of the fruit was sold before it arrived here.

NEW YORK, Dec. 5.—California raisins are in good offering for distribution. The Chalmette from New Orleans to-day brings 19,000 boxes for New York, and 14,000 for New England. Prices for prime

hold full; common is weak, with the increase offering Malaga cables report an exhausted stock.

Local Markets.

BAGS.—In Calcutta standard size on spot, little is doing, but for June-July delivery sales are reported at 7½c to 7½c.

BARLEY.—The market has held to strong prices throughout the week, with sales made at an advance on the top quotations of the daily papers. The stock here and supply in the country are not excessive, considering the large increased consumption, and also that there are yet all of six months before the next crop is harvested. On Call, options have ruled strong and active. To-day's sales are reported as follows:

Morning Session: Buyer season—100 tons, 98c; 100, 97½c; 100, 97½c; 100, 97 3/8c. Afternoon Session: Buyer season—100 tons, 97c; 100, 97 1/4c; 100, 97 3/8c. Buyer 1887—100 tons, 89c @ ctd.

BUTTER.—The demand is freer, while the receipts continue light, with stocks extremely light. The market closed very strong, but, as a rule, dealers are disposed to clean up all around, and to do which they do not ask more money.

CHEESE.—Choice new cheese is scarce and wanted, but other kinds are in large supply and hard to place.

EGGS.—The market is easy. The receipts from the West and also from Utah continue liberal, and as the quality is fair to choice, they keep California's down.

FLOUR.—No advance yet in prices, although one has been looked for several days.

WHEAT.—The sample market offerings continue light, as holders are firm in their advanced views. The reduction in stocks, with a large tonnage loading and a very large disengaged tonnage in port, together with strong foreign markets, are the "bracers" in the market. On Call, options have been fairly active. To-day's sales are reported as follows:

Morning Session: Buyer season—200 tons, \$1.47½; 400, \$1.47 7/8. Buyer 1887—100 tons, \$1.38½; 100, \$1.37½ @ ctd. Afternoon Session: Buyer season—900 tons, \$1.48 1/4; 200, \$1.48 1/8. Buyer 1887, season's storage paid—300 tons, \$1.38½ @ ctd.

COMMUNICATED.]

Market Information.

Receipts of Domestic Produce.

The following are the receipts of the principal items of California produce at San Francisco from the beginning of the harvest year to date, compared with the corresponding period in the previous harvest year:

	July 1 to Dec. 4, '86.	July 1 to Dec. 3, '87.
Flour, qr. sks.	2,170,270	1,522,094
Wheat, cts.	4,422,954	4,422,954
Barley, cts.	1,600,880	1,432,609
Oats, cts.	100,713	116,051
Potatoes, sks.	461,667	523,453
Corn, sks.	31,434	103,902
Rye, sks.	11,242	11,382
Buckwheat, sks.	4,168	742
Beans, sks.	258,468	293,185
Brans, sks.	220,599	2,6430
Hay, tons.	55,194	62,833
Salt, tons.	11,918	8,720
Wool, bls.	44,283	37,499
Hides, No.	51,094	46,087
Raisins, 20-lb boxes.	90,094	60,816
Quicksilver, flasks.	6,362	12,245
Hops, bls.	11,779	13,226

The receipts of certain articles of produce from Oregon, Washington Territory and other distant points, for the same period, compare as follows:

	July 1 to Dec. 4, '86.	July 1 to Dec. 3, '87.
Flour, sks.	22,561	94,751
Wheat, cts.	141,315	358,449
Barley, cts.	1,493	75
Oats, cts.	157,935	80,385
Corn, cts.	46,262	12,980
Wool, bales.	9,054	6,986
Brans, sks.	26,418	29,400
Hops, bales.	648	106
Hides, No.	14,951	12,591
Potatoes, sks.	22,872	2,247

The upward trend now noted in the English wheat market in October was continued throughout November, the changes in California cargo quotations for that month being as follows:

	Off Coast.	Just Shipped.	Nearly Due.
November 1.....	33 1/2	33 1/2	33 1/2
November 4.....	33 1/2	33 1/2	32 1/2
November 5.....	33 1/2	33 1/2	32 1/2
November 8.....	33 1/2	33 1/2	32 1/2
November 11.....	33 1/2	33 1/2	33 1/2
November 14.....	33 1/2	33 1/2	33 1/2
November 15.....	33 1/2	33 1/2	33 1/2
November 16.....	33 1/2	33 1/2	33 1/2
November 17.....	34 1/2	34 1/2	34 1/2
November 19.....	34 1/2	34 1/2	34 1/2
November 21.....	34 1/2	34 1/2	34 1/2
November 30.....	34 1/2	34 1/2	34 1/2

The monthly range for the first 11 months of the current year is as follows:

	High.	Low.	High.	Low.
Jan. 38s od 36s 9d	40s od	38s 3d	39s 6d	37s 0d
Feb. 36 3/4	36 3/4	36 3/4	37 1/2	36 3/4
Mar. 38 3/4	36 3/4	36 3/4	37 1/2	36 3/4
April 38 3/4	38 3/4	36 3/4	38 3/4	37 1/2
May 39 3/4	38 3/4	36 3/4	40 3/4	37 1/2
June 39 3/4	38 3/4	36 3/4	40 3/4	39 3/4
July 39 3/4	39 3/4	36 3/4	39 3/4	39 3/4
Aug. 39 3/4	39 3/4	36 3/4	39 3/4	39 3/4
Sept. 39 3/4	39 3/4	36 3/4	39 3/4	39 3/4
Oct. 39 3/4	39 3/4	36 3/4	39 3/4	39 3/4
Nov. 39 3/4	39 3/4	36 3/4	39 3/4	39 3/4

The exports of wheat from this port during November were as follows:

	Cents.	Value.
Great Britain.....	548,952	\$730,527
Havre.....	6,693	8,450
Hawaiian Islands.....	814	1,103
Tahiti.....	48	80
Elsewhere.....	14	19
Totals.....	556,521	\$740,179

Cereals.

The English market has ruled strong throughout the week, with a sale of No. 1 California white shipping for prompt shipment made at 35s 3d. The strength of the market is no doubt due, as the *Financial Chronicle* says, to confidence respecting the future which is becoming stronger, and the belief frequently hitherto expressed that as the year grew older trade would become more active is being verified. At the same time it is noticeable that the reports from all the leading centers in England, whether of the textile manufactures or the hardware industries, although acknowledging the stronger position of trade generally, state that business has been "quiet," or only about up to the "average." In view of the facts disclosed by statistics, only one construction can be placed upon this circumstance, and that is that the operations now being carried on are of a legitimate character, and that the better tone existing is not appreciably due to speculative manipulation. It may therefore be assumed that the profits earned are real and tangible.

The Eastern market for wheat advanced fully 3c per bu., but on Tuesday fell back. The advance was chiefly due to a corner. Outside of this the wheat market has a very strong tone.

In the local market wheat has ruled strong, with few sellers. Exporters to buy were compelled to bid an advance, and this, too, with the daily press aiding them all they can in quotations and remarks on the market. The stock the past month decreased over 40,000 tons, with this month showing a still further decrease. The mills are large consumers, and besides there is an increased call for seed.

Barley has held strong throughout the week, with a slight advance at the close, and this, too, with the bears hammering away at prices so as to break values. The stock the past month decreased over 5000 tons, and this, too, in the face of good deliveries from farmers. The consumption continues large. The brewing grades of barley this year are not heavy, and consequently only fetch a little more than feed. The Washington Territory crop this year is colored, owing to rains in last September. The off color operates against it, fetching good prices.

Corn is very strong, with concessions hard to get. The strength of the market is due to short crops at the West and the certainty of an advance in freights in next month. The demand with us is only fair.

Oats are steady, with a strong tone. The stock is only fair, while the receipts are light, with the supply to draw from in Oregon only moderate and strongly held.

Rye is strong at full quotations, owing to light stocks and light supplies.

Buckwheat is in fair demand at current quotations.

Feedstuff.

Bran and middlings move off freely, but owing to liberal supplies, the market is easy. Oregon sends us liberal supplies of both bran and shorts.

Oilcake meal is in fair supply, with a good demand ruling.

Feed carrots and feed potatoes are in good supply, with the market steady.

Choice to extra choice hay continues to come forward sparingly. The stock here is light, with the stables only buying in a hand-to-mouth way. The consumption, since the rains, has increased. The market for all grades is very strong.

Vegetables.

Free rains up to Monday interfered with receipts of potatoes, and the demand was free and stocks of the better grades light. Even feed potatoes have been well cleaned up.

Onions are strong at full prices. Receipts are only fair, while the demand has been good, particularly for the better varieties, to fill shipping orders.

Tomatoes, beans and peas are gone out, as are several other summer vegetables.

Cabbages are strongly held, with extra choice, good, hard keepers in demand for filling shipping orders.

Root vegetables are in good supply, with a fair demand ruling.

Fruits.

Apples continue to meet with a good demand, with the more choice fetching good prices. Sals of extra have been made in a small way as high as \$1.75.

Pears are in good demand, with a strong market ruling for the more choice varieties.

California oranges are putting in an appearance, but as receipts are light, quotations are high and more or less nominal.

Raisins are very strong and active, with good prices obtainable. Considerable loose in sacks are coming to hand, and fetch 5 to 6c per lb. These are taken by restaurants, hotels, bakers and other large consumers. The East is still drawing heavily. The stock in this State is light for the season.

Dried fruits are dull, but as the stock is light and the supply also light, concessions are hard to get, for holders have confidence that better prices will obtain after the turn of the year. The trade, as a rule, are carrying light stocks.

Live-Stock.

In beef cattle there is no particular change. The offerings, though not as large as in last month, are ample. Continued free receipts are reported from Arizona, and as the railroad to Oregon will soon be in working condition, receipts are looked for from there. Mutton sheep are firm and in fair supply. Milch cows are inquired for, but no sales reported.

Hogs continue to come to hand freely, but as packers take all offering, the market for grain-fed remains strong. Some few corn-fed are coming in; they sell at about 4c per lb. on foot, equal to about 5½c to 5½c dressed. In horses there is nothing new to report.

The following are the wholesale rates of slaughtermen to butchers:

BEEF—Extra, 7½ @ 7½c; first grade, grass fed, 6½ @ 7c; 2nd grade, 6 @ 6½c; third grade, 5½ @ 5½c.

MUTTON—Ewes, 5½ @ 6c; wethers, 6 @ 6½c.

LAMB—Spring, 7 @ 8c.

VEAL—Large, 6 @ 7c; small, 6 @ 8c.

PORK—Live hogs, 4½ @ 4½c for heavy and medium; hard dressed, 6½ @ 7c per lb; corn fed, 4 @ 4½c; dressed, 5½ @ 6½c; soft hogs, live, 3½ @ 4c. On foot, one-third less for grain or stall fed, and one-half less for stock running out.

Miscellaneous.

Grass seed meets with a better inquiry. The market is strong at full figures.

Brown mustard seed is about out of market, but yellow offers freely.

Hops are still talked down. A real choice parcel finds ready buyers, but this year the quality is variable and unsatisfactory.

In wools there is little doing, as is always the case at the close of the year. The stock here is light.

In poultry, the market ruled firm throughout the week, with choice, well conditioned fowls in light receipt.

Lard is strong, with an advancing tendency.

Beans are very strong, under light stocks, light supplies and a good demand. Pinks and Reds are higher.

The tonnage movement compares with last year at this date as follows:

	1887.	1886.
On the way.....	318,339	212,182
In port, disengaged.....	97,539	73,761
In port, engaged.....	27,848	68,620

Totals..... 443,726 354,563

To obtain the carrying cap city add 60 per cent to the registered tonnage.

San Francisco, Dec. 7, 1887.

DOMESTIC PRODUCE

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

	WEDNESDAY, Dec. 7, 1887.
Beans and Peas.	
Bayo, ctd.	2 00 @ 2 35
Butter.....	2 00 @ 2 75
Peas.....	2 25 @ 2 75
Red.....	2 40 @ 2 10
Pink.....	2 00 @ 2 30
Large White.....	2 00 @ 2 30
Small White.....	2 10 @ 2 81
Lima.....	2 10 @ 2 81
Wild Peas blk eye	1 00 @ 1 05
do green.....	1 00 @ 1 12
do Niles.....	1 25 @ 1 00

	POTATOES.
Burbank.....	75 @ 1 15
Early Rose.....	50 @ 75
Culley Cove.....	70 @ 1 00
Petaluma.....	— @ —
Tomatoes.....	— @ —
Elver dore.....	50 @ 70
Humboldt.....	— @ —
do Kidney.....	— @ —
Chile.....	75 @ 95
do Oregon.....	— @ —
Peerless.....	75 @ 1 00
Salt Lake.....	— @ —
Sweet.....	1 00 @ 1 75

	POLTRY AND GAME.
Hens, do.....	5 50 @ 8 00
Broilers.....	4 00 @ 5 00
Ducks, tame.....	6 00 @ 8 00
do Mallard.....	3 00 @ 4 50
do Sprig.....	1 25 @ 1 50
Geese, pair.....	1 75 @ 2 25
do Goslings.....	1 00 @ 3 00
Wild, do.....	1 00 @ 3 00
Turkeys, B.....	19 @ 21
do Dressed.....	20 @ 23
Turkey Feathers, tail and wing.....	— @ —
Suip, Eng. dos.....	— @ —
Common.....	— @ —
Doves.....	1 00 @ 1 50
Quail.....	1 00 @ 1 50
Partridge.....	1 00 @ 1 50
Hare.....	1 25 @ 2 00
Vermin.....	6 @ 8

	DAIRY PRODUCE, ETC.
Cal. fresh roll, B.	37½ @ 45
do Fancy brands	45 @ 50
Pickle roll.....	32½ @ 37
Firkin, new.....	24 @ 30
Eastern.....	— @ —

	CHEESE.
Cheese, Cal., B.	13 @ 16
Eastern style.....	14 @ 16
do Swiss.....	35 @ 37
do store.....	30 @ 32
Ducks.....	— @ —
Oregon.....	— @ —
Eastern.....	17½ @ 32

	FEED.
Brans, ton.....	15 00 @ 17 00
Corncob.....	25 00 @ 27 00
Grd Barley ton.....	20 00 @ 21 50

Jap. bx.....	@	do Summer bx.....	@
Pineapples, doz. 2 00 @ 4 51		String beans lb.....	@
Plums lb.....	@	Tomatoes box.....	@
Pomegranates, b.....	@	do choice.....	@
Quinces bx.....	@	Turnips ctl.....	40 @ 60
Raspberries ch.....	@	Beets, sk.....	40 @ 50
Strawberries ch.....	@	Cabbages, 100 lbs.....	65 @ 90
Watermelons, 100.....	@	Carrots, sk.....	35 @ 40
DRIED FRUIT			
Apples, sliced, lb.....	4 @ 51	Eggplant, bx.....	@
do evaporated.....	9 @ 10	Garlic, lb.....	@
do quartered.....	12 @ 10	Green Corn, cr.....	@
Apricots.....	9 @ 10	do sweet cr.....	@
do evaporated.....	16 @ 13	do large box.....	@
Blackberries.....	13 @ 13	Green Peas, lb.....	@
Citron.....	18 @ 25	Sweet Peas, lb.....	@
Dates.....	1 @ 1	Lettuce, doz.....	10 @
Figs, pressed.....	6 @ 7	Lima Beans lb.....	@
		Mushrooms, lb.....	@
		Rhubarb bx.....	@

Art Publications for Christmas and New Year.

With the recurrence of Christmas and the New Year come the artistic holiday publications of Messrs. L. Prang & Co. Very much, indeed, is due to this firm for the rapid growth of art taste now manifest in this country. The novelty of their designs, the decorations with which they are embellished, and the form in which their latest efforts to please have been presented, evince their determination to keep pace with their most skillful competitors in this branch of industry. Among their cards abounding with varied designs, the most aesthetic, perhaps, is that by the renowned poet-artist Celia Thaxter. It is a branch of olive in full fruitage, elegantly painted and with a Greek motto in praise of the olive, as consecrated to Athene, and on the reverse a poem by Mrs. Thaxter, in autograph reproduction. Among these cards are charming flower designs, combinations of flowers and landscapes, seasons, animals and birds. The figure designs are very fine, especially two laughing babies, one of them in a basket and the other tied up in a blanket and suspended from spring scales, to be weighed. The satin art-prints are elegant, and some of the sachets, handkerchief-holders and pockets, are quite elaborate. In calendars, this year's product is rich in varieties. Besides several booklets, there are five art-books in imitation of water-color, entitled "A Gay Day for Seven," "Echoes in Aquarelle from Along the Shore," "A Christmas Processional," The Voice of the Grass," and the "Home of Evangeline." Everything offered by Messrs. Prang & Co., as souvenirs of the departing, and salutations to the coming year, is worthy of commendation.

"MELICAN HEATHEN."—This story is going the rounds of the Eastern papers, and it is just as good here as over there: A Chinaman applied for the position of cook in a family in a Western city. The lady of the house and most of her family are members of a fashionable church, and the Chinaman was questioned closely. "Do you drink whisky?" "No," said he, "I Clistian man." "Do you play cards?" "No, I Clistian man." He was employed and gave great satisfaction. He did his work well, was upright, correct and respectful. After some weeks the lady gave a progressive-euchre party, and had wines at the table. John was called upon to serve the party, and did so with grace and acceptability. But the next morning he waited on the lady and said he wanted to quit. "Why, what is the matter?" she inquired. John answered: "I Clistian man; I tole ycu so before; no heathen. No workee for Melican heathen."

HOREHOUND HONEY IN SHASTA.—It is stated that a beeman from Southern California has discovered a canyon in Shasta county where horehound flourishes in great profusion, and proposes to start an apiary there. Horehound honey is used extensively in pulmonary complaints.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

- FOR WEEK ENDING NOVEMBER 29, 1887.
- 373,808.—FRUIT-DRIER—A. Blatchly, S. F.
 - 373,928.—INSECTICIDE—W. A. Garner, Fresno, Cal.
 - 374,060.—SPRING ROLLER—E. Gres, Tombstone, A. T.
 - 373,939.—DEVICE FOR LIFTING GOODS FROM SHELVES—L. M. McLaren, Crescent City, Cal.
 - 373,944.—THRASHER FEEDER—W. E. Phillips, Wilmington, Cal.
 - 373,906.—VINEYARD CULTIVATOR—H. B. Reed, Woodland, Cal.
 - 374,011.—EMULSION TO PROTECT FRUIT TREES—T. W. Smith, Santa Rosa, Cal.
 - 17,916.—DESIGN—S. H. Lucas, San Bernardino, Cal.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

CAPT. J. H. DRUMMOND of Glen Ellen has been appointed by Gov. Waterman a member of the Board of Agriculture for District No. 4 (Sonoma and Marin) vice self, term expired.

THE British bark Pak-Wan sailed from Vancouver last week for South Australia, carrying 500,000 feet of lumber, 12,000 pickets and 6000 bundles of laths.

THE Pioche Record says that coyotes come into town in broad daylight and carry off chickens and turkeys.

AMONG the out-of-the-way shipments from Carson City this season has been 75,000 pounds of pine nuts.

H. M. NEWHALL & CO.,

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309 and 311 Sansome Street, San Francisco, Cal.

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FRENCH COACH HORSES.

More Imported and Bred than by any other Eight Establishments.
511 PURE-BREDS Now Actually on Hand.
Experience and Facilities Combined for Furnishing Best Stock of Both Breeds at Reasonable Prices.
Separate Catalogues for each breed, with history of same. Say which is wanted. Address
M. W. DUNHAM, WAYNE, DU PAGE CO., ILLINOIS.

VACAVILLE SHIPS ORANGES.—The first shipment of oranges from the Vacaville citrus belt was made Dec. 3d by Charles Martelle, who sent 5000. They had been picked a week, but the shipment was delayed by the bad roads. They are large and fine.

THE Pope is said to be very fond of agriculture, and to have a passion for planting trees. One of his first acts after his election was to plant the garden of the Vatican with fruit trees and vines, and this year the grapes of the garden are turned into wine under his personal supervision.

EUCALYPTUS trees have made so much trouble in Alameda, by thrusting their rootlets into cracks in sewers and filling up the pipes, that an ordinance declaring all trees of that genus growing on public streets to be a nuisance has been proposed to the Trustees.

Somebody's Child.

Somebody's child is dying—dying with the flush of hope on his young face, and somebody's mother thinking of the time when that dear face will be hidden where no ray of hope can brighten it—because there was no cure for consumption. Reader, if the child be your neighbor's, take this comforting word to the mother's heart before it is too late. Tell her that consumption is curable; that men are living to-day whom the physicians pronounced incurable, because one lung had been almost destroyed by the disease. Dr. Pierce's "Golden Medical Discovery" has cured hundreds; surpasses cod-liver oil, hypophosphites, and other medicines in curing this disease. Sold by druggists.

Beautiful Women

Are made pallid and unattractive by functional irregularities, which Dr. Pierce's "Favorite Prescription" will infallibly cure. Thousands of testimonials. By druggists.

Dr. Pierce's "Pilllets"—the original "Little Liver Pills" (sugar-coated)—cure sick and bilious headache, sour stomach, and bilious attacks. By druggists.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

- G. W. INGALLS—Arizona.
- GEO. McDOWELL—Santa Clara Co.
- WILLIAM POOL—Fresno Co.
- R. G. HUSTON—Butte, Montana.
- E. P. SMITH—Washington Ter.
- WM. WILKINSON—San Joaquin and Stanislaus Co.
- A. F. JEWETT—Tulare Co.
- F. B. LOGAN—San Mateo and Santa Cruz Co.'s
- H. SPARCKE—Arizona Ter.
- E. H. SCHAEFFLE—Nevada and Placer Co.'s
- C. E. WILLIAMS—Yuba and Sutter Co.'s
- EDMUND WRIGHT—Tehama and Colusa Co.'s

FIVE large ships sailed from Portland, Or., Nov. 30th, carrying out 245,541 cents of wheat and 18,200 barrels of flour for the United Kingdom.

Money Loaned

On Country Real Estate in large and small amounts at lowest rates, by A. Schuller, 106 Leidesdorff St., room 3.

AGENTS LOOK HERE
and farmers with no experience make \$2.50 an hour during spare time. J. V. Kenyon, Olen Falls, N. Y., made \$18 on day, \$76.50 one week. So can you. Proofs and catalogue free.
J. E. SHEPARD & CO., Cincinnati, O.

HEALD'S BUSINESS COLLEGE,
24 Post St. S. F.
Send for Circular

Shorthand, Typewriting, Penmanship, Bookkeeping

This paper is printed with Ink Manufactured by Charles Eneu Johnson & Co., 500 South 10th St., Philadelphia. Branch Office—47 Rose St., New York, and 40 La Salle St., Chicago. Agent for the Pacific Coast—Joseph H. Dorsey, 529 Commercial St., S. F.

Lands For Sale and To Let.

WEST COAST LAND CO.
TEMPLETON, SAN LUIS OBISPO CO., CAL.

Home of Wheat, Fruit, Wine and Olive; 15,000 acres sold in past 8 months to 220 settlers, representing a population of 1100; 49,000 acres—small subdivisions—average, \$22.50 an acre; 1/4 cash, balance 5 years, 6 per cent. Catalogues and maps free. C. H. PHILLIPS, Manager.

A NEW COLONY

On the new extension of Southern Pacific Railroad, on the lands belonging to R. T. BUELL, Esq., near Los Alamos, Santa Barbara county, Cal. Parties desiring to visit the property now, can go via San Luis Obispo, and take the cars from thence to Los Alamos, thence by stage to the Colony. 20,000 acres of the best lands in California, subdivided into 20, 40 and 80-acre farms; \$20 to \$30 per acre. INTERNATIONAL IMMIGRANT UNION, 401 California St., San Francisco

GOOD CROPS EVERY SEASON WITHOUT IRRIGATION.

Free by mail, specimen number of "The California Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of
SANTA CRUZ COUNTY.
Address, "EXCHANGE AND MART," Santa Cruz, Cal

GUM AND CYPRESS TREES.

All Fresh, Healthy, Hardy Stock, Regularly Transplanted in Boxes by Hand.

Monterey Cypress. 6 to 10 inches high, of 100 trees per box, at \$2 per 100, or \$19 per 1000; (in larger spaces), 8 to 12 inches high, of 70 trees per box, at \$2 per box or \$25 per 1000; or 12 to 15 inches, of 50 trees per box, at \$2 per box or \$35 per 1000. Seedlings, 2 to 4 inches (slow grown), at \$5 per 1000; transplanted thick, 4 to 6 inches, at \$10 per 1000.
Monterey Pines. 4 to 6 inches of 100 trees per box at \$2.50 per box, or \$22.50 per 1000; 6 to 8 inches of 50 trees per box at \$3.50 per 100, or \$35 per 1000. Acacia Melanoxylon, 15 to 20 inches of 35 trees per box at \$1.75 per box.
Blue Gums. 6 to 10 inches of 100 trees per box at \$1.50 or \$14 per 100. In larger spaces, 10 to 15 inches of 70 trees per box at \$1.50 per box, or \$14 per 1000; 15 to 24 inches of 50 trees per box at \$1.50 per box; 2 to 3 feet of 30 per box at the rate of \$5 per 100. Also large straight sacked or bulked Gums, 6 to 15 feet, at low rates.
U. S. stamps will be taken for sample boxes. All trees will be delivered promptly and in good condition, free to shipping points. Send all money orders, postal notes or drafts to
GEO. R. BAILEY,
Berkeley, Cal.
Box 108

SPRAY HOSE NOZZLES.

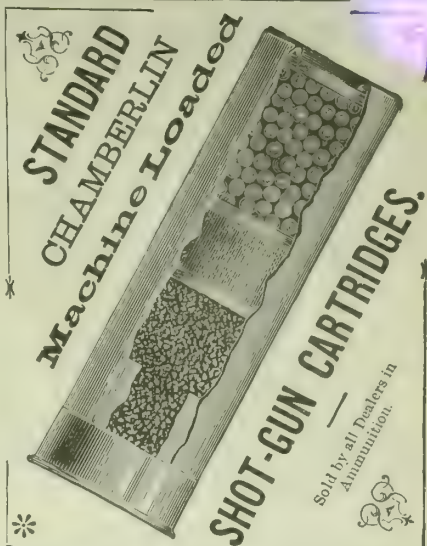
The Telegraph Spray The Eureka Spray Nozzle Nozzle
Throws a spray or solid stream; the spray or solid stream; can be used for throwing; the spray is reduced; washing barns, chickenable; it will make a large, houses, fences and free medium, small, or a spray-spraying.
They fit one-half inch hose pipe, and may be adapted to any good force pump. They can also be used for watering gardens or washing windows, etc. Sent by mail, postage paid, \$1 each. Spray Pumps, from \$4 upwards. Hose and Hose Pipes at wholesale prices. Agents wanted. Address, WM. WAINWRIGHT, 1409 Jackson St., San Francisco.

FOR SALE.

Grapevines and Cuttings, OLIVE TREES and CUTTINGS.
RIPARIA SEED.
Apply to CLARENCE J. WETMORE,
204 Montgomery St., S. F.

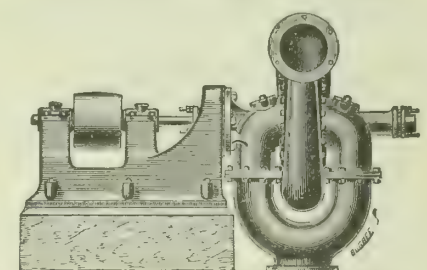
An Ingenious Invention
You Can Make Money
WITH THE
Novelty Clothes Rack
An indispensable convenience for the kitchen and laundry. Send for illustrated circulars explaining territorial rights in exchange for land.
W. C. AIKEN, St. Helena, Cal.

California Inventors
Should consult DEWEY & CO. AMERICAN AND FOREIGN PATENT SOLICITORS, for obtaining Patents and Caveats. Established in 1860. Their long experience as journalists and large practice as Patent attorneys enables them to offer Pacific Coast Inventors far better service than they can obtain elsewhere. Send for free circulars of information. Office of the MINING AND SCIENTIFIC PRESS and PACIFIC RURAL PRESS, No. 220 Market St., San Francisco Elevator, 12 Front St.



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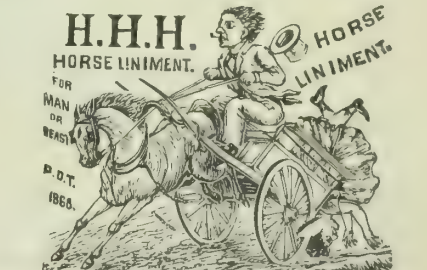
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H. H. H. HORSE LINIMENT.
THE H. H. H. Horse Liniment puts new life into the Antiquated Horse! For the last 14 years the H. H. H. Horse Liniment has been the leading remedy among Farmers and Stockmen for the cure of Sprains, Bruises, Stiff Joints, Spavins, Windgalls, Sore Shoulders, etc. and for Family Use is without an equal for Rheumatism, Neuralgia, Aches, Pains Bruises, Cuts and Sprains of all characters. The H. H. H. Liniment has many imitations, and we caution the Public to see that the Trade Mark "H. H. H." is on every bottle before purchasing. For sale everywhere for 50 cents and \$1.00 per Bottle.

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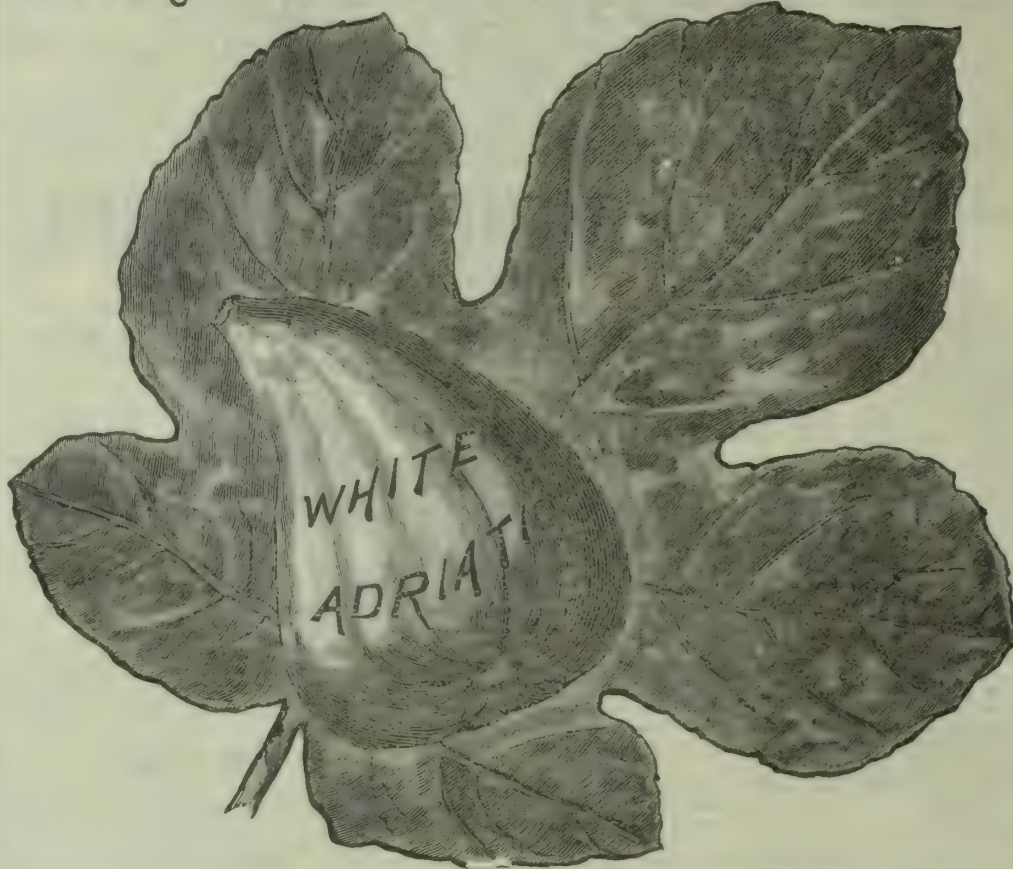
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And everything to be found in a first-class Nursery; also the following new fruits, obtainable only at these Nurseries:

Clyman—Earliest and finest shipping Plum.
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Purity—Most beautiful, white, canning Cherry.
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Commercial—The largest Almond.

Send for catalogue and price list. All stock unirrigated and free from disease. LEONARD COATES, Napa City, Cal. For County Rights for a new and valuable FRUIT DRIER, address as above.

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—THE—

Largest Stock of Trees in the State.

The only Fig that should be planted for Drying.

ALSO A LARGE STOCK OF OTHER TREES:

APPLES,
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 Shade Trees and
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A complete assortment of Rooted Grapes and Cuttings. All trees warranted free from Scale or Aphid.

Catalogue free.

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FRUIT TREES, GRAPEVINES, OLIVES, SMALL FRUITS, Etc.,

Ever offered on the Pacific Coast at very low rates. Samples on hand at below address.

SEEDS. SEEDS. SEEDS.

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French Walnuts, Home-grown Oranges and Rooted Grapevines.

Illustrated Catalogue and Price List for the season of 1887-88 free to all sending for them. All Trees, Vines, etc., guaranteed free from scale and other injurious pests. A certificate of inspection furnished to all.

A full line of Fruit and Ornamental Trees, Shrubs, Vines and Hothouse Plants.

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SPECIALTIES:

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Send 10 cents in stamps for a sample of the dried and cured Adriatic Fig. Fall catalogue now ready. Address all letters to F. ROEDING, Fresno, Cal.



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Ornamental Plants, Palms, Bamboos, Bulbs and Seeds,

True to name and free from insects.

Raised in our own Nurseries at Aynio and Yokohama, Japan, under supervision of an able Horticulturist, well known to the best Nurserymen of the U. S. We offer, free by mail, to any address, three choice new divers colored Japanese Chrysanthemums for \$1; five choice Japanese Lily Bulbs for \$1. One pound Japanese Chestnuts for 50 cents. Finely illustrated catalogue.

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OONSHIU (Seedless), the KAWACHI and KINOKUNI,
 DAI DAI and CITRUS JAPONICA

GRAFTED TOGETHER.

The C. Japonica round and oblong. Also a new choice variety of

JAPAN PLUM (TAMBA), CHESTNUTS (Mammoth), OLEA FRAGRANS,

And in a week shall have other varieties.

See photograph taken in Japan and samples of the fruit at our office, 120 Sutter Street.

NURSERIES—Santa Cruz, and on Filbert St., San Francisco. The Union St. and Presidio Cars from the Ferry pass the door, and the Polk St. Cars within half a block.

JAPANESE NURSERIES

Of the ORIENTAL IMPORTING COMPANY, 409 & 411 Washington St., San Francisco.

UNSHIU AND CANTON HYBRID ORANGE TREES.

And all other varieties of Japanese Fruit and Ornamental Trees.

SURPLUS STOCK.

CHERRIES—10,000 Royal Ann or Napoleon Bigarreau, and others, including Rockport, Grafton, B. Tartarian, E. P. Guigue (Vacaville), Centennial, Burr's Seedling, Black Republican, etc.

APPLES—10,000 yellow Newtown Pippin, red and yellow Bellflower, Jonathan, and almost a complete list of those grown in this State.

PEARS—15,000 Bartlett; a good list of shipping varieties and general assortment.

PLUMS—Kelsey Japan, Washington and others.

Quince, Walnuts and Shade Trees; a few Peaches and Apricots. All the above are healthy, non-irrigated trees, budded or grafted from bearing trees, and guaranteed free from all insect pests. Grafts all on whole roots. Write, giving number you desire, and by return mail you will get prices.

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Selected and imported by us direct from Smyrna, it is the finest Fig in the world, and the only sort that should be planted for profit. The largest and finest list of NUTS in the country, at prices below competition.

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Including

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A general assortment of healthy FRUIT TREES, VINES and SMALL FRUITS, grown without irrigation, free from Scale Bug and warranted true to name.

Apple Trees in assortment, Crawford's Early, Orange Cling, Salway and other kinds; Royal and Blenheim Apricots or Myrobalan stocks; Bartlett, Beurre Hardy, Beurre Clairgeau, Howell, Winter Nellis and Easter Beurre Pears, Coe's Golden Drop or Silver Prune and other Plums and Prunes in assortment. Rockport, Black Tartarian, Napoleon and Centennial Cherries; Nut-bearing Trees; Grapevines, etc.

Prices furnished on application. Address,

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—AT—

HALF PRICE.

I am prepared to furnish the Washington Navel, the hardy Unshiu, of Japan, and other choice varieties of Orange Trees, for the season of 1888, at about ONE-HALF the price usually charged.

This is a rare opportunity for setting out orange orchards cheap, and for getting first-class trees. Send for Circular. J. H. FOUNTAIN.
Riverside, Nov. 14, 1887.

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FINE ASSORTMENT OF THE LEADING VARIETIES OF FRUIT AND ORNAMENTAL TREES.

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LARGEST PEACHES IN CALIFORNIA. Splendid flavor; good shippers; excellent for canning. Gum, Cypress, Pine and Pepper Trees in boxes. Flowers and Shrub.

All trees grown on new, rich soil, without irrigation, and are positively free from insect pests.

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30,000 Golden State Almond Trees

BY THE

OAK SHADE FRUIT COMPANY,
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These Trees are spring budded and have grown this season from one to three feet high. The tree from which they were budded has borne seven full crops of Almonds and no failure. This is a fine and better Almond than the Languedoc, and ripens three weeks earlier.

WEBSTER TREAT, Manager.

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Of the following varieties FOR SALE:

Cabernet Sauvignon, Cabernet Frank, Teinturier, Carignane, (Riparian, for Resistant), Mataro, Grenache, Trousseau.

Also Trees and Cuttings of the White Adriatic Figs.

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NEWCASTLE EARLY APRICOT,

Earliest in Cultivation.

HANDSOME AND GOOD FREESTONE.

Good Shipper and Productive.

All kinds of Fruit Trees and Small Fruit Plants. Send for Catalogue.

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Prettiest Illustrated
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Gardeners trade a specialty. Packets only 5c.
Cheap as dirt by oz. & lb.
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Bartlett Pear Stock for Sale.

5000 Bartlett Pear Trees, one and two years old, for sale at bed-rock prices; special rates to dealers.
H. B. MURCOTT, San Bernardino, Cal.

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One-year old in boxes; two-year old in nursery.
Picholine variety. O. W. CRANE,
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SPECIALTIES:

NUTS, PRUNES AND GRAPES.

The Finest Collection of "Nut-Bearing" Trees to be Found in the United States.

21 Varieties of Walnuts,

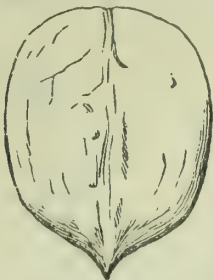
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CLUSTER WALNUT (Juglans Racemosa).

The newest, most prolific and valuable variety ever introduced into this country.

PRÆPARTURIENS,

Or FERTILE WALNUT, introduced into California in 1871 by Felix Gillet.

"Second" Generation Præparturiens,
(California Grown).

"Second Generation" trees, grown from nuts borne on the original tree; 80 to 90 per cent guaranteed to be "pure," or having retained the characteristics of the original Præparturiens, chief among them the surprising fertility of that type.

Third Generation Præparturiens or common French walnut (Juglans Regia), grown from nuts borne on Second Generation trees, all California grown. Vigorous and fertile variety, but the nuts smaller than those of the second generation.

GRAFTED WALNUTS.

Franquette Parisienne, Mayette, Chaberte, Meylan, Vourey and "Weeping" Walnuts, the leading varieties of Europe, highly recommended for the size, beauty and quality of the nuts, fertility, and above all, "hardiness" of the kinds.

We offer this season imported trees of the seven above sorts, expressly grafted for us, regardless of cost. The difficulty in grafting the walnut is such, and grafted walnuts are so scarce, that we are compelled to decline orders for such trees in quantities over a dozen. Only a limited number of trees of each kind from four to six feet.

"MARRONS" or French Chestnuts.

(Solely propagated from grafting.)



MARRON COMBALE (California grown).

10 Varieties of the finest kinds of Marron-Chestnuts to be found anywhere; at the head of the 1st "Marron Combaie," which we have been fruiting upon our place the last 13 years; very large and sweet nut, prolific; one of the very best for market.

7 Varieties of Filberts.

4 Varieties of Almonds.

4 Varieties of April Cherries, the earliest and most prolific in California.

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Prunes! Prunes!

Lot D'Ente, or D'Ente "true from the root," one of the best and finest types of the "French Prune" and the kind so extensively cultivated in the prune district of France. This type is not propagated from grafting, which would do away with its chief qualities of being more vigorous, more long-lived than grafted trees, and a "gum-resistant" stock.

Also, the finest grafted types from the home of the Prune D'Ente or D'Agen, on Myrobalan, St. Julien and Almond stock.

Saint Catherine (true from the root), one of the finest dessert Plums, and one of the best for preserving and drying.

Puymirol D'Ente, Blue and Red Perdigran, German and Italian Guesche, Alsace Guesche, Knight's Green Drying, etc.

Apricots, Peaches, Pears,

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NOBEL'S DYNAMITE,
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Best and Strongest Explosives in the World.

As other makers IMITATE our Giant Powder, so do they Judson, by Manufacturing a second-grade, inferior to Judson.

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The Only Reliable and Efficient Powder
For Stump and Bank Blasting. From 5 to 20 pounds blows any Stump, Tree or Root clear out of ground at less cost than grubbing. Railroaders and Farmers use no other.

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To grow large and profitable crops and at the same time to make the farm better each year, is the problem for the farmer.

FERTILIZE!

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NITROGENOUS SUPERPHOSPHATE.

UNIVERSITY OF CALIFORNIA, Nov. 3, 1886.

Dr. J. KOEBIG—Dear Sir: I have analyzed your sample of "Nitrogenous Superphosphate," with the following result:

Soluble Phosphoric Acid.....	12.90 per cent
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Ammonia.....	1.87 "
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The above amount of Nitric Acid is equal to 0.85 per cent Ammonia, therefore, total of Nitrogen calculated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vineyards, orchards, gardens, farms, and I recommend its use by the cultivators of the soil generally, in California. Yours truly,

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Dr. J. KOEBIG, San Francisco—Dear Sir: I take pleasure in adding my testimony to that of Dr. Schneider as to the high quality of the "Nitrogenous Superphosphate" Fertilizer, analyzed by him at your request. It is a high-grade article, and as such returns the user a better money value than a low-grade

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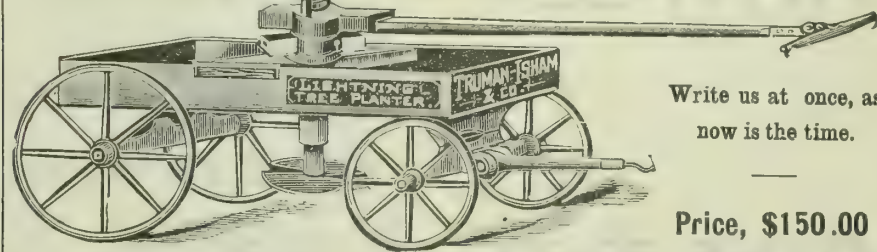
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SIMPLE, PRACTICAL and SERVICEABLE.

Two men and one horse will bore 300 holes
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Bores Holes 36 inches deep and 24 inches in diameter.

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It contains 1000 of the most beautiful and artistic designs, all of which are of the latest and most popular styles. It is a valuable work for all who are engaged in the art of bookbinding, and is a must for all who are interested in the art of bookbinding. It is a work of art, and a work of beauty. It is a work of genius, and a work of power. It is a work of love, and a work of devotion. It is a work of faith, and a work of hope. It is a work of charity, and a work of mercy. It is a work of justice, and a work of truth. It is a work of peace, and a work of love. It is a work of life, and a work of death. It is a work of glory, and a work of honor. It is a work of power, and a work of might. It is a work of wisdom, and a work of knowledge. It is a work of understanding, and a work of insight. It is a work of compassion, and a work of mercy. It is a work of love, and a work of devotion. It is a work of faith, and a work of hope. It is a work of charity, and a work of mercy. 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TRUMAN, ISHAM & HOOKER.

Our Racine Four-Spring Wagon

THE ONLY A GRADE WAGON ON THE COAST.

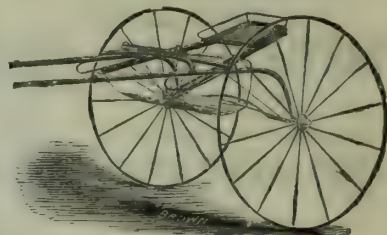
No. 100 A-1½ Axle and Break.

No. 100 A-1½ Axle and Brake.

It has Double Collar, Steel Axles and Steel Tires; Nickel Rail on dash; Leather Cushions; all selected material, and elegantly painted and trimmed; White-wood Body; Hardwood Sills and Bottom. An important feature of this wagon is that the

Felloes are Riveted each side of Spoke.

It is A grade in every particular. Poles, Neck-Yoke and Doubletrees, and with Patent Fifth Wheel. It is the Premium Wagon of this coast. With or without top.



OUR DANDY CART.

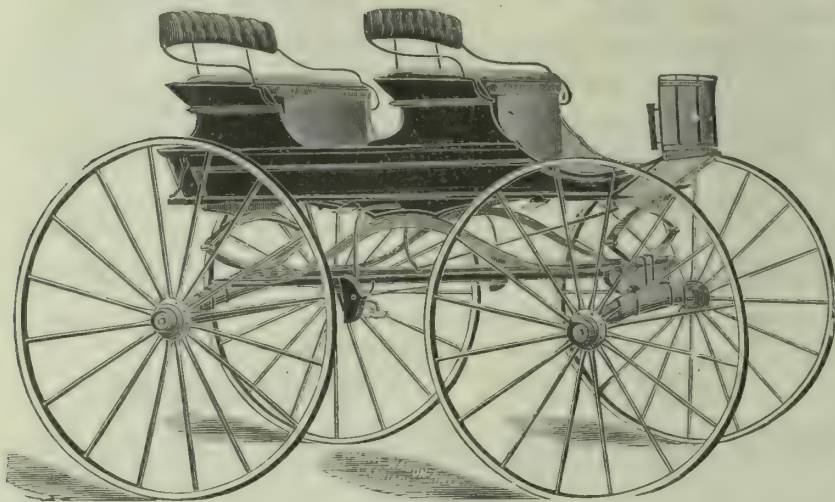
SINGLE SEAT.

Price, \$35.

Terms Cash.

Delivered at any Railroad or Steamship Station in California.

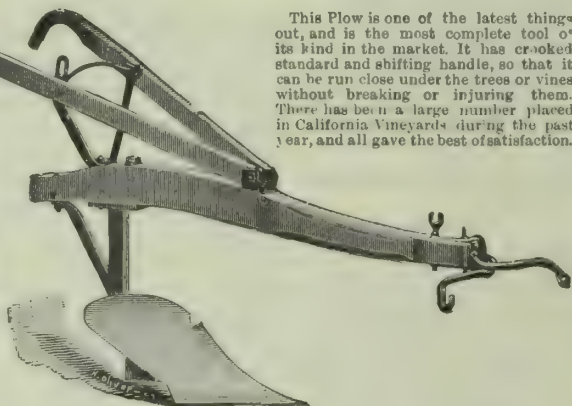
It beats the Chicago, and at half the price. It is simple, light and durable. It is made of the best material and workmanship. Finished in oil and varnish. Best cart for the money in the market. Will sell readily.



New Bradley Vineyard Plow.

Especially Adapted for Cultivation of Vineyards and Orchards. The Only Practical Vineyard Plow Manufactured.

This Plow is one of the latest things out, and is the most complete tool of its kind in the market. It has crooked standard and shifting handle, so that it can be run close under the trees or vines without breaking or injuring them. There has been a large number placed in California Vineyards during the past year, and all gave the best of satisfaction.



Price, with Wooden Whiffletree, \$9. Extra Share, \$3.



LA DOW HARROW.

Just the Harrow for Vineyards.

Thousands in use, giving entire satisfaction. Simple, Durable and Flexible.

Send for Prices and Description.

See Saw Cultivator.

Patented April, 1887.

PRICES.

4 feet\$50 00
5 feet 55 00
6 feet 60 00

Terms Cash

Weight, 325 Pounds.



It is the only Cultivator that is a perfect side-hill machine. The machine is simply perfect. It is expensively made and great care has been used in its manufacture.

We call special attention to our HAVANA PRESS DRILL. By its use you are assured of an excellent crop. Send for circulars, testimonials and description. Have you seen our New Square Corner Gang Plow? It beats anything in the shape of a plow. Agents for David Bradley's Celebrated Garden City Plows. Send for Catalogue. Address

TRUMAN, ISHAM & HOOKER, San Francisco.

HAWLEY BROS. HARDWARE CO.

SOLE AGENTS FOR THE

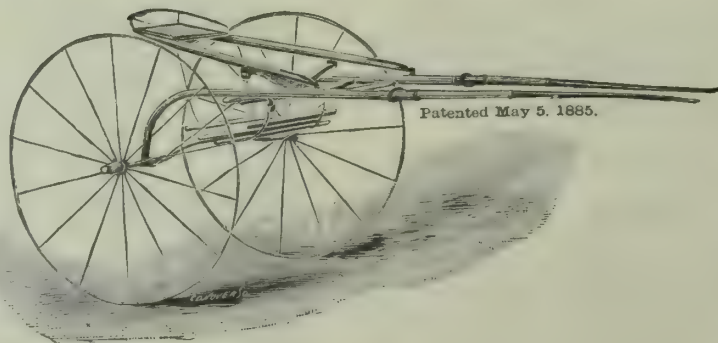
CELEBRATED

COLDWATER ROAD CART.

As a Mud Cart it is unsurpassed.
As a Breaking Cart it has no equal.
As a Speed Cart it goes to the front.
It is entirely free from all horse motion.
The spring and seat-bars being on top of shafts gives more horse room than any other cart yet constructed.

We use the best of material in its construction. Shafts, seat-bars, circle-bar and cross-bars are made from the finest selections of second-growth ash and hickory.

For ease and comfort to occupant it goes ahead of any two-wheeled vehicle manufactured in the world.



Patented May 5, 1885.

Owing to its low price, it comes within the reach of all.

The Wheels are Brown's compressed banded "A" wheel.

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The Cork Oak.

C. G. Hutchinson of San Gabriel, who owns the large cork oak tree of which an engraving was given in the *RURAL PRESS* some time ago, writes that his largest tree is now very handsome with its evergreen foliage. It is much sought out by tourists, who have seen the acorns and the cork which have been shown at the Chicago and St. Louis expositions, and are desirous to see the tree growing. Mr. Hutchinson has for several years grown quite a crop of acorns, and the University has purchased from him part of the seed from which they have grown the seedlings, which they are distributing in small lots for trial. This year Mr. Hutchinson has also sold some to go to Ventura county and has some left. The Ventura county grower proposes to put out ten acres to cork oaks. Another direction from which the University has procured acorns is Calaveras county, where H. A. Messenger of Valley Springs has old trees. We know of other trees in Visalia, in Santa Barbara and in Sonoma. This makes five counties in which cork oaks of considerable age are now growing, and there are probably other places also. All these trees are from seed sent out by the Patent office about 1855, so the trees are now upward of 30 years of age, and old enough to yield some cork. We would like to know about any other old trees than those mentioned.

The young cork oak seedlings do well without much care, when set out in dry situations. Mr. Hutchinson writes that he set out some two years ago on a hill where there is no chance for irrigation. They were watered by hand when first set out, and have had nothing but the natural rainfall since that time. They are now looking well, and if they get a fair amount of rain this winter, he expects they will make a good growth. Some young seedlings were set out last winter on the hill back of the University grounds in Berkeley, and have done well in spite of the short rainfall. They have had no water at all. The squirrels do not like the cork oak as well as the English oak, apparently, for they have done them little harm, while they wrought great havoc with the latter.

The seedlings are grown easily in nursery or garden-beds. The bluejays have, however, a passion for the acorns, and will dig them out in quantity unless they are covered with lath frames or something of the kind to keep them out. Gophers also like the seedlings and must be watched and destroyed. Now that there are plenty of fresh home-grown acorns to be had, there is no reason why there should not be large quantities of the trees grown and planted. The coming generations in this State bid fair to require large quantities of cork, and we should be planting the trees for them now.

THE BEST EARLY POTATO.—A reader of the *RURAL* asks which is the best early potato for San Luis Obispo county. We would like to have our readers in that county give us the benefit of their experience, and, in fact, we wish our vegetable-growers generally would rise and explain more fully. We have great partiality for this branch of horticulture, and would like to give it more space in our columns, if our practical readers will let us hear from them of their observations and experiences.

ORANGES flourish at Fresno. Harvey Akers of that town will pick 10,000 this season, and the fruit is very large and clean.

The California Fan Palm.

Our indigenous palm, one of the most striking native plants of the State, gave the botanists some trouble in classification. First it was a *Prichardia*, then a *Brahea*, and finally it has

enters Los Angeles from the east by the Southern Pacific sees them upon the left side of the railway just before the station is reached; in fact, the buildings shown in the lower left-hand corner of the picture are those of the railway. These palms are a landmark for the



THE TWIN PALMS IN LOS ANGELES.

found botanical rest as *Washingtonia filifera*. Its native area along the Colorado river was thrown open to the public by the building of the Southern overland route, and is now a comparatively familiar country. Long ago, however, seeds were brought from this region and plants were established which have now grown to grand size, while the facts of their introduction have become a matter of tradition. The twin palms shown in the engraving which are growing within the limits of Los Angeles city, are perhaps the oldest and largest cultivated fan palms in the State. They are probably upward of 50 years old. The tourist who

enters Los Angeles from the east by the Southern Pacific sees them upon the left side of the railway just before the station is reached; in fact, the buildings shown in the lower left-hand corner of the picture are those of the railway. These palms are a landmark for the

tourist, and their photographs are in great request. They are now being encroached upon by the buildings, and may fall before the progress of the day, but we trust they will be spared as long as possible. The California palm was widely distributed over the State at quite an early day. It is on record that Louis Prevost, the pioneer San Jose horticulturist, brought seed from the southern desert to San Jose about 30 years ago, and succeeded in growing about 50 plants. These were carried to all the chief points in the northern half of the State. Either from this, or in some cases perhaps from later propaga-

tions, came the large fan palms which are to be found at points in the Sacramento valley as far up as Shasta county; also in Oalistoga, in Sacramento, Stockton and elsewhere.

The plant is a rapid and vigorous grower and quite hardy. It also bears transplantation well. Some years ago the late Governor Latham bought two old palms at San Jose. They were at the time about 25 feet high, and he is said to have paid \$1000 for the pair. These he moved from San Jose to his residence at Menlo Park, where they grew well and are still standing on the old Latham place.

A Perennial Fair.

Although the State, Mechanics' and various district fairs were all over weeks and months ago, many of the pleasures and advantages of an agricultural exposition can be enjoyed any week-day on Market street, or within a stone's throw of it, by the citizen of San Francisco, the visitor from other portions of the State and the stranger within our gates from the far East.

Let any one who would test the truth of our statement pause before the window of the California Land Association, 634 Market street, and let his eye wander over the big squashes, potatoes, and other vegetables, the specimens of maize and grain, grapes and fruit, citrus and deciduous, nuts and cotton. Let him stroll a few doors further down to Carnall's and Stevens & Morgan's real estate offices, glance at the similar but smaller collections there, and then cross the street to the northwest corner of the Palace hotel and inspect the great Sonoma Valley exhibit, in which the large and elegant assortment of fruits in glass is particularly striking.

All these will make a proper introduction to the varied and fascinating display which is to be seen at the rooms of the State Board of Trade on Second St., under the Grand hotel. Here 14 of the 21 affiliated counties have already placed exhibits of their products, and others are preparing to do likewise. In a hasty glance around on Wednesday of this week, we were struck particularly with the handsome samples of dried fruit from Sacramento county, the glace confections from San Jose (Barbour and Washburn's), the heavily laden boughs of luscious Japanese persimmons from Sonoma, and the superb cluster of (23) oranges from Oroville, Butte county. And we were given palatal evidence that both the 'simmons and the citrus fruit were delicious to eat as well as fair to look upon.

The register kept at the rooms shows the autographs of from 25 to 40 visitors per day from outside the State. We noticed them hailing from Texas and Missouri, from Maryland, New York, Massachusetts, Maine, Canada, and even England and Scotland. How they will spread California's fame abroad!

Should the citizen or sojourner still wish to see more of our State's resources, the Immigration Association, at 10 California street, offers freely to show him a fine array of corn and grains in the sheaf, luxuriant hop-vines and olive-branches in the hall outside its rooms, while within are many specimens of minerals, native woods, jars of thrashed wheat, oats, barley, etc., almonds and walnuts, beans in vast variety, fruits, honey, fleeces, etc.

Taken altogether, the several exhibits above indicated give San Francisco an interesting and quite respectable standing agricultural fair.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

A Deep Bore in Oregon.

EDITORS PRESS:—To one coming from Iowa or Dakota, where on all land water may be obtained by boring or digging with ease, it being found at a reasonable depth on almost every section of country, it is interesting to see the different devices for securing water on the Pacific Slope. Multitudes of Iowa farmers have come to California and secured land without giving thought to the question of water, finding the price of their land quadrupled sometimes before irrigation was secured. While on a long visit to different parts of Southern California, in San Luis Obispo, Los Angeles and their neighborhoods, nothing interested me more than the various devices for securing water on farms, and the marvelous effects produced on the sandy, seemingly barren soil by the flow of water on it. Orange groves, vineyards and fields of grain are growing in richest luxuriance on sandy soil which a dweller on the prairie would consider worthless for cultivation.

Riding through the park in San Francisco one day in February, we saw many men employed in preparing about 40 acres of ground, to receive all kinds of bedding plants, many of them of the most tender varieties. We laughed at the idea of anything growing in soil like that. It seemed pure sand—only fit for mortar. In August we drove by it again and were astonished to find most luxuriant blossoms of every conceivable variety on every part of the tract—dahlias, asters, chrysanthemums on one part and delicate spring flowers on the other, with many kinds unknown to our Northern gardens. "All that sand needed was plenty of water," said the gardener. But the rapidity of growth and its luxuriance was a great surprise.

So with some land in San Luis Obispo and vicinity. Soil that seemed absolutely barren a short time ago is now producing marvelous crops, with no manure or fertilizing material. Land that had cost over \$200 an acre to buy, clear and fence, paid 50 per cent more than the whole cost in its first crop of white beans!

In many parts of California and Oregon, however, water is found on many farms in springs—and surface water; on others, by digging from 20 to 60 feet, never-failing water is obtained, and all modern methods, of course, are used to make this easy of access to houses, barns, dairies and stock-yards.

Among the places where there is no spring or well-water found is one of the farms owned and being improved by W. S. Ladd, the well-known banker of Oregon. We may say here that this man says he waited years with the object ahead to be "able to afford to clear and run a farm," and is now using his farms as his recreation from business and making costly experiments in breaking lands, clearing, cropping, stock-raising, etc.

An Artesian Well.

The one of Mr. Ladd's farms of which we write is near Portland, and upon it he has been for some time sinking an artesian well, which has attracted much attention. I think it will interest some of your geological students, and therefore give you the briefest possible record of the soil as found.

Strata of earth and clayey soil and fine drift sand, 100-ft. level.

Sand, clay and gravel, granite and basalt, boulders in moist sand, 20 ft.; 120-ft. level.

Water-worn boulders and gravel, with veins of water with sand, 90 ft.; 80-ft. level.

Water-worn ground and sand of basalt and granite, 20 ft.; 200-ft. level.

Water-worn boulders and grit of spar and basalt, 20 ft.; 220-ft. level.

Loam, grit and gravel of water-worn basalt and granite spar in veins of sand and conglomeration, 55 ft.; 275-ft. level.

(The presumption is that there is lateral leakage at this point.)

Fine sand and small basaltic gravel, 55 ft.; 320-ft. level.

Coarse grit and sand of granite and spar, 55 ft.; 330-ft. level.

Alternate veins of clay, sand and granite boulders, with water-worn gravel and sandstone, 20 feet; 360 ft. level.

Compact veins of clay, slate and talc containing fine basaltic grit and sand, also lignite and fossil wood and plants, 315 ft.; 720 ft. level. (The presumption is that if packing were solidly placed at upper portion of this section, a flow might be procured.)

Fine grit, sand and gravel of basalt and granite in soft shale, 1 ft.; 730 ft. level.

Marl talc and slate mud, with small basaltic gravel and veins of soft sandstone, 120 ft.; 850 ft. level.

Stiff clay shale and marl with soft talc containing veins of pure basaltic sand, 150 ft.; 1000 ft. level.

Solid and compact veins of white sand and coarser gray sand with mica scales and fine basaltic grit, 8 ft.; 1080 ft. level.

Fine conglomerate containing shale and marl, with fossil plants and sand showing iron stains, 120 ft.; 1200 ft. level.

Coarse basaltic grit and gravel, 50 ft.; 1250 ft. level.

Fine sandy marl and shale mud containing fossil plants and gravel showing iron stains, 50 ft.; 1300 ft. level.

Solid granite, compact archaean rock.

At 166 feet below the surface of the ground

water was obtained, and 220 feet the flow never diminishing.

The geological curiosities found at different depths are of great interest. Silt mud at various depths, and 150 feet below the surface in this mud is found embedded bark and limbs from a tree, solid wood.

There was also found shale of the coal period, claimed to overlay petroleum, also giant tree-bark of the coal period and bark of fern of the carboniferous age, and also conglomerate of the coal period.

Most curious of all to me was the seed of pine cones found many feet below the surface of the earth, and two qualities of rock 1200 feet below.

The man who is sinking this well under contract for 2000 feet is now employed by the Government on another at Vancouver. How much nearer Asia than the 2000 feet Mr. Ladd will employ him to bore, we shall know in the near future. The work already done is full of interest to all geologists, as well as to the owners of land here.

Some items of Mr. Ladd's clearing his farm, success with hedge plants, fencing, etc., will be given in future letters.

Portland Or.

THE FIELD.

Distribution of Seeds and Plants.

University Experiment Station Bulletin, No. 76.

The distribution of seeds and plants from the University Experiment Station is each year commanding wider attention. The distribution, last year, as shown in detail in Bulletin No. 68, included shipments to upward of 630 individuals, and the geographical area covered is indicated by the fact that the material was sent into nearly all the counties of California, and to more than 600 post and express offices.

It will be noticed that we offer this year a greater number than ever before of growths received by us from the Department of Agriculture at Washington. Many of the seeds from this source have given much promise by their success in the University garden, and by our system of distribution we believe we can more readily transmit them to those who are disposed to test them carefully and intelligently than can be reached by the usual method of political dissemination. Hon. N. J. Colman, U. S. Commissioner of Agriculture, in his report to the present Congress, advises that future seed distribution be through the agency of the State Experiment Stations, and we believe such an arrangement will be productive of the best results. We have labored hitherto, in anticipation of a closer relationship with the U. S. Agricultural Department, to show what can be done to promote local experimentation under local guidance, and it is expected that when the new law establishing Experiment Stations shall be made effective by the appropriation of funds to carry out its provisions, the work of introduction and distribution of promising seeds and plants will be greatly facilitated and advanced.

As has been described in previous bulletins, this distribution is made for the purpose of ascertaining the adaptation and practical value of the several kinds in the different climates and soils of the State; and persons receiving them are requested to report results, whether success or failure, and if the latter, from what apparent causes.

Terms.—As there is no appropriation available to meet the expenses of packing and postage, applicants are requested to send the amounts specified in connection with each description below. If they desire seeds sent by express, applicants need not send the amounts specified for postage, but all orders for seeds by express must be accompanied by a remittance of ten cents to pay for packing. Applications may be made for one or more kinds of seeds. In case any kind of seed becomes exhausted, the money sent will be returned unless a second choice is mentioned by the sender.

Plants will be forwarded by express (unless specially otherwise requested), in lots consisting of the number hereinafter mentioned for each kind, on remittance of 25 cents for each lot of plants, and ten cents additional for each additional lot, to pay expenses of packing, etc. Postal notes are requested to be sent in lieu of stamps whenever practicable. Any surplus left after filling orders as far as possible will be returned to the senders, deducting letter postage.

Cereals.

Hessian Fly-Proof Wheat.—The repetition this season of our experiments with resistance of wheat varieties to attacks of the Hessian fly (*Cecidomyia destructor*) affirms the value of the kinds distributed last year, and leads us to urge them for trial in infested districts. The Missoyen wheat on our poor soil and with the deficient rainfall of 1887 yielded at the rate of 33 bushels to the acre, while other non-resistant wheats adjacent were killed outright or reduced to a fraction of a crop by the fly. The Atlantic wheat yielded over 27 bushels, and the Volo at the rate of 20 bushels per acre. These varieties are solid-stemmed and were originally dark, hard wheats, but are fast becoming white and starchy, but do not so far sacrifice their resisting qualities. Applicants will be furnished with one pound of each of the three varieties (1) Missoyen, (2) Atlantic,

(3) Volo], or a single pound of each variety. Send 20 cents for each pound ordered, if to be sent by mail.

Indian Corn.—A collection of maize received from the U. S. Department of Agriculture included some varieties which did very well even under the local conditions of Berkeley, which are not at all suited to this grain. We distribute them to be tested in other localities, where the summer heat is usually too low for corn, as well as in the best corn districts of the State. The varieties are as follows: The soil requirements mentioned are given on Mexican authority.

1. Mosby's Improved Prolific.
2. Fine Pigeon Corn (Mexican)—for sandy soils.
3. Cacahuazintle (Mexican pastry corn) for poor soil.
4. Chalco (Mexican go-day corn).
5. Lezma (Early Mexican Yellow) for poor soils.
6. Early Black, for poor soil.
7. Early Minnesota Sweet; dwarf sort; fine.
8. Early Sugar; dwarf sort; fine.

Seed of these varieties will be sent, as long as the supply lasts, in 3-oz. packets of each variety at 5c. each. Applicants may order one or more kinds.

Berkeley Hybrid Barley.—A two-rowed, beardless variety, which originated in a small plot of Scotch two-rowed barley on the University grounds in 1882, when Mr. W. G. Klee, then head gardener, found two heads of what he considers the true type, viz: two-rowed and slender ears, appendices to awns three cleft, as with the Nepal barley; hull adhering to the seed. All the kernels of these two heads were sown next season in the University garden. There was found considerable tendency to variation, probably 12 per cent being untrue to type in having beards or six rowed heads. The grain has been grown each year since that time and care taken to pull out all heads not true to type before blooming. Afterward all heads were picked over and all grain shelling out was rejected. The tendency to variation has decreased from year to year, but still exists to a certain extent. We propose to continue the selection of true heads in our sowing here, and would like to have the variety tested by barley-growers, for yield, quality and hardiness. We imagine it will be found of chief value as a hay grain. Seed will be sent by mail in 1-lb. bags, 20c. each.

Oats.—A large sowing of oat varieties was made in 1887, partly because the oat does not harbor the Hessian fly, and also with the object of testing the rust-resisting power of the varieties. It did not prove a "rusty year," so no data on that point were gained. The following varieties gave the best yield on the Experimental Grounds this season, and are offered for test in the out districts of the State:

- | | |
|---------------------|---------------------------|
| 1—Black Tartar | 5—Hopeton |
| 2—Canadian | 6—Early Black (Ft. Imper) |
| 3—Hallet's Pedigree | 7—Harris (from Alabama) |
| 4—Polish | 8—Late Silesian |

Applicants will be furnished with one pound of each variety, or of either variety; send 20c. for each pound ordered.

Trees and Shrubs.

The Camphor (Cinnamomum camphora).—In many parts of California this tree has proved a hardy and a rapid grower. It is a very handsome evergreen, and likely to prove valuable in this State, both as a source of gum camphor and for timber; also very satisfactory as an ornamental or shade tree. Trees planted late last spring on the dry hill east of the University site survived the unusually dry summer. Squirrels seem to have no use for the camphorated foliage. A fine lot of seedlings were donated by A. Chabot, Esq., of Oakland, and will be sent in lots of five to each applicant; 25c. for each lot.

Cork Oak (Quercus suber).—Seedlings from acorns obtained from trees about 30 years old in Los Angeles and Calaveras counties. There are now bearing cork oaks in at least five counties of the State. The failing supply abroad and the immense prospective demand for cork in this country make it a duty to plant cork oaks for the use of the coming generation. It seems a very promising investment, too, for future benefits. Small trees, two to each lot, 25c. per lot by express.

The Strawberry Tree (Arbutus Unedo).—The true madrone of Spain: A near relative of our native madrone (*Arbutus Menziesii*). The strawberry tree is an ornament to any garden, while its sweet berry, very much resembling in appearance and taste the strawberry, might make it profitable fruit. Our stock is small: One tree to each lot; 25 cts. per lot by express.

Kikar (Acacia Arabica).—The true gum arabic tree, seed of which we obtained from the Department of Agriculture, Cawnpore, India. Will not stand frost and is only fit to plant in thermal belts. We have but a small stock and will send only where evidence of a frostless situation can be given. Four trees to each lot; 25 cts. per lot by express.

Black Wattle (Acacia decurrens).—We have saved a good lot of seed of this promising tree and desire to secure its general introduction. The seed is small and a 2-oz. packet properly handled should give trees for a large plantation: Five cents per packet by mail. In some cases a large amount of seed will be furnished.

Guavas.—We have a few plants of the strawberry guava (*Psidium cattleianum*) a hardy species. Two plants to each lot; 25c. per lot by express.

Date Palms.—A small number of seedling date palms from seed produced by the late E.

Von Borstel of Lower California will be sent to localities where the conditions seem to favor the plant. It is possible some of these seedlings may prove especially adapted to California. Mr. Von Borstel succeeded in securing early ripening varieties and furnished us seed from them. We wish to place the trees in careful hands. Two plants to each; 25c. per lot by express.

Melon Tree (Carica papaya).—Plants grown from seed of a fruit procured from Mexico by G. P. Rixford. The growth and fruiting of this tree in San Diego (as described in our last annual report, page 116) and elsewhere in frostless situations in this State commend it for trial in strictly thermal belts to determine how far it will prove hardy. It is highly ornamental in form and in bloom and its fruit very desirable. We have but a small stock and reserve the right to place them only in what seems to us promising situations. Two plants in each lot; 25c. per lot by express.

Silicium Sumac (Rhus coriaria).—This is the true tanners' sumac of which large importations are made from the Mediterranean region. Our plants have matured seed this year. We will send seed, 2c. per packet; or rooted plants, two to each lot; 25c. per lot by express.

The Tea Plant.—Seedlings grown from Japanese seed and donated by A. Chabot, Esq., of Oakland. Tea plants thrive in many parts of California, and in some cases the leaves are gathered for home use. We can furnish a limited number in lots of three plants each; 25c. per lot by express.

Grasses and Forage Plants.

Schrader's Brome Grass (Bromus unioloides).—This grass is fully discussed in our last annual report. It is proving valuable in many situations and should have farther introduction in new localities. Seed in 3-oz. packets; 5c. each by mail.

Hungarian Brome Grass (Bromus inermis).—Also a promising grass deserving wider trial. Seed in 3-oz. packets; 5c. each by mail.

Many-Flowered Millet Grass (Milium multiflorum).—Our correspondents speak very highly of this grass and others should try it. It seems best adapted to the warmer parts of the State. Seed is very small; 1-oz. packets; 2c. each by mail.

Yellow Millo Maize.—This is a variety of sorghum. The seed is donated for distribution by E. A. Bonine of Lamanda Park, Los Angeles county. Mr. Bonine has tried this variety in comparison with "white millo-maize" and with "Kafir corn," and considers it much superior to either in yield of seed and fodder. Seed in 3-oz. packets; 5c. each by mail.

Snail Clover (Medicago turbinata).—An annual starting in to grow early, making a dense growth and covering the ground thickly with pods twice the size of burr-clover pods and smooth, so that they will not cling to the wool of sheep. Preliminary trials indicate considerable value. Seed in 3-oz. packets; 5c. each by mail.

Black Medic (Medicago lupulina). The growth of this plant without water, in the University garden, and in other situations where it has taken root, commands it highly for wider trial. It is a persistent grower, and makes a deep and dense mat of foliage. Seed in 1-oz. packets; 2c. each by mail.

Tagasaste (Cytinus proliferus albus).—This is a leguminous shrub from the Canary islands, where it furnishes much pasturage on dry hill-sides. In the University garden it has grown to 10 feet in height, and is apparently overgrown under too kind conditions, though it has had no water. It should be tried on dry hill-sides, where it may prove more nearly what Baron Von Mueller describes it, "a tall herb, recommended as a fodder plant in countries exposed to drouth." We would especially like to have it tried on sheep and goat ranges. Pour hot water on seed and let stand 12 hours before planting. Seed in 1-oz. packets; 2c. each by mail.

Salt Bushes (Atriplex sp.).—Our last report (p. 93) contains quite contradictory reports as to the value of these plants, which are especially recommended for saline soils. They are found to be of great value in Australia in such situations, and some California growers speak well of them. We have a good lot of rooted plants, which we send in lots of 5 each; 25c. per lot by express.

Fiber Plants.

We offer again the fiber plants of which quite a number were sent out last year:

New Zealand Flax (Phormium tenax).—Grows well in the coast regions of the State. Valuable for tying plants, vines, etc. Five plants to the lot; 25c. per lot by express.

Esparto Grass (Stipa tenuissima).—Grows well on sandy beaches within reach of salt water, and in some other situations. Used for cordage, basket-weaving and paper-making. Ten plants to the lot; 25c. per lot by express.

Ramie (Boehmeria candicans).—The famous "China grass." Several processes are now being advocated as successful in extracting the fiber, and some foresee an important industry resulting therefrom. Ten plants to the lot; 25c. per lot by express.

Fiber Flaxes.—Four varieties of *Linum usitatissimum*, grown in Europe especially for fiber; reach twice or thrice the height of the kind commonly grown for seed. Seed of one or more varieties in one-pound sacks; 20c. each by mail.

Grapes: Roots and Cuttings.

The Wild Arizona Vine (Vitis Arizona).—To those residing in regions already infested

and wishing to test this resistant stock in new situations we will send rooted vines thoroughly disinfected. Five to each lot; 25c. per lot by express.

Huasco.—The raisin grape from Chile. Though the value of this variety as compared with the Muscat is not fully established, it appears that in some situations it is especially good. Cuttings by mail 15c. per bundle of 12.

Asiatic Vines.—The peculiar appearance of these vines (*Vitis Romaneti* and *Spino-vitis Davidii*) and the interest which pertains to their undetermined value in this State makes them desirable to amateurs and experimenters. Cuttings by mail, 15c. per bundle of 12.

Miscellaneous.

Chick-pea (*Cicer arietinum*).—This is a variety of the species which is so highly esteemed in France and other countries of Southern Europe for the same purpose as the lentil. It is the basis of the *puree aux croutons*, so popular in Paris. Cultivated like other peas, the pods being gathered before the seeds are perfectly ripe. Sent in 1-oz. packets; 2c. each.

Chuna.—Another variety of chick-pea brought from East India in 1886 by Miss Luella Kelly and donated to the University by R. E. Wood of St. Helena. It is a brown seeded variety. The seeds are eaten by the natives in curries, cakes, etc., and are also very fattening for cattle. Sent in 1-oz. packets; 2c. each.

Quinoa (*Chenopodium quinoa*).—The seed of this plant has been offered to California experimenters for several years, but does not attract much attention. The plant is highly esteemed in Peru and is favorably mentioned by travelers. The seed is used for food, being prepared for the table as beans are. It is also possible that it would be of value for poultry and stock. It should have a wider trial. Sent in 1-oz. packets; 2c. each.

Buckwheat.—We have two varieties from the Orient, one called "Asiatic," the other "Chinese." They differ from the common variety in having a very long growing and blooming season, which may render them of special value to beekeepers to provide winter stores for the bees, even if the honey is too dark for sale. In yield of grain they are probably no better than the common kind. Sent in 1-oz. packets; 2c. each.

Pumpkins and Squashes.—Seed of the following varieties was received from the Department of Agriculture: (1) Pumpkin Cashaw; (2) Mammoth Tours; (3) Calabaza, a Mexican variety of pumpkin squash; (4) Cashaw squash. These varieties grown on the University grounds seem to commend themselves for trial over a wider area. Seed of each or all kinds in 1-oz. packets; 2c. each by mail.

Bamboos.—A limited number of applicants can be supplied with bamboo plants of two species: (1) the Ringal (*Arundinaria falcata*), a small-cane species, very ornamental for a large lawn; (2) the *Metake*, medium-sized canes. Our larger cane species are not available for distribution. So far as the stock goes, we will send one plant of each kind in each lot; 25c. per lot by express.

Tobacco.—We have grown the past season a fine collection of tobacco varieties of which seed was received from Washington. Although the industrial value of the plant in California must still be regarded as undetermined, because of the failure of curing processes, the seed is offered to any who are disposed to grow the plant for experiment or for use as an insecticide. We have 20 named varieties, of which we will send seed by mail in small packets at 2c. each variety.

Insect Powder Plants (*Pyrethrum cinerariaefolium* and *roseum*). The former has the stronger insecticide properties; the latter beautiful flowers. Seed of the former in 3-oz. papers, 5c.; the latter in small packets, 2c. each.

Fruit-Tree Scions.

The University orchard contains upward of 500 named varieties of fruit, and our report of 1886 contains, on pages 130 to 140, tables in which are succinctly recorded observations on apricots, apples and pears, growth of tree and quality of fruit, time of ripening, keeping quality, etc. These observations cover a series of years and indicate that some varieties are worth a trial in other parts of the State. Applicants may order any of the varieties named in the report. We do not furnish rooted trees but scions for grafting. We do not send large quantities of any variety, because the object is to test varieties and not to furnish material for commercial propagation. Send 10c. for each dozen ordered.

N. B.—All applications for seeds and plants should be made as early as possible. We expect to send out seeds about January 1st and plants about February 1st. All applications should be addressed to E. W. HILGARD,

December 10, 1887.

Berkeley, Cal.

LARGE PLANKS.—The Vicksburg Herald says: "The statement that the Illinois Club of Chicago has the largest table ever made from a single plank is a decided mistake. In the St. Cloud palace, the old home of Josephine Bonaparte, six miles east of Paris, is a round table of solid oak in one piece, 6 inches thick and 16 feet in diameter, from the Otaheite islands. There is a yellow cotton-wood near Ochotaw Landing, Miss., five miles east of Rolling Fork, that measures 33 feet in circumference, 9 feet from the ground, is 11 feet in diameter, and one on Holland's bayon, three miles east of Anguilla, 35 feet around."

SHEEP AND WOOL.

The Tariff Question.

The woolmen are getting thoroughly aroused over the President's message in its relation to the wool industry. The telegraph brings news of the way the representatives of the wool interest in Washington received the message.

Action in Washington.

WASHINGTON, Dec. 7.—At to-day's session of the conference of wool-growers and wool-dealers of the United States the following was unanimously adopted:

The wool-dealers and wool-growers of the United States, representing a capital of over \$500,000,000 and a constituency of a million wool-growers and wool-dealers, assembled in conference, have read the first annual message of the President to the Fiftieth Congress, and declare that the sentiments of the message are a direct attack upon their industry, one of the most important of the country, and in positive violation of the national Democratic platform of 1884 as interpreted by the party leaders and accepted by the rank and file of the party. The argument made by the President for the removal of our protection against foreign competition is one repeatedly made by the enemies of our industrial progress and effectively answered in nearly every school district of our land, and so thoroughly disproved by the logic of facts and the demonstration of experience and history as to need no answer from us.

We had the right to expect something different from the Chief Executive of a nation the most happy, prosperous and contented of any of the world, made so by the policy of protection and development which he now seeks to destroy. We had the right to expect our President would favor the wool-growers of the United States, and confess our deep disappointment that instead he favors the interests of our foreign competitors. We make an appeal from his recommendations to the seven and three-fourths millions of our fellow-citizens engaged in agriculture; to the millions engaged in manufacturing; to the army of wage-earners, to tradesmen and merchants, knowing that their judgment and decision will be based upon justice and patriotism, and will therefore favor the maintenance of the American policy of protection, to which the country is indebted for its unexampled development and prosperity.

"If the whole amount of revenue derived from wool was abolished, it would reduce the surplus only about \$5,000,000, or less than 10 cents per capita of population, which is paid by foreigners, while the old war taxes he recommends we retain yield over \$119,000,000 and is a direct tax per capita of \$2 each. The total revenue derived from imports of wool under the tariff of 1867 was less than \$17,000,000, and under the reduced tariff of 1883 the revenue last year was only \$5,000,000. The number of sheep in the country in 1884 was 50,626,626, and in 1887 44,759,314, a decrease of nearly 6,000,000, and the diminution of the annual wool product was over 35,000,000 pounds, thus showing that the reduction of tariff by the Act of 1883 has decreased the revenue from imported wool and diminished the number of sheep in the United States about 12 per cent. The President's policy would bring about the destruction of this industry, and the same policy of reduction or abolition of the tariff would end in disaster to all other industrial and productive enterprises of the country."

Senator Chase of Rhode Island thus concisely sums up the President's recommendation for the repeal of the tax on wool: "The President says that the consumer of wool has to pay for the clothing that he buys, a price that is increased several times by the duty on wool, and that this is oppression of the people. There are now in this country, in rough numbers, 100,000 flock-owners, who own over 3,000,000 sheep, and produce 325,000,000 pounds of wool, worth \$120,000,000. That wool is a very important product of the world. Take off the duty on wool, and probably one-half of those flockholders would go out of business, slaughter their sheep, and turn their attention to other affairs, thus reducing the product one-half. The effect of this would be to make wool scarce in the markets of the world, and the price would necessarily advance, the increase being greater than the duty. But men who gave up wool-growing would have to turn their attention to something else, agriculture probably, and increased competition would reduce the profits of that branch of industry."

A Meeting in San Francisco.

A meeting of woolmen was held December 8th at the office of Christy & Wise, at which were present P. B. Flint, C. S. Moses, G. Ball, J. H. Wise, John Shober, F. P. McLennan, Samuel Wilkenson, R. F. Parks and others. The following resolutions were adopted and ordered telegraphed to the California Congressional delegation:

And, whereas, a general revision and a reduction of the tariff by Congress, now in session, is contemplated; and, whereas, the wool interest of this State is very extensive and one of its chief industries, producing forty millions of pounds last year; therefore, be it

Resolved, That any reduction in the tariff on wool would seriously cripple this industry and greatly decrease its production in this State, because our wool-growers cannot compete with the cheap labor and cheaper ranges of foreign countries without the protection which the tariff affords.

Resolved, That we appeal to Congress neither to

repeal nor reduce the tariff on wool, and we hereby request our Senators and Representatives in Congress to use their united efforts to maintain it.

Resolved, That we extend to the National Wool-Growers' Association our hearty co-operation in their endeavors to continue the present tariff on wool.

P. B. FLINT, President,

CHAS. H. ABBOTT, Secretary.

A Meeting Called in Sacramento.

A meeting of the wool-growers and dealers of Sacramento, Yolo, Solano and Placer counties has been called to meet at Grangers' hall, in the former city, on Monday, December 19th, at 11 A. M., to consider and take action on the tariff question.

Other Action at the East.

WASHINGTON, Dec. 8.—The wool growers and dealers were in conference to-day, and passed a series of resolutions declaring unjust the present classification of wool by the railroads of the country, and directing that they be urgently requested to place wool in their new classification on a basis that would at least be equal to the present classification. They also passed a resolution declaring that recent events have demonstrated the necessity for a central organization at Washington or elsewhere, and request all wool-growers and officers of wool-growing associations in the United States to immediately send their address to Albert Chapman, at Middlebury, Vt.

THE PUBLIC LANDS.

Land Grants and their Forfeiture.

Hon. L. Q. Lamar, recently Secretary of the Interior, but now Judge of the U. S. Supreme Court, submitted at the opening of the present session of Congress his report upon public land affairs, from which we take the following concerning land grants to railways:

The legislation by which these vast territories passed under the dominion of railroad companies gave an incurable wound to the homestead scheme before that scheme had a fair opportunity of displaying its beneficent effects. This land-grant legislation was certainly not in harmony with the theory of the distribution of the public domain among the people, and gave up to capitalists, as a basis for traffic and speculation, and gigantic financial schemes, what was, by the original policy of the Government, designed as homes for an industrious and thrifty people, and abodes of domestic happiness and virtue. Notwithstanding these indemnity withdrawals were made exclusively for the interests of the company, few of these, if any, constructed their roads within the time prescribed in the granting Act as an express condition on which the grant was made. Maps of "probable," "general," "designated," and "definite" routes of the roads were filed with rapidity in the Department, and the withdrawals thereunder asked and almost immediately granted, until the States and Territories were gridironed over with railroad grants and indemnity limits, and in many instances the limits of one road, overlapping and conflicting with other roads in the most bewildering manner, so that a settler seeking a home could scarcely find a desirable location that was not claimed by some one or perhaps two or three roads to which grants of land had been made. Though the desired tract might not be apparently covered by a railroad location, a settler would hardly select it before the agents of corporations would set up a claim to it, or the right to occupy and denude it under the right of way and construction privileges conferred by the granting Act. Thus the settler, ignorant of his legal rights, and no one to advise him with respect to either the law or facts, would for the sake of peace readily consent to purchase from the company. In this way these corporations, in addition to the lands granted to them, have claimed, sold and received the price of a great deal of other land to which they had neither a legal nor a moral right. The confusion, hardship and impositions practiced upon settlers were greatly increased by bold schemes by separate agents where withdrawals were made of lands to which the legal title of companies had not attached, and which afterward remained in the same condition for years through the failure of Congress to make the necessary appropriations for surveys.

When, however, through partial surveys or adjustments of grants, the lands thus sold by a company were found to be outside of the grants, and determined by the department to be public land, the purchaser from the company found himself in the unfortunate predicament of having lost both his land and his money, generally without means to enter into a costly litigation with a powerful corporation. The deprivation of his home, the expenditure and waste of his years, his energy and strength in redeeming that home from its wild condition, rendered his mere technical right of action against the company but little more than a mockery. Years have elapsed since many of the grants have been made, and other years since the withdrawals. Some of the companies have constructed the entire line of their roads; others, fragmentary portions only, and others, again, none at all. But the withdrawals of lands were no less effective as a barrier against the settler in one case than in the other, it mattered not what might be his equities acquired by years of toil upon what he believed part of the national domain.

It was declared by the highest judicial

tribunal, as expounded by the highest law-cers of the country, that a withdrawal once made by a competent authority was legal and effective to exclude all from intrusion within its limits. One such case where hardship and injustice were about to be inflicted under the law came under observation. Guilford Miller settled upon lands afterward selected and claimed by the Northern Pacific Railroad Company to be within withdrawal limits for indemnity purposes. Some doubt arising as to the legality of that withdrawal, the case was referred by this department to the Attorney-General for his opinion. That officer held that the withdrawal was legal, and that during its existence Miller could acquire no right or title to the tract claimed by him on which he lived.

While recognizing the correctness of the law, the injustice of the case was seen, so far as this individual settler was affected, and hundreds of others were similarly situated who might and would be affected, and it was directed by the President that such grants should be so administered by this department if possible, to protect these settlers from such injustice, the President stating his belief, "That this can be done under the provision which declares that these selections shall be made under the direction of the Secretary of the Interior." After years of waiting Congress has failed to empower the department to make the necessary surveys whereby some of the grants might be adjusted and no immediate prospect of such survey was in sight, but a law passed March 5, 1887, whereby the Secretary of the Interior was "Directed to immediately adjust each of the railroad land grants made by Congress to aid in the construction of railroads." With an earnest desire to obey the mandate of Congress to grant corporations their every right under the laws and at the same time follow directions given by the President to see that ample protection should be extended to settlers and those seeking to make settlement on public lands, I entered upon the most careful consideration of the whole subject of land grants, and concluded that if the department was clothed with authority to make indemnity withdrawals, as has been done in so many instances, the exercise of that authority was a matter entirely within sound discretion, and not a matter of legal obligation in any respect; and the same sound discretion which, in the interest of the companies, justified said withdrawals, now demanded a speedy revocation of the same, and that the most effective way of expediting an adjustment of land grants and doing exact justice to the companies, guarding and promoting the interests of settlers also, was to permit the public to enter into competition with the companies in the selection of land heretofore withdrawn for indemnity purposes.

Accordingly, on May 18, 1887, with the approval of the President, rules were served upon different companies, for whose benefits withdrawal had been made, to show cause by a certain day why said withdrawals should not be revoked. Some of the companies failed to show cause. Others filed answers assenting to the revocation, as they had received satisfaction from their grant. Others assented on condition that the lands covered by the selections already made should be excepted from the order of revocation, and other companies objected to the order of revocation as being illegal and a violation of chartered rights. Briefs were filed and oral arguments accorded to counsel of such companies as desired to be heard, all of which were fully and carefully considered as was due to the importance of the questions and the magnitude of the interests involved. On August 13, 1887, my views were fully expressed in a decision rendered in the case of the Atlantic & Pacific Railroad Company, which by answer and argument raised nearly all the objections that were presented in part only by a number of other companies. Two days later orders withdrawing the land within the company's limits and reserving the same from settlement were revoked and the lands restored to the public domain and settlement.

The amount of land restored to the public domain through orders revoking indemnity withdrawals is stated by the Commissioner of the General Land Office to be 21,323,600 acres.

WHEAT IN AMERICA.—Concerning the introduction of wheat into America, reliable information is obtainable. It may be difficult in the present day to realize the fact that wheat was at one time unknown in America; yet prior to the discovery of this continent by Columbus, there was no cereal in America approaching in nature to the wheat plant. It was not until 1530 that wheat found its way into Mexico, and then only by chance. A slave of Cortez found a few grains of wheat in a parcel of rice and showed them to his master, who ordered them to be planted. The result showed that wheat would thrive well on Mexican soil, and to-day one of the finest wheat valleys in the world is near the Mexican capital. From Mexico the cereal found its way to Peru. Marie D'Escobar, wife of Don Diego de Chauves, carried a few grains to Lima, which were planted, the entire product being used for seed for several successive crops. At Quito, Ecuador, a monk of the order of St. Francis, named Fra Jodosi Bixi, introduced a new cereal; and it is said that the jar which contained the seed is still preserved by the monks of Quito. Wheat was introduced into the present limits of the United States contemporaneously with the settlement of the country by the English and other European settlers.—*Milling World*.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Objects of Life.

Among the interesting exercises with which Sacramento Grange celebrated the birthday of the Order was an essay read by W. S. L., Daniel Flint, in answer to the question: What are the objects of life, or, for what are we living? By request of the Grange, it was sent to the *Patron* for publication, and appeared in the last issue of that paper. We give a few of the closing sentences; and if our readers like the taste, they know where to get the good thing entire.

"We are not only living for to-day, but our acts and examples will live on and be quoted and commented upon by those that shall come after us. Can we say that no responsibility rests upon us? Shall we pass from this busy, active life without leaving some recompense for the great benefits that we have been permitted to enjoy? Do not let us shirk the responsibility that belongs to each individual. Let us feel that our existence and personal efforts were necessary for the accomplishment of some of the great schemes of human progress. Do not let us shield ourselves behind the flimsy excuse that we have no influence, are not gifted with a ready tongue or commanding appearance, and silence and obscurity are more befitting our station in life. It is said nothing was created in vain.

"Likewise there is a place for everything, and everything should be in its place. As bodies float in liquids according to their density, so individuals hold their station in society according to their supposed merits. The Creator has distributed the human race throughout the land, and with a wise purpose has assigned something for all to do. Do not stand with your arms folded and your voice silent, because you think some of the members are a little more accomplished than yourself. That is just the reason why you should apply yourself with more vigor to equal if not surpass all friendly competitors.

"If you cannot be that majestic orb whose nod commands the world to rest, and whose morning beams summon again to busy life, you may be some beacon light on a stormy coast that guides the mariner to a harbor of safety."

What the Farmers Ask of Congress.

"Sentinel," the special correspondent of the *Farmers' Friend* at Washington, speaking of the late session of the National Grange at Lansing, says: In language not to be misunderstood, in a dignified way, without bombast or bluster, that National assembly of representative farmers asks of Congress:

1. That the Oleomargarine law shall not be repealed.
2. That the Interstate Commerce law shall remain.
3. That the Patent laws shall be revised.
4. That U. S. Senators shall be elected by a direct vote of the people.
5. That Tariffs on raw materials shall not be reduced while existing Tariffs remain upon manufactured goods.
6. That the Commissioner of Agriculture shall be made a member of the President's Cabinet.
7. That reforms looking to lower rates of postage shall be inaugurated.
8. That the Hatch Experimental Station bill shall be perfected, and the money appropriated be spent in sustaining stations distinct from the so-called agricultural colleges.
9. That laws be passed prohibiting gambling in farm products or dealing in "futures."

The National Grange.

In Worthy Master Darden's opening address at Lansing last month, he said:

The progress made in the work of our Order since we last met in annual session is commendable and gratifying. Success has attended the efforts of our lecturers, as shown by the large number of dormant Granges that have been revived and by the establishment of 174 new Granges—an increase unusual if not unparalleled in an institution as old and well established as the Grange. The State Grange of Nebraska has been re-established, and we have the pleasure on this occasion of welcoming Brother O. E. Hall, her worthy representative, to our meeting. We also have the pleasure of extending fraternal greetings through Brother Peckham, the W. M., to Patrons in Rhode Island who have recently fallen into line with this farmers' movement, thus completing the circle of States, and making the Grange in deed and in truth a grand National organization.

We were hoping to give some account of what was said and done at the recent session of the National Grange beyond the points mentioned in our issues of Nov. 26th and Dec. 3d; but the pressure upon our columns proves too great, and we must refer those desirous of learning further particulars of what transpired on that interesting occasion to the extended reports published in the *California Patron*.

GRANGE ITEMS.—Wheatland had a delightful meeting Dec. 21, and W. L., Frank Kirchner delivered a fine lecture. . . . Worthy Sec. Skaggs reports Point of Timber as gaining strength and

numbers with more candidates on the way. . . . Bro. Huffman of Lodi has got home from Lansing, Mich., where it will be remembered he had charge of the San Joaquin exhibit. He found the Eastern people greatly interested in California. . . . Enterprise had a good time celebrating the Grange birthday, conferred the 3d and 4th degrees upon a class, discussed a Feast and voted on three candidates. . . . Tulare, as had been promised, was favored on the 3d inst. with an excellent lecture by Dr. Stratton on "The Signs of the Times."

Grange Work and Progress.

[Prepared by M. WHITEHEAD, National Lecturer.]

As the end of the year draws near it is fitting that our work of the past 12 months should be reviewed, its successes noted, and new courage and hopes inspired for the future. The reports made at the late session of the National Grange were full of encouragement. Some of them will be given here, with a few kind words from the friendly press of the country, which will show that the Grange is now considered a success and a permanent institution, commanding the respect that its principles and its work so well deserve.

W. H. Stinson of New Hampshire, A. S. N. G., said in his annual report:

The unity and fraternity of the Grange has been apparent everywhere, whether knocking at the doors of Congress or State Legislatures for the enactment of righteous and honest laws, or more quietly in its social and educational work at our frequent meetings, or at our homes and around the fireside circles.

To every thoughtful Patron it is evident that the Grange has brought more sunshine and good cheer to the agricultural classes of our country than any other association of similar design in this or any other day or generation.

From the hills and valleys of New England westward to the Golden Gate, through the sunny Southland to the famed Northwest, come the proofs of the Order's ennobling, elevating and educational work. No other institution or agency has brought forth such noble returns of fraternal work in doing away with sectional divisions, unjust suspicions and bitter antagonisms that grew out of the war between the North and South. Confidence has returned, the grasp of friendship and good-will is given; the Blue and the Gray meet here on common ground, under one flag, standing shoulder to shoulder for Union and liberty.

I. G. Hale, W. M. Connecticut S. G., in his report said:

Holding our membership in all Granges in the State, and making moderate gains in most of them, and with the organization of 21 new Granges, we have added more than 1000 members to the Order within the past year—a gain of about 60 per cent; three Pomona Granges with a large membership in each. The organization of a State Fire Insurance Company, marvelous exhibits at State, county and town fairs, tell to some extent the story of our work in Connecticut, and this has been done without excitement, but by simply following Grange principles, especially the first plank in our Grange platform. . . . Trying "to develop a higher standard of manhood and womanhood among ourselves" in the older Granges has so elevated the standard of the former in that immediate vicinity that it has become infectious; and the Grange in Connecticut has become such a power for good that doubting ones are fast coming over to us, and more will follow, just as long as we continue to make the educational and social feature the leading part in all our work.

Our relations with all other agricultural organizations are of the most cordial character, and we are working together in every possible way for the advancement of the cause of agriculture.

Ex-Gov. Robie, W. M. Maine S. G., said:

The Order in the State of Maine continues to move along on an upward grade. There have been eight new Granges organized, and several dormant Granges have been reinstated, and one Pomona Grange has been organized during the past year. We have in each and every county in the State a flourishing and efficient Pomona Grange, and there are 209 active Subordinate Granges, most of them doing good work, and our actual active membership exceeds 15,000. There has been a growing interest in Grange work during the year, and our accessions of late come from the younger members of the farmers' families. There have been 12 new Grange halls built and dedicated during the past year, and as many more are in the process of construction. The Grange halls in Maine are very numerous, costing from \$1000 to \$5000, and it is a strong element of our success. Leonard Rhone, W. M. Pennsylvania S. G. said:

It is a source of great pleasure to note an improved condition of the Order in the State since my last report. . . . We have organized 27 new Granges, with an aggregate charter membership of 648, and reorganized nine dormant Granges, with an aggregate membership of 145, making a total increase of 2160 members. . . . Quarterly reports and payment of dues have been more prompt than heretofore, and our income from this source will show an increase of \$500 above that of 1886, and \$700 above that of 1885.

H. Hawkins, W. M. Alabama S. G., said:

A few in Alabama remained true and steadfast, and to-day are living monuments to the undying principles of the noble Order we have met to perpetuate. I am happy to be able to re-

port that, with brighter hopes than for many years in the past, we have commenced to rebuild the Grange temple in Alabama, and this time on a solid foundation. Our work is progressing not rapidly but steadily, as is evidenced by the fact that we are 13 Granges stronger now than we were one year ago.

W. R. Williams, W. M. North Carolina S. G., said: The Grange in North Carolina has been on the upward grade for the last year; but within the last three months a real boom has set in. Now we have two new Granges to report and 55 reorganized during the year, making 70, and at least 1000 more members than last year.

J. N. Lipscomb, W. M. South Carolina S. G., said: There have been six new Granges organized since the close of the Grange year, making, with the one reported by your secretary, seven in all, organized since the last session of this Grange and up to date.

Students of politics who are studying the decline and fall of the Labor party may find the story of the career of the National Grange, P. of H., an instructive one, especially as a revival of this once powerful organization is now taking place. The prospect for the future of the organization is brighter than it has been before in many years.—*Orange County Farmer, N. Y.*

A few years ago there was great glee among the middlemen and overbearing corporations. The reason for their joy was peculiar, and to the ordinary mind not provocative of merriment. It was simply this: There was a temporary lull in the activity of the Patrons of Husbandry, and immediately its haughty and greedy foes set up the cry, "Lo! the Grange is on its last legs; it is lying down to die." Just here was where their mistake very naturally occurred, for the Grange was only resting itself up for more vigorous efforts, for now behold! it is on its feet again, and is hitting out from the shoulder with a vigor and vim that is at once a terror and surprise to its adversaries.—*Western Rural, Chicago.*

Every week our official report brings the cheering news of new Granges being organized and old ones reorganized, and the live working Granges increasing in membership; many of them have more than doubled their membership. Last week we reported ten new Granges and this week we report four new Granges and two reorganizations—three in Alabama, two in Oregon, and one in Missouri. Thus the work goes steadily on.—*States Democrat, Tennessee.*

Grange Elections.

ALHAMBRA.—Dr. J. Strentzel, M.; E. B. Smith, O.; Mrs. W. B. Thomas, L. E.; B. Barber, S.; James Kelley, A. S.; T. Griffin, C.; H. Rapp, Sr., T.; Mrs. M. B. Lander, Sec.; J. Cornwall, Jr., G. K.; Mrs. C. Wittenmeyer, Ceres; Miss Sarah Young, P.; Miss M. C. Holenbeck, F.; Mrs. E. J. Boss, L. A. S.

BENNETT VALLEY, Sonoma county.—J. B. Whitaker, M.; J. P. Whitaker, O.; J. M. Talbot, L.; Scott Whitaker, S.; Ed. Peterson, A. S.; Sister A. Laque, C.; N. Carr, T.; W. P. Crane, Sec.; Arthur Crane, G. K.; Rhoda Whitaker, Ceres; Vera Talbot, P.; Nellie Peterson, F.; Sarah Laque, L. A. S.; Sister H. Carr, Trustee.

GRASS VALLEY.—Dec. 3: Jona. Butler, M.; Thos. N. Paine, O.; Jno. T. Rodda, L.; Wm. H. Stephens, S.; A. G. Peterson, A. S.; Mrs. E. Bree, C.; Albert Matteson, T.; Clara Kleine, Sec.; Wm. Bree, G. K.; Mary J. Hastings, P.; Margaret E. Hastings, F.; Mrs. S. L. Richards, Ceres; Mrs. Mary Peterson, L. A. S.

WASHINGTON, San Joaquin county.—James Ritchie, M.; Jeff. Siles, O.; R. S. Pardoe, L.; Chas. Child, S.; O. H. Little, A. S.; Mrs. A. E. Blyther, C.; Chas. Blyther, T.; Samuel C. Waters, Sec.; S. W. Sollors, G. K.; Mrs. R. S. Pardoe, P.; Mrs. Leah Bamert, F.; Mrs. Giles, Ceres; Sister Silvia Worthup, L. A. S.; Mrs. Jeff. Giles, Org.

YUBA CITY, Sutter county.—W. J. Hardy, M.; Geo. Ohleyer, Jr., O.; Sister Pauline Newkom, L.; Louis Woodworth, S.; W. E. Sammis, A. S.; Sister A. P. Woodworth, C.; Fred. Cooper, T.; Sister E. M. Wilkie, Sec.; C. E. Williams, G. K.; Sister Sadie Walton, P.; Sister Ella Walton, F.; Sister Della Walton, Ceres; Bro. W. D. Woodworth, Org.

DANVILLE.—R. O. Baldwin, M.; C. E. Howard, O.; F. B. More, L.; J. C. Jones, S.; C. J. Wood, A. S.; Rev. Mr. Burgess, C.; J. M. Stone, T.; J. H. White, Sec.; W. Z. Stone, T. K.; Clara Stone, Ceres; Dora Flournoy, P.; Mira More, F.; Ida S. Hall, L. A. S.

EDEN.—W. C. Blackwood, M.; John McDermed, G.; Fred. Russell, L.; Herbert Cowing, S.; Frank Dassell, A. S.; Bertha Gading, C.; Annie Mohr, T.; Josie Sharai, Sec.; John Suenderman, G. K.; Martha Cowing, P.; Nettie Anway, F.; Annie Obermuller, Ceres; Amelia Gading, L. A. S.

NORTH BUTTE.—L. D. Hedger, M.; W. T. Lamb, O.; L. A. Clark, L.; H. Luther, S.; Tom Bruce, A. S.; Sister Graves, T.; H. S. Graves, P.; James Myres, Sec.; B. R. Spillman, G. K.; May Clyma, P.; May Simpson, F.; Laura Luther, Ceres; Jennie Hedger, L. A. S.; Lizzie Clyma, Org.; W. T. Lamb, Trustee.

TULARE.—A. P. Merritt, M.; J. M. Mears, O.; J. W. Mackie, L.; Joseph Mer-

ritt, S.; M. Kreme, A. S.; O. O. Herilson, Sec.; Wm. Carpenter, G. K.; Sister Merritt, P.; Sister Kreme, F.; Sister Herilson, Ceres; Sister A. P. Merritt, L. A. S.

POINT OF TIMBER.—H. C. McCabe, M.; M. B. Prory, O.; Sister L. J. Wills, L.; W. T. Grover, S.; E. L. Emerson, A. S.; Sister L. G. Prory, C.; C. J. Preston, T.; M. B. Skaggs, Sec.; Jno. Walton Jr., G. K.; Sister S. A. McCabe, Ceres; Sister Maggie Cople, P.; Sister S. E. Smith, F.; Sister Fannie Walton, L. A. S.

WHEATLAND.—D. A. Ostrom, M.; Julius Hollister, O.; Mrs. L. Keyes, L.; Sheridan Harding, S.; Sherman Harding, A. S.; Sister Hollingshead, C.; Sister Lou Fraser, T.; J. W. Huffaker, Sec.; Hugh Morrison, G. K.; Sister L. W. Hamilton, P.; Sister L. G. Jasper, Ceres; Sister C. K. Dam, F.; Rosa Ostrom, L. A. S.; Fannie C. Dam, Org.

NOTE.—The Secretaries of Granges are requested to forward reports of all election and other matters of interest relating to their Grange and the Order.

Date of Installations.

Alhambra Grange—Jan. 7.
North Butte Grange—Jan. 14.
Yuba City Grange—Jan. 7.
Wheatland Grange—Dec. 31.

WORTHY MASTER OVERHISER, after attending National Grange and seeing Bro. Huffman off for Chicago with the California exhibit, went on with Sister Overhiser, by easy stages, alternating with wayside visits, to Brooklyn, N. Y., where they were enjoying themselves among friends at last accounts.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

A WELL-MANAGED NURSERY.—*Irvington Reporter*: Upon P. McKeany's plat of five acres every inch is made available for the production of the various lines of nursery stock, including evergreens of all kinds, different varieties of roses, deciduous fruits, oranges, lemons, limes, pepper trees, acacias, pot plants and exotics. This stock is free from insect pests, is of vigorous growth and full of vitality, and only needs care and proper attention to grow into fruitful and long-lived trees.

Butte.

HOREHOUND HONEY AND BERGAMOT.—*Jas. Dawson in Record-Union, Dec. 9*: W. M. Hoge is establishing an apiary 15 miles from Oroville, and has 20 acres of horehound under cultivation. Last spring he brought 200 swarms of bees through here, and I understand from his superintendent that these increased during the summer to 275 swarms. This horehound plant is the most wonderful honey-producer I ever saw, and the bees cluster in great numbers upon it. I understand that Mr. Hoge (who is from Brooklyn, N. Y.) calculates to average next year 250 pounds of this horehound honey to the swarm, and that he has had overtures made him by a large New York druggist for his entire production for the next 25 years at 50 cents per pound, but his crop has yielded him up to this time fully \$1 per pound. He declined the offer. This same man is successfully growing bergamot, and making oil of bergamot right here in this county.

Contra Costa.

BRADSHAW EGG.—*Item*: We have been shown an egg from the Alhambra Poultry-Yard of Mr. J. J. Jones 6½ inches in circumference, and lengthwise 8½ inches, weight ½ of a pound. The egg was laid by a light Brahma, and is the largest hen's egg we have ever seen. Mr. Jones proves that it pays to keep the best grades.

Fresno.

SWEET POTATOES.—*Fresno Examiner*: A sweet potato weighing 33 pounds is on exhibition at the real estate office of Cole, Chittenden & Cole. It was grown on some land owned by D. W. Lewis in Washington Colony. Mr. Lewis says: "While this is quite a large potato, I have some others I think larger, which I will send in this week to show what really can be raised in the colony." The potatoes he has reference to he thinks will weigh 40 pounds.

Los Angeles.

CEMENTING THE ZANZAS.—*Orange Tribune*: The Santa Ana Valley Irrigation Co., under the direction of Supt. Young, assisted by Zanjero Barbark, have, during the past 30 days, cemented nearly a mile of the main canal known as the "Kirby Fill," besides several hundred feet each side of the tunnel, and it is estimated that at least one head of water will be saved from the seepage that was constantly going on in the exposed places. The work has been done in a creditable manner, and will last for all time; about 600 barrels of the best Portland cement being used in the work just completed. Should the plan of cementing each year a mile or more of the main ditches, as inaugurated by the present Board of Directors, be continued by future boards, but a few years will elapse before all our main canals and ditches will be cemented, and several heads of water that are now lost by seepage permanently saved to the stockholders for irrigating purposes.

BACK TO JAPAN.—*Anaheim Gazette*: Timothy Carroll is in receipt of an order for a large con-

shipment of Japanese persimmon trees to be shipped to Japan, which are to be forwarded immediately. The fame of his nurseries, so well established throughout Southern California, is thus seen to have extended to the other side of the earth.

Merced.

COMPLETING A RESERVOIR.—Merced *Argus*, Dec. 8: We took a ride out to the great reservoir of the M. C. & I. Co. yesterday, and found the work rapidly approaching completion. Mr. Huffman informed us that the force consisted of 250 men, most of whom were managing a pair of mules and scraper, removing the dirt to the top of the embankment and excavating and finishing up the extension of the canal in the direction of Mr. Hooper's Yosemite colony tract a couple of miles to the southeast. The reservoir is practically completed and ready to receive the water. The work now being done is filling and smoothing uneven places upon the crown, placing the roadway in good condition, clearing away debris and giving a finished appearance to the work. The length of the embankment is computed at 1000 yards, width of base in center 275 feet, 54 feet high and 22 feet wide at the crown, forming a smooth, broad road, with wagon bridges across the canal at the inlet and outlet. Thus it will be seen that a supply of water will be insured the coming season for all farms north of Bear creek ready to use it for irrigation.

Napa.

ORANGES.—St. Helena *Star*, Dec. 2: Mr. Beach says that his orange and lemon trees, about 25 in number, ranging in age from 4 to 13 years, have all stood the late cold snap without any noticeable injury. His 158 Japanese Oonshiu orange trees are getting along nicely, and his 6000 seedling orange trees in the nursery have not suffered at all. He can also show 2000 or 3000 oranges, nearly full-size, and just beginning to take on their golden hue. Even his five-year-old trees are in bearing, and with fruit in full size. The same may also be said of the trees of W. W. Lyman, R. W. Lemme, H. J. Lewelling, E. Schuneman, E. Foutz and half a dozen others.

Nevada.

NUTS IN VARIETY.—North San Juan *Times*: P. H. Butler has three pecan trees in his orchard at his residence in this place, which are full of the nuts, now ripe. Mr. Butler has proven to the world that English and American walnuts, butternuts, chestnuts of every variety, almonds and pecan nuts can be raised in this township.

Sacramento.

A CITRUS FAIR IN MINIATURE.—*Record-Union*, Dec. 9: At the Golden Eagle hotel, W. O. Bowers has commenced getting up a little citrus fair of his own, and been quite successful. Silva & Sons of Newcastle have contributed a fine lot of Navel and Seedling oranges, many of them in clusters, surrounded by the foliage, which makes a splendid showing. The samples are large, many of them being over three inches in diameter, and golden in color. The same firm contributes a fine lot of Sicily lemons. N. K. Spect of Orland contributes a number of Navel and Seedling oranges. Placer county also sends a fine lot of olives. Mr. Aurbach of this city contributes a branch of a lemon tree upon which are three crops—ripe fruit, fruit half-grown and fruit that has just shed the flower.

JAPANESE PERSIMMONS.—*Record-Union*, Dec. 3: Many of the gardens of Sacramento are at present decorated with Japanese persimmon trees loaded down with ripening fruit. The leaves of these trees are now all off, leaving the branches and fruit alone, and presenting a very pretty sight. The Japanese who recently visited Sacramento spoke very lauditorily of this fruit, classing it as the finest in that empire, and stated that it would come to be greatly appreciated by the American people when better known. The trees produce very young, and some large specimens of the fruit are to be seen in various parts of the city. In Henry Furry's yard on 14th street, between P and Q, is a small tree, only two years old, that bore 30 fine persimmons this year, and is much admired for its precocity. Other similar instances of early fruiting have been seen in this city.

San Benito.

IRRIGATING DITCH.—Hollister *Free Lance*, Dec. 2: A. S. Sally is busily engaged in taking out a ditch from the river at his ranch. The place where the ditch is taken out is particularly favorable to the scheme, the sides of the river canyon narrowing down so that little difficulty will be experienced in building a dam for a reservoir. The ditch is six feet wide at the bottom. It will run along the eastern slope of the valley and be about 10 miles long. It will irrigate thousands of acres, and those ranches which are under it when completed will laugh at the idea of a dry season.

San Joaquin.

COTTON.—Stockton *Independent*: A farmer who lives near Peters yesterday exhibited in this city a lot of cotton which was raised on his place without cultivation or irrigation. The bolls were large and full, and the fiber was fine and of excellent quality. The farmer says cotton can be successfully raised on any of the land in his section, and to demonstrate it will plant a large field next season.

Santa Cruz.

SQUIRREL-SLUGHTER.—Watsonville *Transcript*: H. C. Peckham, who has the Luning ranch under lease, has been doing some effectual

work in exterminating the thousands of squirrels that formerly made their home on that tract. He used about 500 pounds of a preparation made by himself, and since its use there can hardly be found a squirrel where there were before thousands. Fully 90 per cent have succumbed to the effect of the poison used. The preparation is eaten up within 12 hours after being put out, and not a particle of the preparation is to be found after that time. And what is better still, Mr. Peckham claims that the cost of this preparation is only about one-half of any other kind he has ever used.

FAIR ASSOCIATION INCORPORATED.—*Courier-Item*: Articles of incorporation have been filed for the Pajaro Valley Agricultural and Horticultural Fair Association, for an existence of 50 years. Its business is in the hands of 16 directors, as follows: A. N. Judd, N. A. Uren, G. W. Sill, James Waters, Mrs. A. W. Bixby, Mrs. G. B. Card, Mrs. B. A. Osborne, Mrs. A. P. Roache, Mrs. Ada L. Libby, H. S. Stipp, Mrs. C. W. Stipp, Mrs. M. E. Tuttle, Mrs. L. V. Willets, and Mrs. Henry Jackson.

Sonoma.

DRIER BURNED.—Santa Rosa *Democrat*, Dec. 10: The fruit-drier of Rev. J. Phillips of Bloomfield was burned Wednesday afternoon, with all the fruit that he has dried this season, his carpenter-tools and other property—a very heavy loss to him. The fire caught from the furnace.

Sutter.

QUARANTINE GUARDIAN.—Marysville *Appeal*, Dec. 9: The increase and distribution of insects is one of the drawbacks to the culture of fruit trees. As orchards increase there is reason to fear that the pests will become more numerous and more widely disseminated through the neglect of proper precautions and remedial treatment. H. P. Stabler has been appointed Quarantine Guardian for Sutter county, and can furnish all necessary information for the guidance of fruit-growers who may desire to be advised in this regard.

Tulare.

HARROWING.—Visalia *Times*: J. J. Cairns has a number of Randall harrows tearing up the ground on Deer creek. The land having been plowed late last spring, it turos up in fine condition now with a Randall harrow. Mr. Cairns seeded 15,000 acres in this county to wheat and barley last season, and will engage in the business extensively this season, should the rain come at proper periods.

BALDWIN APPLES.—Delta, Dec. 8: W. G. Daunt has grown Baldwin apples on his place, near the Soda springs, on North Tule river, which are not excelled on this coast. It is his intention to forward a box of them to Los Angeles for exhibition.

ANOTHER RABBIT-DRIVE.—Tulare *Register*, Dec. 9: The rabbit-drive at Pixley, Saturday, was another success. They didn't kill quite so many rabbits as on the first occasion, only a few more than 1000 being slain, but there was just as much fun. The lame, the halt, and the half-blind, the young, the fleet, and the strong, the aged, the feeble, and the decrepit—all were there. Solemn-visaged doctors and bald-headed lawyers, toothless cronies and nimble-footed children, shouting men and women of every age and size, were all mixed up in that seething carnival of destruction. About 500 persons took part, among whom were a number from Tulare. One of the latter, a staid, quiet, elderly gentleman, told us that he wouldn't take \$10 for the fun he had. If all who participated had as good a time, that would make \$5000 worth of fun. As before, a good many rabbits were taken alive and shipped to S. F. to defray the expenses of the drive.

Ventura.

THRASHING RECORD.—Ventura *Democrat*: Ed. Ayers' thrashing outfit made a run of 138 days, commencing on the 6th day of July on barley, and finishing on the 22d day of November on Lima beans. Mr. Ayers thrashed in that time 75,520 cents of barley and 49,416 sacks of beans. He has probably made the best season's work of any of the nine steam thrashers running in the county this season.

Yolo.

ORANGE-PLANTING.—Woodland *Mail*: Dr. J. Clark, whose venture in orange-growing near Arbuckle has been noted in these columns, informs us that the rabbits swooped down on his nursery some weeks ago and destroyed about 6000 young seedling trees, ranging from 6 to 18 inches in height. The doctor, while lamenting his loss, is not discouraged, and will renew his nursery at once. His plan is to obtain rotten oranges in S. F. at the wharves, where the vessels from the orange countries unload. He pays \$5 per barrel for them, and this amount he estimates will yield him from 5000 to 7000 seeds. Dr. Clark will encircle his orange nursery and orchard with a rabbit-proof fence next year.

OLIVES.—R. B. Blowers has on display at Coward & Porter's a branch of a five-year-old olive tree which is loaded with olive berries. Mr. Blowers says that the tree from which this branch is taken has upon it a crop of from 45 to 50 pounds of olives. It is remarkable that a five-year-old tree should bear so abundantly. An acre of such would yield probably \$1000 worth of oil. Olive culture is the surest road to wealth known to the horticulturist.

Yuba.

MARYSVILLE ITEMS.—*Appeal*, Dec. 9: A very attractive display of oranges, lemons, persimmons, citrons, figs and chestnuts, grown in

Yuba and Sutter county yards, is made in the large show-window of J. H. Marcuse & Co.'s store. A large limb of lemons from W. G. Murphy's yard is suspended from the top center. In the bottom, pyramids of oranges and lemons are made. The size and ripeness of the oranges and lemons elicit most comment.... Local dealers say that the crop of mountain apples, especially of the favorite varieties, is very scarce this year.... Pruners commenced yesterday to trim the trees in S. J. Stabler's orchard. When they are done with the 7000 peach trees, H. J. Stabler will commence spraying the trees with a scale-bug preventive.... A visit to the blacksmith shops yesterday showed that they are all running full-handed, turning out plows and harrows and repairing old ones. The season is expected to be one of unusual activity among the farmers and fruit-growers.

THE VINEYARD.

Meeting of the Viticultural Commission.

The Board of State Viticultural Commissioners held its semi-annual session at 230 Montgomery street, Dec. 12th. President Arpad Haraszthy presided, and there were present also Commissioner L. J. Rose of Los Angeles district, Isaac de Turk of Sonoma district, Charles Krug of the Napa district, and George West of the San Joaquin district. Those absent were Commissioners C. A. Wetmore of the San Francisco district, J. de Barth Shorb of San Gabriel, R. B. Blowers of the Sacramento district, and G. G. Blanchard of the El Dorado district.

Commissioner Krug read a short report relative to the mercurial remedy for phylloxera, which is advocated by Dr. Bower. The speaker said that he, Mr. Crabb and Viticultural Officer Wheeler had visited the vineyard of Mr. Hagar at Napa, and they found the alleged remedy a complete failure, though the *Riparia*, a native stock to resist the insect, was found to be working well.

A lengthy discussion on viticultural legislation resulted in the adoption of the following resolutions and terminated the business:

Resolved, That it is the sense of this board that no wine-maker should use any spirits in fortifying sweet wines except grape spirits free of tax.

Resolved, That the bonding period of brandy should be extended to five years, and that distillers should be permitted to break up packages in bond in any size required by the trade.

Resolved, That imported fruit juices compounded with alcohol should be classed as alcoholic compounds and taxed as such. A special effort to secure a revision of the tariff in this respect should be made without delay.

Resolved, That this commission indorses the Green Wine bill introduced at the last session of Congress, and that if any bill is introduced to protect pure wines this session it should be a similar one.

The Downy Mildew.

Dr. H. W. Harkness, president of the Academy of Sciences, writes to the *Evening Bulletin* of Dec. 12th as follows:

Your paper of recent date contains a letter from Professor F. L. Scribner, Mycologist of the United States Agricultural Department at Washington, in which he denies that either "black rot" (*Phylospora Bidwellii*) or the "downy mildew" (*Peronospora viticola*) occurs in California, and warns against introduction from without. With respect to the former of these, I have nothing to add, no specimen from this coast ever having reached me. In regard to the latter there is, unfortunately for us, no doubt that Mr. Scribner is wrong.

The fact that our wild grapevines, in close proximity to vineyards, have been found infested with this most dangerous fungus has been often alluded to by me, and warning given as to the danger of infection.

The importance of the matter to the welfare of the vineyards of the State seemed so pressing that a paper on the subject, illustrated by stereopticon slides, was read by the writer before the California Academy of Sciences June 7th of this year.

It is to be regretted that Prof. Scribner did not make more careful inquiry before issuing his statement, proof to the contrary being directly available, as may be seen from the following extract from *Fungi of the Pacific Coast*, No. 5, in Bulletin California Academy of Sciences, No. 7, issued June, 1887:

Peronospora Viticola, B. & C.—On living leaves of *Vitis Californica*, near Bartlett springs, Lake county, June, 1884, and Russian river, June, 1886.

This fungus, forming large white patches, is confined to the lower surface of the leaf, where only the stomata from which it emerges is found. The corresponding part of the upper surface is much paler than the healthy portion of the leaf, on which account it is noticeable to a considerable distance. In both the cases noted above it is very abundant, and is a menace to our vineyards, not to be lightly regarded.

It was first observed by the writer in 1872 in a vineyard near Sacramento, which has since, the vines having been uprooted, been devoted to other uses. The vineyard was near the levee and in close proximity to wild grapevines, from which the fungus was undoubtedly derived.

Peronospora viticola is not likely to prove injurious in the Northern States, but in California the climate and conditions are similar to those of France and Italy, in which countries it does great damage. It appears with us on the wild vine at the time of flowering and robs it of the leaves necessary to shield

the growing grapes from the scorching rays of sun.

Sulphuring washes and all such remedies, used with more or less success in various fungoid diseases of the vine, are necessarily useless in this, for the resting spore, by which it propagates in the succeeding year, is formed deep in the substance of the leaf and only becomes free by its decay.

Vineyards in the vicinity of infested wild vines will sooner or later acquire it from them, and the experience of the coffee plantations of Ceylon will be repeated. These became infected by a fungus, probably infrequent on the original host, which propagated itself to such an extent on the more fertile one as almost to ruin the planters.

The only effectual remedy which can be suggested is to destroy by fire the infested vines, taking especial care that no leaves escape; and where a vineyard is to be planted in the vicinity of wild vines, it would be well to destroy the latter as a measure of precaution.

The letter of Mr. Scribner will do great harm if it leads our viticulturists to disregard an imminent danger already in our midst, while trying to protect themselves from importation without.

H. W. HARKNESS, M. D.

San Francisco, Dec. 8, 1887.

[Prof. Scribner's visit to this State was very hurried, and he had not time to look the ground over fully. His mission was to determine if possible the disease which was causing such havoc in Los Angeles county, and it was especially with reference to that that he proclaimed the absence of the "downy mildew." Dr. Harkness is right in calling attention to the fact that the disease exists here but has not spread to any extent to cultivated vines. It is of course a standing menace, and precaution against its dissemination should be taken.—EDS. PRESS.]

Caution to Nurserymen and Tree-Buyers.

A Circular by the State Inspector of Fruit Pests.

In view of the continued spread of certain dangerous scale insects, especially of the "fluted" or "cottony cushion" scale (*Icerya purchasi*) throughout the State, due partly to the fact that in their early and minute stage they are apt to be overlooked, and thus are carried hundreds of miles to new sections, we hereby caution all nurserymen, dealers and purchasers of nursery stock to exercise the utmost caution in selecting their stock, especially of citrus trees, and certain ornamental evergreen trees as well, especially acacias. Before ordering they ought to inquire carefully into the condition of localities from which they buy, to satisfy themselves that no danger of contagion exists. In regard to the location known to be infested, we refer them to our report to the State Board of Horticulture, and to that of Professor Riley to the Department of Agriculture of United States, and we shall always cheerfully give any information necessary on this point; but due allowance must be made for the utter impossibility of visiting all portions of this vast State, and the fact that in but comparatively few counties we receive any co-operation from local authorities.

To those unacquainted with the appearance and habits of the *Icerya* we also refer to the report of the State Board of Horticulture and to that of Prof. Riley, where full illustrations and descriptions of this veritable pest of our trees and plants can be found. As matters stand now we claim it is the bounden duty of any one interested in the welfare of our gardens and orchards to become familiar with this pest, and assist in its extermination, otherwise it will only be a question of time when the whole State shall become infested. We shall discourage all buying from any locality known to be infested, and in case of shipment from such places we demand the most thorough disinfection, which shall consist in the dipping for at least one-quarter of a minute of all parts of the tree in a certain solution, viz.:

One pound of lye (American concentrated) or four-fifths pound of caustic potash (98 per cent) to a soap solution of 25 gallons, made of one pound of the best whale-oil soap (containing no more than 25 per cent of water) to four gallons of water. Solution to be used warm, 110° F.

Importations from Other States and Foreign Countries.

As it is a fact that we have received our worst insect enemies from other countries, the same caution must be taken in regard to the introduction of new pests from any of them, and importers of orange trees from Japan and Florida are asked to keep me notified as regards the time of receipts of consignments, and to co-operate with any local authorities that may exist.

As regards the possible importation of the curculio or plum weevil on deciduous trees, we urge the necessity of shipping only trees which are free from soil adhering to the roots.

In regard to the enforcement of these rules we shall rely upon the local quarantine guardians as well as on all honorable dealers to whom we appeal for the closest co-operation in this matter, which is of the utmost importance to the prosperity of the fruit industry and horticulture in general.

W. G. KLEE,

State Inspector of Fruit Pests.

Berkeley, Dec. 13, 1887.



Music's Power.

[Written for the RURAL PRESS by EDITH DEXTER.]

Naught on earth hath music's power,
Sweet music's in the soul's dark hour;
Its magic influence, its holy spell,
The depth of language fails to tell.

It cheers the heart when tired of strife,
And soothes the closing hours of life,
And often by its sweetest strain
To saddened lips brings smiles again.

A mighty King by griefs oppressed,
On his loved harp found comfort blest,
And warriors brave and conquerors proud
To music's unseen power bowed.

The Hebrews of the olden days
Expressed their joys in songs of praise;
E'en mythic Pan, by river's brink,
Made the bright sun forget to sink.

Greek Orpheus, in the classics famed,
Melted the rocks and wild beasts tamed;
Yet sweeter, holier power it knows
When the sad heart forgets its woes.

But when in solemn prayer sublime
It gently tells of Love Divine—
God's love—and soft the Vesper calls,
On our hearts the *Spirit of music* falls.

Eva's Lesson.

There were indications of a domestic storm brewing as Richard Hayes entered his house at seven o'clock one fine evening in June; his little three-year-old May ran eagerly to meet him, and baby Harry stretched out his dimpled hands and prattled a glad welcome, but his wife's face showed that no pleasant greeting awaited him from her.

"So you have condescended to put in an appearance at last!" she said angrily. "I conclude you intended to stay all night watching that silly baseball game and guzzling beer."

Richard's face flushed painfully at the last taunt, so wholly undeserved. Although harsh words were becoming of almost daily occurrence in his once happy home, he felt them most keenly now, as they were uttered in the presence of an intimate friend, who had never before seen these too frequent outbursts of anger.

"Well, come to supper," Eva said ungraciously; "you have kept us waiting an hour, and I've no doubt Clarice is half starved."

Clarice protested pleasantly, and Richard made courteous excuses for his delay, but Eva was too angry and impatient to heed them. Her sharp words and unkind reproaches marred all the pleasures there might have been at her next-day spread supper-table.

At the earliest moment Richard escaped from the unpleasant home atmosphere and took his little ones out for a walk.

To Clarice the whole scene had been painful. Slight indications of growing unhappiness between her friend and her husband had been betrayed before, but nothing like this. And it had been such a pleasant home. She remembered how proud Eva had been of her handsome, even-tempered husband, how devotedly she had seemed to love him in those early days. She recalled the tender confidences Eva had poured into her ears of his patience, his constant kindness and generous devotion; but now, in her impatience and ill-temper, everything was wrong—petty faults and foibles, that would have passed unnoticed in the old days, were dwelt upon harshly and magnified into serious defects.

A merry, thoughtless girl, fond of society and gay pleasures, Eva had taken upon herself the duties of wife and mother without a thought of how weary the burden might prove to be.

For two or three years she bore them remarkably well; she was very proud of her handsome husband, her pleasant home and her bright, sprightly little girl, whom every one admired and petted. But with the coming of the second child her cares increased, the household duties became heavier, and her confinement to home closer. She never realized how largely the nervous irritation, which made her so cross and fault-finding, was caused by these things.

Confined to her close, warm rooms day after day, with rarely any other society than her little ones, who shared her irritability, the troubles had increased rapidly.

From an occasional impatient word, it had grown to sharp, angry reproaches and constant fault-finding, until Richard was beginning to seek pleasure in the society of friends outside, only to be met with still harsher words each time on his return. Thoughtless and ignorant of the laws of health, it never occurred to either that a ride or walk each day, a few hours in the open air, would do more to cure all this trouble than would either sermons or good resolutions.

The day of Clarice's visit everything had gone wrong. It had been very warm, and Eva

had spent many hours in her close, hot kitchen, over the ironing and baking, while May, mischievous little puss, had been unusually troublesome, scarcely out of one piece of mischief before she was into another, keeping the baby in constant fretfulness by her teasing until Eva's patience was exhausted, without the additional vexation of having her husband take advantage of a half-holiday to attend a baseball game and delay his return beyond the usual hour.

"Oh, if girls only knew when they were well off, they would never marry," she said bitterly, as she seated herself at the parlor window with her friend. "Just look at the cozy life I led before marriage; and now it is work, work, from morning till night, no chance for rest or recreation, no opportunity to go out, and the children drive me nearly wild, while my husband cares no more than a block for all my troubles. Oh, I wish I were free once more! I would—" she broke off abruptly, and leaned out of the window. "For heaven's sake," she cried, excitedly, "just look at that child! May, come out of the room this instant, or you'll get a good whipping. Dick Hayes, are you crazy? There's that child in the middle of the road, liable to be run over any moment. A smart man you are to take care of the children!"

May was in the street, running here and there, kicking at some bits of stone and now and then stopping to dance, whirling and twisting, jumping like a ballet-dancer, while her father, on the walk near her, was pushing the baby-carriage containing little Harry, walking slowly, his eyes bent on the pavement, evidently unmindful of what was passing around him. At the sound of his wife's sharp voice he lifted his head, and for the first time saw May's danger.

"Come here, May, this instant!" he called quickly. But May stopped for a moment only in her dancing, then whirling on her foot cast a saucy, defiant glance at her father.

"May, do you hear me?" he said sternly. "Come over here!" And dropping the handles of the baby-carriage he started rapidly toward her. May stood still for an instant, kicking the earth with her tiny shoes, then started to obey.

At that moment there was a rattle of wheels, the quick tramp of a horse's feet, and before the child had passed half the distance to the walk a horse attached to an empty, broken carriage came rapidly round the corner not a dozen rods from her. The whiffletree of the broken carriage dashed against the horse's heels at every jump, and half maddened with fright, he was tearing down the street at a furious pace. To spring into the road and catch May in his arms was the work of an instant; but the horse was close upon them, and with a shout Richard threw up his arms almost in its face, thinking it would naturally turn to the right, but, on the contrary, the animal in its mad terror swerved to the left and struck Richard with full force. In an instant the iron hoofs and heavy vehicle had passed over his prostrate body, and at the next bound the wheels struck the baby carriage, leaving it wrecked about the helpless little form. It was all over in a moment, the frightened horse was dashing madly down the street, and the three bodies lay apparently lifeless in the road.

So suddenly had it all happened that Clarice and Eva had stood as if paralyzed with horror, then with a quick cry Eva was out of the house and down the steps. Reaching the wrecked baby-carriage she lifted her child from amid the debris. There was a cruel gash at the back of the head, from which the blood was flowing freely, while the fair hair, the sweet face, and dainty white garments were stained with the crimson tide.

The beautiful blue eyes met hers in a dull, glassy stare, there was a quiver of the blue-veined lids, a quick gasp, and a little form lay limp and lifeless in her arms.

A crowd had rapidly collected and Richard and May were carefully lifted and borne into the house, while Eva, like one bereft of her senses, silently and mechanically followed, holding the lifeless form of her babe pressed closely to her breast.

In the middle of the pleasant parlor she paused and looked with a wild, horror-stricken countenance from the pallid, blood-stained face upon her breast to the unconscious forms of her husband and child upon the sofa. Clarice came toward her, passed her arm about her and tried to lead her to a seat. Slowly Eva turned toward her; then as she seemed to recognize the friendly sympathetic face, she cried out in tones of heart-rending agony: "Oh, Clarice, Clarice! I have murdered them! I wished myself free, and God has taken me at my word!"

She staggered, threw out her hand blindly, and sank in a dead faint in her friend's arms.

Through all that long sad night she passed from one fainting fit to another, tasking all the skill of the medical attendants and the kind care of her friend.

She would revive only long enough to recall the terrible accident; then, with a repetition of her first wild cry—"I have murdered them!"—would relapse into another fainting fit, only to repeat the same over and over, until at last, as the morning began to dawn, worn out with the fearful struggle, she slept the sleep of utter exhaustion.

When she awakened a few hours later her friend's face greeted her opening eyes. At first she gazed around in bewilderment, then, as there came back to her the scene of the previous evening, she turned her face to the wall,

and the first tears she had been able to shed fell freely. Clarice pressed her hand in tender sympathy, making no effort to check her tears, thinking wisely they were nature's best relief for the aching heart and overcharged brain.

After a few moments the tears ceased, and Eva lay motionless with closed eyes, only an occasional sob shaking her light frame.

"Oh, Clarice," she said at last, in broken tones, "I am most bitterly punished. I wanted to be free, and now they are all gone! I am utterly alone! Oh, my God, how can I bear it?"

"But May is not seriously hurt," Clarice hastened to explain; "she was only bruised and stunned. Here she is now," as the mischievous cause of all the trouble, awed and quieted by the strange scenes around her, slipped timidly into the room.

Eva sprang up with a wild cry, and, dropping on her knees, caught the child in her arms. "Oh, thank God!" she uttered fervently, "that I have even one left."

"Your husband is alive," Clarice said softly, laying her hand upon the bowed head. Eva raised her eyes quickly.

"Oh, Clarice, say it again!" she cried, hysterically, between sobs and tears. "Dick alive! I must go to him." And she rose to her feet, trembling in every limb from the reaction of feeling.

Clarice laid her hand gently on Eva's arm as she turned to leave the room.

"Wait one moment, dear. Richard is very seriously hurt—his head is cut badly and one leg is broken. It was a long time before the doctors could restore him to consciousness, but they think now with the best of care he may recover."

Eva had sunk into a chair, her eyes fixed intently on the face of her friend, as if every word were life or death to her.

"If care can save him, then he shall surely live. How good God is to me!" she added fervently, the tears falling again, but this time like soft summer rain.

"And my baby, Clarice, will he live also?" She almost held her breath, awaiting the reply.

Clarice did not answer, only passed her arm around Eva, and drew her head against her shoulder.

"Clarice, tell me," Eva pleaded, "is he dead?"

"Yes, dear," Clarice said gently, her tears falling in sympathy for the bereaved mother; "he was dead before the doctors came; he must have died instantly."

"No, he died in my arms!" Eva said with a sob. "I remember he gave one gasp as I took him up. O my baby, my baby!" and she broke forth again into piteous sobs, and rising, started to leave the room.

"One moment, please," Clarice said, again detaining her; "let me go first. He was asleep a few moments ago, and the doctor left orders that he must not be disturbed."

She left the room, and in a few moments returned and motioned Eva to follow her.

"Be as calm as possible, dear," Clarice whispered as she left her. As the door closed softly behind her friend, Eva stood still a moment at her husband's bedside. His head was well covered with bandages, concealing the ugly wounds beneath, the eyes were closed and his face wore the pallor of death. Her heart grew faint within her; surely he would die, if not already dead; and every unkind word she had spoken rose up before her like avenging spirits.

How all the old love revived with ten-fold power! He had never, even in their happiest days, seemed so inexpressibly dear as at that moment! Oh, if God would but spare him, a life-time of devotion should atone for all past unkindness.

A quick sob broke from her, notwithstanding her efforts of self-control. Richard's eyes unclosed and with a faint smile he held out his hand to her. Dropping on her knees by the side of the bed, she laid her head beside his on the pillow, while his arm was passed fondly about her.

"Oh, Dick, forgive me!" she sobbed, forgetting all her caution. "I shall never forgive myself; I'll never speak an unkind word again, never, never, while I live!" The sentences were broken and disjointed, uttered amid sobs and tears.

"There, there, dear," Richard said, gently, as he drew her face closer to him and kissed her tenderly. Then, with a noble generosity, which seems a part of some men's natures, he added kindly: "I was to blame; I should have been more thoughtful; I ought to have taken you out instead of going off alone for my own pleasure. We will begin anew now—"

He stopped, unable to finish the sentence.

"Yes, I know! Harry is dead. Oh, my baby! my baby!" she sobbed.

Richard's lips quivered and the heavy eyelids were pressed upon the pallid cheeks to repress the starting tears. He drew her closely toward him and tenderly pressed her tear-stained cheek against his own in mute sympathy, but could utter no word.

How very, very dear his beautiful boy had been to the young father, none but God might know.

For a long time they were very quiet, Eva's sobs alone breaking the stillness, until at last those ceased and Richard said softly:

"Evvie!"

"Yes, dear!"

How many long months had passed since she had heard the dear old pet name from his lips! How many more since she had spoken one endearing word to him! The sound of them now

carried them back to the old, happy days before harsh words had been spoken or unkind feelings held sway.

"What do you wish, dear?" Eva asked, waiting a moment for her husband's request.

"Harry"—his lips trembled—he could not go on.

"Yes, dear," Eva said softly, divining intuitively, in her new-found sympathy with her husband, the wish he could not express.

Rising quietly, she passed out of the room. In a few minutes she returned, bearing the dead babe in her arms.

All the violence of her grief seemed hushed into stillness in the presence of death.

Seating herself on the side of the bed, she turned her precious burden tenderly until the father's eye could rest on its face, his hands touch it without change of position.

Never in the full flush of health and infantile beauty had their boy looked more lovely than now, as, robed for the grave, he lay in his mother's arms. The fatal wound had been deftly concealed, and the looks of hair fell over the white forehead in soft, curling rings; the long lashes of the blue-veined lids lay lightly on the fair, round cheek; the sweet curved lips just parted with a smile, and the pretty dimpled hands were crossed on the lifeless breast.

Too fair and beautiful he seemed for the coffin, the cold, dark grave.

The white lips of the young father quivered, and the large tears forced their way from beneath the trembling eyelids, as he laid his hand on the head of his darling boy. Then his hand fell softly upon Eva's, with a gentle, loving clasp.

"Our darling Harry is safe in a better world," he said at last, in a voice broken by emotion. "And let us, dear, make his death the beginning of a new life of thoughtfulness and forbearance each toward the other."

And Eva, touching her lips with tender reverence to the fair, cold forehead of her darling, said softly:

"God being my helper, I will prove that the death of my precious boy has not been in vain."

Hindoo Maxims.

EDITORS PRESS:—The following maxims have been culled from notes made while reading different books regarding this ancient people, whom we had been taught in our childhood to regard as heathens, whose future abode was one where they would not be likely to suffer from cold feet. Whatever the masses were, it is evident there were some enlightened teachers among them.—M. A. SHELDON.

The original Hindoo religion recognized but one God, also the sages of Greece. The Hindoo Vedas (that had the same authority with them that the Bible has with Catholics and Protestants) was written 3000 years before Christ. Deity is thus defined: "He who exists by himself, who is in all, because all is in him."

"The Ganges flows, it is God; the ocean roars, it is God; the wind blows, it is He; the cloud that thunders, the lightning that flashes, it is He. As from all eternity, all existed in the spirit of Brahma, so to-day all that exists is in his image."

Manou, a Hindoo philosopher, wrote 4000 years ago the following maxims, that are as well worthy of acceptance now as then:

"Of all things pure, purity in the acquisition of riches is best. He who preserves purity in the acquisition of riches is really pure; not he who is purified with earth and water."

"As the body is purified by water, so is the soul by truth."

"Sound doctrine and good works purify the soul."

"The intelligence is purified by knowledge."

"Science is useless to a man without judgment, as a mirror to a blind man."

"The man who only appreciates the means, according as they conduce to his success, soon loses his perception of the just and of sound doctrine."

Christna (a Hindoo) taught this about the soul (that a benighted being like myself, groping for light, can better comprehend than much of the teachings of theologians of the past 50 years).

"The soul is the principle of life, which Sovereign wisdom employed to animate bodies; matter is inert and perishable; the soul is immortal."

The Vedas has also a good word to say for women, that will be a grain of comfort to the female sex even if it neglects to say that all women as well as all men in these United States should have the ballot.

We cherish a private opinion that neither should have it till by a rigid examination they have proved they can exercise the right of suffrage intelligently.

Thus saith the Vedas: "He who despises women despises his mother. There is no crime more odious than to persecute women, and take the advantage of their weakness to despoil them of their patrimony. When women are honored, the divinities are content, but where they are not honored, all undertakings fail."

The Hindoo philosopher, Narada, reputed to have lived before the deluge, reasons thus: "Never resort to the argument, I do not know this, therefore it is false. We must study to know, know to comprehend, and comprehend to judge."

"Thank God for such heathens. May they increase in number and wisdom and be able to send us a cargo of missionaries to convert the heathen in America, in return for the efforts made and lives lost to convert the Hindoo heathen to our accepted beliefs."

Horace Greeley Crossing the Sierras

BY JOAQUIN MILLER.

The old stage-drivers of the brave old days!
The old stage-drivers with their dash and trust!
These old stage-drivers they have gone their ways,
But their deeds live on, though their bones are dust;

And many and many a tale is retold
Of these daring old men in the days of gold:

Of honest old Monk and his Tally-Ho,
When he took good Horace in his stage to climb
The high Sierras with their peaks of snow
And 'cross to Nevada, "and come in on time;"
But the canyon below was so deep—oh! so deep—
And the summit above was so steep—oh! so steep!

The horses were foaming. The summit ahead
Was as steep as the stars on a still, clear night,
And steeper and steeper the narrow route led,
Till up to the peaks of perpetual white;
But the faithful old Monk, with his face to the snow,
Sat silent and stern on his Tally-Ho:

Sat silent and still, sat faithful and true
To the great, good man in his charge that day;
Sat vowing the man and the mail should "go through
On time" though he bursted both trace and stay;
Sat silently vowing, in face of the snow,
He'd come in on time with his Tally-Ho!

But the way was so steep and so slow—oh! so slow!
'Twas silver below, and the bright silver peaks
Were silver above, in their beauty and snow;
Where eagles swooped by, with their bright, shiny
beaks;

When, sudden out-popping a head snowy white—
"Mr. Monk, I must lecture in Nevada to-night!"
With just one thought that the mail must go through;
With just one word to the great, good man—
But weary—so weary—the stage wheels drew
As only the weary old stage wheels can—
When again shot the head; it came shrieking out-
right:

"Mr. Monk, I MUST lecture in Nevada to-night!"
Just then came the summit! And the wide world
below.

It was Hank Monk's world. But he no word
spoke,
He pushed back his hat to a high peak of snow!
He threw out his foot to the great strong brake!
He threw out his silk! He threw out his reins!
And the great wheels reeled as if reeling snow
skins!

The eagles were lost in their crags up above!
The horses flew swift as the swift light of morn!
The mail must go through with its message of love,
The miners were waiting his bright bugle horn.
The man must go through! And Monk made a vow
As he never had failed, why, he wouldn't fail now!

How his stage spun the peak like a fair spider's web!
It was spider and fly in the heavens up there!
And the swift swirling wheels made the blood flow
and ebb;

For 'twas death in the breadth of a wheel or a
hair.

Once more popped the head, and the piping voice
cried:
"Mr. Monk! Mr. Monk!" But no Monk re-
plied!

Then the great stage it swung, as if swung from the
sky:

Then it dipped like a ship in the deep jaws of
death;

Then the good man he gasped, as men gasping
for breath,

When they deem it is coming their season to die.
And again came the head, like a battering ram,
And the face it was red, and the words they were
hot:

"Mr. Monk! Mr. Monk! I don't care a ———
Whether I lecture in Nevada or not!"

Parable of the Spider's Web.

[Written for the RURAL PRESS by ALICE KINGSBURY COOLKY.]

Once upon a time, on a bright, beautiful morning when the air was full of perfume and musical with the songs of birds, a sweet, tender-hearted girl looked with loving eyes upon the scene, and with her heart and eyes she thanked the Creator for making the world so beautiful and her life so happy.

Across her path, from bush to bush, was a hining thread, and clinging to the dewy rose-buds was the perfect home of a little garden spider. She hesitated at breaking such an exquisite piece of work, but the wind, more thoughtless, dashed her robes against the delicate structure, and in a moment the little insect's beautiful home was destroyed.

"Too bad!" she murmured, as she passed on to greet a friend.

"Was it not almost sad that my dress should have destroyed the work of hours, perhaps days, of some poor little harmless spider; it was so perfect, too," said the lovely girl to her friend, and the friend passed on, and in a little while told another friend: "How sentimental was dear Miss ———. She had almost cried because she had broken a spider's home," and that friend told another friend: "Miss ——— got mad and cried and broke some one's house."

And the little bird that carries all bad stories had soon borne it to a whole neighborhood, and it was soon told "That Miss ——— had broken into a person's house and destroyed everything."

And people looked at each other and shook their heads and said, "I told you so."

Friends grew cool, and the lovely maiden wondered, and still the story grew: "Miss ——— had broken into Mr. S.'s house, destroyed the furniture and killed his wife!"

Friends passed the lovely girl with averted heads and frowning faces.

And the girl began to fade and droop as a

beautiful flower. Still the story grew and faster the friends forsook her.

"What is it?" she cried in agony. "The very world seems changed."

And she faded with the flowers, and when the snow fell, her spirit, as pure and white as the falling flakes, passed them on her way to that home where enter not those who maketh a lie, nor scandal-mongers, nor busybodies, only the pure in heart and the merciful. So God gave his beloved peace.

And they buried her under the cold, hard earth, that was not colder or harder than the hearts and tongues that had murdered her. And this all came of a broken spider's web.

YOUNG FOLKS' COLUMN.

Seaweed and the Sand-Piper.

A Fairy Tale.

[Written for the RURAL PRESS by MARTHA F. TYLER.]

A long time ago, when people were simpler and more superstitious than they are now, there lived, in a fisher village somewhere on the coast of Scotland, a little girl called Seaweed. That was not her true name, of course, but she had acquired it because she was long and lanky, with very light brown hair and greenish eyes, and could float on the water like a piece of kelp.

"Not at all a pretty heroine for a fairy tale," you say. No; but it is not always the pretty children upon whom the fairies bestow their choicest gifts. They often favor the poor and plain. To work wonders for a boy or girl who has almost nothing to wish for, would not be to show the real power of the elves and brownies.

The sand-piper was a dark-skinned, bright-eyed boy. He would run along the beach with his little bare, brown feet so swiftly and with so bird-like a motion that the fishermen would cry as he pattered by, "There goes the sand-piper," and that is the way he earned his name.

About a mile from the shore, just opposite the hamlet in which Seaweed and the sand-piper lived, there was a small island, and on the island a cave called the Sea Fairies' grotto, because it was supposed to be inhabited by those little people, who, no doubt, found the cool, dim chambers of the enchanted cavern a more agreeable dwelling-place than the exterior of the rocks, which was exposed all through the day, at least, to the broad glare of the sun, and the wonder-folk, you know, avoid the daylight. Not only did the children believe in these fairies but every fisherman and fishwife in the town would have given you accounts of them, cautioning you in a whisper at the same time to shun the haunted locality. Once an inquisitive fellow had landed on the island and declared his intention of exploring the mysteries of the cave. It was conjectured that he had but reached the entrance when he met with the punishment his rashness invited, for the next day his lifeless body was discovered stretched across the mouth of the dreaded opening. "Tis ill luck meddling with the fairy folk," your informant would have added with a shake of his head as he concluded this harrowing tale.

Now Seaweed and the sand-piper were overbold. The little man was afraid of nothing, and Seaweed, I regret to say, was a genuine tom-boy. The fiercer the wind blew on a stormy day the more delighted were they. They scaled the highest rocks in search of gulls' nests, and a lacerated hand or foot was considered a slight penance to pay for the beautiful, large, green eggs with which their efforts were usually rewarded.

One day the two friends were seated together on the soft, warm, yellow sand. The wind swept gently over them like some great, wide-winged bird, for it loved them, the wind did, these children of the sea and sky.

"Sandy," said Seaweed rather abruptly, "do you fear the small folk?"

"I do not know," answered the sand-piper meditatively. (He did not say it that way, however; he said, "I dinna ken.") "I fear not Giles Hobson, nor his great sword, nor his sharp words, but the small folk are queer folk. A body needs must fear what he cannot see."

"Sandy," said Seaweed mysteriously, as she edged a trifle nearer to him, "I saw a fairy last night. I just opened my eyes, and there she stood in the moonlight—a lovely, wee lady, with something shining in her hair like a star. 'Seaweed,' she said, and her voice was like the singing one hears in the sea-shells, 'do thou and that wild laddie whom thou callest the sand-piper, take a boat to-morrow at midday and row for the fairies' grotto on the island. My people have there a gift for thee and for him. Thou hast indeed a staunch heart for a lass, and he is a brave Scotch laddie.' Then in a twinkling she vanished and there was naught but the moonlight. There, Sandy," Seaweed continued with a wave of her hand, "is my father's boat. It will be idle these two hours coming. Let us do the fairy's bidding."

The sand-piper, in whom the spirit of adventure was strong, needed no second urging, and the two children were soon gliding over the blue waves, arriving in a short time at the island, where, after securely mooring their boat, they prepared to enter the awful cavern, hand in hand.

There was an opening at either end of the

grotto, and sufficient light was admitted to enable them to see quite distinctly when their eyes had become accustomed to the twilight. For some minutes they walked on in silence, for they were almost breathless, partly at thought of their own daring and partly with the expectation of what they hoped to see. There was no sound but the roar of the ocean thundering among the rocks, and not a fairy could be discovered anywhere.

Seaweed began to experience a sense of disappointment, when suddenly she stumbled upon some object lying in the way, which examination proved to be a small iron chest—rusty, as if it had lain in the damp atmosphere for years.

"We'll take it to the light," said the sand-piper; "perhaps there's something in it."

There was gold in it! And there were precious stones in it! "Pretty fairy things," the children cried delightedly, not knowing what else to call them. Fairy things, however, which made them comparatively rich, for no one in the village ventured to dispute their claims to the contents of the box, or doubted that the treasure had been brought to the cave by the small folk for the benefit of the two brave children.

Seaweed all her life long, even after she was a woman grown and had become Mrs. Sand-piper, was referred to as a person who possessed, to a remarkable degree, the gift of what the Scotch call second sight.

Now, if you are skeptical in regard to fairies you may think, if you like, that the treasure was deposited in the cave for safe-keeping by some wild seaman who had probably stolen it, and who, intending to return for it one day, had perhaps been lost in a storm meanwhile, and so never did.

"But," you insist, "this would not account for Seaweed's dream—if it was a dream."

Very true: that is quite inexplicable. There must be fairies after all, then.

GOOD HEALTH.

Diphtheria.

In response to "Constant Reader's" inquiry, an old subscriber sends us an extract from the *Stockton Mail*, of Jan. 15, 1886, remarking that the treatment spoken of was practiced in that city with great success. After speaking of the fact that diphtheria in the malignant form sets at defiance both the "regular" and the homeopathic practitioner, and kills the patient, the article proceeds: "In view of these facts, it is worth while to consider a method of cure once practiced very successfully in this county, and which the practitioner declares without reserve will cure every case of diphtheria that is taken in time, or that is treated before that stage is reached which any of the old-school physicians would pronounce necessarily fatal. His method is simply to put the patient at once into a pack until copious perspiration ensues. The pack is repeated at proper intervals, and no medicine whatever is given, attention being paid merely to diet and regimen. He is willing to stake his reputation that he will cure any case of diphtheria submitted to him before the disease has progressed to the obviously fatal stage.

"Considering that the allopaths and the homeopaths are perfectly helpless in the presence of this comparatively new affliction to children, why would it not be a good idea to give the packing plan a fair trial? The devotees of medical science are the slowest persons in the world to concede the possibility of a valuable new discovery outside of the line of investigation followed by the books; but in a case of this kind, considerations of humanity urge the adoption of any plan, books or no books, that will save the little ones."

[We do not care to continue farther the discussion of the diphtheria treatment in the form which it has taken. We aimed to satisfy a correspondent, but we cannot undertake to discuss at length the mooted "treatment."—EDS. PRESS.]

SKIN DISEASES.—The laity believe, as a rule, that cutaneous diseases result from "bad blood," the impurities of which find exit through the skin, and in so doing take the form of an eruption. Consequently it is harmful to remove them. I have had, says a specialist, patients express themselves as very solicitous about the sudden cure of a disease of the skin; the consequence, in their opinion, might be disastrous by the "driving of a disease that might attack an internal organ." Nothing could be more absurd, for it is absolutely impossible in this sense to either "drive in" or "drive out" a skin disease. The blood has little to do with skin disease. There are diseases as peculiar to this organ as to any other, entirely localized, depending upon changes in the tissues themselves. Others are caused by parasites; still others by nervous disturbances. It is evident that the much-lauded "blood purifiers" for cutaneous diseases are, to say the least, useless.

HEART DISEASE AND INDIGESTION.—There isn't a doubt of the truth of the statement of a New York physician that half the cases of so-called heart disease are only indigestion, and more men are scared to death than die any

other way. Dyspepsia causes a pain in the breast and makes the heart beat rapidly. The physician advises sufferers to give up tea, coffee, tobacco, beer and whisky—if they are users of these things—eat brown bread and plenty of good meat, especially rare roast beef, and let hot bread, cake, pudding, and pastry severely alone. A powder of bismuth and bicarbonate of soda before each meal, for a month, is recommended. That self treatment, with abundance of exercise, will effect a cure in 19 cases out of 20.

BLINDNESS INCREASING.—It is stated on good authority that blindness in the United States is increasing. While the population during the ten years from 1870 to 1880 increased at the rate of 30 per cent, blindness increased over 140 per cent.

DOMESTIC ECONOMY.

Curing Pork.

EDITORS PRESS:—I have been much interested in the methods of curing hams and bacon, as recently given in the *RURAL*, and perhaps the more so just now, because of 10 fat hogs being in the pen 50 yards from where I am writing waiting favorable weather to be made into bacon, and that matter of *weather* has not received due attention. Kill at such time that the night after killings shall be frosty. A warm, foggy night will not remove the animal heat from the slaughtered hogs, but, on the contrary, will do much toward souring and spoiling the meat.

Another matter is the *kind* of salt to use. There are brands of salt that are almost certain to spoil meat if used in curing it. This I have learned by more than a quarter of a century of experience of curing a family supply of meat in our warm climate and by testing different brands of salt that have caused me the loss of an aggregate of several tons of meat, and while I do not wish to publish any brand of salt as uniformly bad, I do wish to say that the only brand that I have found to be uniformly *good* is the "Worthington Liverpool salt." If any *RURAL* readers have found other brands of salt equal to this in meat-preserving qualities, I wish they would make it known. There are many brands of salt put up right here in our own country. I have tried a portion of them, and always with loss, but if there is a brand as reliable as the "Worthington" I desire to know it, though I have done my share of experimenting, unsuccessfully, to find it.

My Method

Briefly stated would be: Get all ready to butcher, then wait for a frosty night. On the day preceding kill, dress, and hang up your hogs over night to expel all of the animal heat. On the morning after they've hung over night, cut them up and rub thoroughly with the following and lay in a cool place: For each hundred pounds of meat use 10 pounds of "Worthington" salt, 2 pounds of brown sugar, and 4 ozs. of finely pulverized saltpeter. Add boiling water enough to about half dissolve this mixture, keep it boiling while you dip your meat into it, a piece at a time; then when partially cooled rub each piece of meat thoroughly with the undissolved salt, etc., from your boiler, allowing as much to adhere to the flesh side of the pieces as will do so, laying it after rubbing in a cool place, skin side down. In like manner rub daily, using the wet salt left from first rubbing for three days; follow with rubbing three times on alternate days, using additional dry salt if necessary. Then cover with brine as strong as it can be made for ten days more, or, if more convenient, continue the salt rubbing every two or three days, keeping all the while in as cool a place as possible.

In 20 days from your first salting your meat should be ready to smoke. You can smoke so as to make fairly good ham in three days by using sulphur—plenty of it—to smoke with, but it is better if you are not in a great hurry to smoke with brush, wet straw, or corn cobs, being careful not to make fire enough to cause heat. Let it remain in the smokehouse—the longer the better—frequent smoking being the only necessary preservative and protection from flies and insects.

Canning Fresh Meat.

Never use rosin or wax in canning meat; the grease from the meat will dissolve either of these, in many cases spoiling or very much injuring the flavor of the meat. Procure cans that can be soldered. Cut the meat from the bones and put it into the cans raw and cold, pack each solid full, adding only such salt and seasoning as will be necessary in cooking. Solder the can covers on, making them air-tight. Puncture each cover in the center with a very fine awl. Set the cans into a boiler of water and boil them from 40 to 50 minutes. As you take them from the boiling water, immediately close the puncture with your soldering iron and a drop of solder; they are ready to set away and keep. You can open them when required for use by using a very hot soldering iron or other large heated iron, running it around where the cover is soldered on—both cover and can being thus kept in good condition for future use, year after year.

W. A. SANDERS.
Sanders, Cal.



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Pianos—Kobler & Chase
Gill's Nurseries—Oakland, Cal.
Boarding School—Miss Bisbee, East Oakland, Cal.
West Side Nurseries—Los Gatos, Cal.
Orange Trees—J. Villinger, Covina, Cal.
Seeds—Lewiston Seed Co., Lewiston, Idaho
Furniture—Chas. M. Plum & Co.

See Advertising Columns.

The Week.

The week has given us a fair sample of California winter with a dash of north wind at times, a heavy shower at others, warm sunshine between, and grass growing all the time. There have been days fit to intoxicate the new-comer, and to arouse all the State pride of the old-timer—days when one can bask in the sunshine and look out into the clear air so far that were the earth's surface concave one could see the whole of it. There has been rain enough to start work in many places, but more is still desirable. So far the ends of the State and the interior valleys seem to have been better favored than the central coast region, but there is time enough for that.

All seems ready for the spike-driving on the California & Oregon line, and the event will take place on Saturday of this week at Ashland, Oregon. Another important event will be the Citrus Fair at Oroville, which will open December 20th. To both of these places excursion trains will steam out, giving all a chance for an airing before Christmas. Open-air events in December are something of an exponent of California climate.

The various boards of trade are gradually affiliating with the State Board, and the time is not far distant when all the counties will be represented on the executive committee.

Postal Progress.

The signs of the times certainly favor reform and extension in the postal service, which will be of great public value. In the matter of the postal telegraph, which we have constantly advocated for years, both as a relief from oppression by monopolies and to make the telegraph available for cheap and frequent communication, there is probability that this session of Congress will consider the proposition more carefully and thoroughly than ever before. Although the session is but a few days old, two measures have already been introduced in the Senate, one by Senator Edmunds, which is the same measure proposed by him at the last session, and another by Senator Collum, which seems to aim at a thorough system, and proposes rates which will be of incalculable benefit. It proposes to build lines to many points at the East and South, and one overland to San Francisco. The style of the lines provided for by the Act, and the rates which it is contemplated to charge for the service, are of such wide interest that we give the following full abstract:

Postal telegraph offices are to be opened at the places named and at all intermediate points at which first, second or third-class postoffices are established. The bill provides that branch lines shall be constructed from time to time, as appropriations therefor are made by Congress, the intention being to connect the lines with all the cities where the postal free-delivery system prevails, but no additional facilities will be provided in States already connected with trunk lines until postal telegraph offices have been established in every State and Territory.

The system is to be constructed on straight lines or as near as practicable, but regard is to be taken of the cities that will afford the best telegraphic facilities to the public. The lines are to be constructed by the Engineer Corps of the army and then transferred to the custody of the Postmaster-General.

The poles are to be of iron, the wire of copper, and all other materials of the best character. Eight wires are to be strung on the line from New York to Chicago, and four upon the other lines. The Secretary of War is authorized to use the military service lines of the United States as far as expedient, and also to make all necessary condemnations of lands or buildings at a fair compensation, all disputes as to what is fair compensation to be settled by the Court of Claims. The Secretary is further authorized to construct, take and use all the machinery and devices, not including telegraph lines, whether patented or not, as shall be deemed necessary, the compensation to be determined in the same manner as in the condemnation of land. Sums of money necessary for this purpose are to be appropriated by this bill.

A rate of 10 cents for each 20 words and five cents for each additional 10 words is fixed for distances of under 500 miles, and an additional rate of five cents for each 250 miles over 500. A night rate of 35 cents, and a day rate of 75 cents, is fixed for each 100 words transmitted for newspapers, except that where the same dispatches are dropped off at more than one office, the rates shall be 25 cents, and 25 cents respectively for each dropped copy.

The office of Director-General of Telegraph is created as a part of the postoffice department. It is made the duty of the Postmaster-General to report to Congress after the passage of the Act a plan for the complete organization of the postal telegraph system with detailed estimates of the men and amount of money needed, before the system is put into operation and the employees selected. Examinations are to be held by the Civil Service Commission to determine the fitness of applicants. Four million dollars is appropriated for the location and construction of telegraph lines provided by the Act.

Such is the outline of the main features of the Act. We do not present them as the best that could be devised, but we do most emphatically approve the idea aimed at, and that is to make the telegraph of the fullest possible use, and to cheapen it to that end. The vast business interests and the communication of facts and ideas generally should not be at the dictation of private or corporate greed. It is no benefit to have competition cheapen rates until the conflicting interests are merged, and then, when they are merged, the price of a telegram raised again. This is the most injurious kind of a fluctuation. What would be the result of having the postage on a letter one cent to-day and five cents to-morrow? It is much the same, though to a less degree, in having telegraph rates dictated by the directory of a company.

It may be objected that the money called for by the Act is a large amount. It is so, and yet what investment of public money would confer wider benefits? Where is the sense in having surplus funds so large that the Government is compelled to build larger and larger vaults to contain it, while the people are being robbed of millions by the owners of telegraph lines? Let

the telegraph become a public necessity, as the mail service is. It may not pay its way at first; the mail service was a public burden until recently, if it is not now, and yet no one would advocate returning to high postage rates. This is a direction in which the Government can afford to experiment providing it is done wisely and honestly.

Power of the Soil.

In a land like England we can find an abundant evidence that the soil really needs neither rest nor rotation of crops to insure an eternal fertility. There is no wear out; there is no such thing as a garden becoming a wilderness by use, so long as there is a proper attention and a generous culture.

Towns and cities can be found there, where from 10,000 to 50,000 people have lived 1000 years. They have drawn their sustenance from the neighboring fields for all that time. Before the advent of fine highways, canals and railroads, more than ten miles of carriage was impossible. The farmers within that circle had a monopoly of the market. And to-day they maintain more people, have finer crops, pay higher rents, and thousands live better than ever, because the soil, generously treated, is exhaustless. Given a sufficient depth of soil, sunshine, rain, and the addition from time to time of such elements as are exhausted in the crop, and there is no end to fertility and resources.

California has soil and sun. Give it water to supply the wanting element and return to the soil proper fertilizers when it needs it, and there can be no failure of production. The sunshine is rather in excess. Efforts must be made for an equivalent supply of water. That is the chief want, and no land under the sun can provide so many cottage-houses with more pleasure or greater plenty.

We learn in a recent agricultural report from England that a farmer near one of those ancient cities sowed wheat for 45 years in the same field, without a break or rest, and the last crop was over 40 bushels to the acre.

This fact may well encourage the small farmer. It assures him that with proper culture and saving, and application of fertilizing matter, there is no real need of fallow or of extended acres. Enough for to-day is enough forever.

It will be a long time before the soil in some specially favored localities needs fertilization; in others, our experience has long shown that such crops as were gathered in the early days of California cannot now be had without restoring fertility to the soil. For this reason we are glad to see that increased attention is being paid to the introduction and sale of fertilizers and to the manufacture of the same from the offal of the great city. Our advertising columns during the last few weeks have borne witness to this fact. It will not be long before the use of fertilizers in this State will reach large amounts.

As an instance of the fertility of California soil in its best estate, we can but cite again the victory won by J. D. Roberts of Arroyo Grande of San Luis Obispo county, at a recent competition at the East. He won the prizes for the following articles: Onions 5 lbs. 2½ oz.; pumpkin, 274 lbs.; beet, 100 lbs. Many people had never seen such things before, and they were a matter of wonder. But with our soil and sun, with culture and water, nothing seems impossible.

Progress in Santa Cruz Mountains.

Among the many works of development and advancement in the very important district of our State known as the Santa Cruz Mountains may be mentioned the progress which E. Emil Meyer is making in the improvement of his excellent property, which he appropriately calls Mare Vista Vineyard. Mr. Meyer's place is 2000 feet above the ocean, and facing toward Santa Cruz has a magnificent sea view, whence the name he has chosen. We have seen a sketch of a wine-cellar which Mr. Meyer proposes to erect, and which has many novel and interesting features. It is impossible to present them without an engraving, which we may have when the enterprise has further progressed. It may be said, however, that the site has a sharp slope, and the arrangement is such that the grapes will be received from the roadway at the highest point, the wagons running upon a scale which is under roof. The crushing-room

is on the same level, and the fermenting-room is on a level below. Still lower is the floor on which are the casks, and from the fermenting vats to the casks the wine flows by gravitation. On the level of the cask-room is the excavation or cellar for the storage of old wines. Still on a lower level is the engine-room, and on a level lower the bottling-room. The distillery is apart from the main building, but on such a level that the wine will naturally flow to it. All the work can thus be done without an elevator, which is expensive to build and to operate. The terraces upon which the different levels are gained are to be laid up with solid masonry, for which excellent stone is found on the place and at a higher elevation than the building, so that all hauling will be down-hill. Mr. Meyer's building will have novel features in roof and in other parts which we can better describe when we have an engraving.

This year Mr. Meyer has made 5000 gallons of wine from his own grapes, but his vineyard is but beginning its bearing. He has 50 acres of resistant roots, 20 Californicas and 30 Riparias, which he will graft this winter with the 14 varieties from his experimental plot which seem to him most promising. These are, for white wine, Traminer, Green Hungarian, Franken Riesling, Mondeuse, Gutedel, Semillon, and three Sauvignons, which he has under special names, but whether they are all true varieties he is not yet sure. For clarets he will graft in St. George Pinot, St. Macaire, Tannat, Pinot de Peinaz and Gros Marsein.

In addition to his vines, Mr. Meyer is growing olives of which he has 22 varieties, and figs in variety. His place is young, but for beauty and productiveness gives good promise of its future.

The Rural for 1888.

We are approaching the close of one of the most active and progressive years in the history of California, and indications are that it is but the opening year of a wonderful period of development and progress. The growth of the State in all its productive interests has been great, as we propose to show clearly as soon as the year's statistics can be gathered. Though we are enjoying increased attention from those who seek sunny climes merely for health or enjoyment, still our growth over the whole State is chiefly by incoming of those who come to make homes and become factors in real wealth-winning.

In view of these facts, it becomes apparent that the sphere of the RURAL PRESS as the recognized leader in the agricultural literature of the State grows in importance, and its services to its growing community of readers become more valuable. We undertake to furnish to the new-comer practical information of methods and practices in this State which they can obtain from no other source, and at the same time we afford to the old and experienced farmers of California an opportunity to compare views and latest experiences, and thus help each other, and the new-comers as well, to put forth productive energy so as to reach the best possible results.

We are continually securing a wider circle of practical contributors and thus enriching our columns. We are keeping all informed of the progress of the newer industries, many of which are really being worked out in their details under California conditions, and to which distant experiences and methods drawn therefrom are of little value. We are working for greater diversity in the practical information we furnish, so that all may take such share as their conditions warrant in the unsurpassed breadth and variety of production in which California is destined to lead the world. We expect to do more for our readers in 1888 than we have done hitherto, and we ask it as a favor from those who have all along shown our enterprise such warm friendship that they speak to the many new-comers in their neighborhoods of the value they find in the RURAL as a practical guide in agriculture, as an entertaining and clean sheet for the family circle, and as an earnest advocate of the people in the face of oppression from all forms of greed. We desire to get in this word for the RURAL early, so that many may be induced to send their names for the opening of the next volume with the first issue in January. We expect to carry all old friends with us and to greet many new ones with an earnest wish for a "Happy New Year" to them all.

The Shorthorn Sale at Sacramento.

On Wednesday, the 7th inst., there were sold at the Sacramento Fair grounds 52 head of Shorthorn cattle, consisting of 48 heifers and four bull calves, belonging to R. M. Dunlap. The weather was fine and pleasant. The greater part of the Shorthorn breeders of the State being present, made a presentable gathering round the ring, so that there was not that bare and scant appearance of people one is but too apt to see at auction sales in this State. One attraction to Shorthorn-breeders in particular, no doubt, was the announcement that the cattle were to be sold by that veteran auctioneer of Shorthorn cattle, Col. J. W. Judy of Illinois. All we can say in regard to that is, that those who did not attend the sale missed a treat. We heard one man say: "I would rather hear him talk than sell cattle." That was before any cattle were sold, and most likely that man did not want any.

In his prefatory remarks, Col. Judy dwelt upon the advantages of keeping good cattle, under any circumstances, and whatever the breed chosen might be, let the cattle be good of their breed, with good constitutions, thus insuring good growing and thriving qualities and a power of keeping up under the heavy constitutional drain of giving large quantities of milk, and thus be ready to turn into a good carcass of beef when done with in the dairy. For this purpose it is generally conceded that the Shorthorn breed is the best. "The end of all cattle is beef," said the Colonel, very emphatically, "and the better the cattle, the better will be the quality of the beef produced, thus insuring a double gain in the increased weight for food consumed, and by having a better quality of meat, obtaining a better price per pound." If we have not got the exact words of the Colonel's speech, we feel confident that we have given the spirit and meaning of what he said.

And now to the sale. As usual, the bidding for the first two or three lots was slow, but the cattle being young and in good condition gave the people confidence, and when some of the good things—and there were some good ones—began to come to the front, the auctioneer's enthusiasm appeared to be contagious, or something like it, for some of our Shorthorn breeders began to warm up, and the bidding became lively and spirited, especially when anything above the average came forward. There were three animals that brought \$200 and over. These were: lot 12, Mazena 2d, bought by P. S. Chiles for \$200; lot 29, Red Princess, \$255 (the top price of the sale), bought by R. Ashburner, who no doubt knew the value of the first "Princess" female ever brought to this coast as well as any one present; lot 25, Blooming Health 7th was bought by Samuel Stewart for \$200. This was one of the best bred ones, and of a sort that generally sell for good prices where known for their good breeding.

There was one bull calf, Grand Duke 2d, of the same family, that was bought by Mr. Ashburner for \$150, a bargain, no doubt, but with some little risk attached to it, as the calf had been suffering from an attack of diarrhea, brought on by cold, and looked anything but well on the day of sale; it was thought that he would have brought double the money if he had been in blooming health, such as we hope to hear of him being in soon, under the judicious care of his present owner.

The 52 head sold for \$5225, a fraction over \$100 apiece—not quite as much as they were expected to bring, we believe; but, as the Colonel said in talking over the results of the sale, "the good things sold well, the lower priced ones not so well." However that may be, we heard of one of the largest buyers of the high-priced ones having sold 10 head at a profit before breakfast next morning to a person who had not seen the animals separately and individually—another proof of the truth of the saying: "Well bought, half sold."

Whether Mr. Dunlap will venture on bringing more Shorthorns from Illinois or any other State noted for its good cattle we did not hear, but we are glad to see the number of good cattle and the inquiry for such on the increase, and

whoever brings them here or breeds them is, in a certain sense, a public benefactor just as much so as the much-bepraised man who makes two blades of grass grow where only one grew before.

An Early Peach.

Many early peaches have been introduced, all laying claim to be superior to the "Alexander," such as Amsden, Brice's June, Gov. Garland, etc., but which, upon comparison, do not come up to the first named in quality and are no earlier in ripening.

A chance California seedling has been found called the "Ulati," which really does seem to be what the fruitmen in the early sections have been looking for. The Alexander must be picked very green, before it is fully grown, to stand very long shipments, but the "Ulati," which Mr. Leonard Coates of Napa is introducing is of much firmer quality, besides being larger and handsomer, and it ripens a little earlier.

Specimens were left hanging on the parent



AN EARLY PEACH—THE "ULATIS," A CALIFORNIA SEEDLING.

tree this year until dead ripe, when they were still firm and solid. Mr. Coates has reason to be proud of introducing so promising a fruit to the orchardists of California, and it would seem that in time seedling fruits originating in the State will supersede most of the older known varieties.

The Wool-Growers.

We publish upon another page some emphatic utterances by woolmen upon the proposition to put wool on the free list. It is evident that the wool interest will make a very strong appeal to Congress not to throw down the bars which even now afford but a slight protection to this industry which gives a livelihood to so many people. Since the date of the meetings to which we allude the telegraph has brought tidings of other meetings and other measures to avert the evil. At Salt Lake, on December 12th, the Chamber of Commerce authorized the chairman of its Wool Committee to call a general meeting of representatives of that industry for the discussion of the interests involved and for the preparation of resolutions. It was stated that the Idaho wool-growers would co-operate with the people of Utah in sending a delegate to Washington to protect their interests, and would gladly pay half the expenses. It is reported that the meeting was one of the largest ever held in the Chamber of Commerce, all classes realizing that free lead and free wool mean a dire blow at two of Utah's material industries.

The Potato Supply.

We have already alluded to the prospective potato shortage at the East and the likelihood that all which can be spared from this State will probably be taken at good prices if freight rates favor such shipment. Unfortunately our own crop was not large, so the amount to be spared from it will probably not cut much of a figure at the East. It is quite feasible, however, to turn out some fine new potatoes which will strike the Eastern market just when they will do most good to the growers.

To show just how great a decline there has been in this year's production, we give the figures of the total crop of the country for the last ten years, as stated by the statistician of the Department of Agriculture at Washington:

Years.	Bushels.
1879	169,000,000
1880	168,000,000
1881	109,000,000
1882	171,000,000
1883	208,000,000
1884	191,000,000
1885	175,000,000

1886	163,000,000
1887	134,000,000

Thus it appears that the product is shorter than any year except 1881. Pancoast Griffith of Philadelphia writes us that the short crop of the present season was largely of poor and un-keeping quality, and therefore will not equal the winter and spring supply here of 1881, which goes to confirm their previous prediction that potatoes should sell unusually high at the East this winter and next spring. The price in 1881 in Philadelphia ranged from 90 cents to \$1 per bushel, or \$1.50 to \$1.65 per cwt. This is not very high, and would hardly warrant carriage overland except at severely cut rates; but probably for a good California potato in the spring a better price could be had. The subject is interesting, at all events.

CHANGE OF FORESTRY COMMISSIONERS.—Hon. James V. Coleman has resigned his position on the State Board of Forestry, in order to devote his attention to private business, and the Governor has appointed John D. Spreckels to fill the vacancy. Mr. Coleman has been an earnest and active member of the board, and will be greatly missed by his late associates, Messrs. Kinney and Bettner.

DRIED BLACKBERRIES.—The picking and drying of blackberries is quite an important industry in the Piedmont section of North Carolina. The Chicago Herald says that a single firm in Greensboro lately shipped 18,000 pounds in one day to markets at the North.

QUERIES AND REPLIES

Killing Gophers.

EDITORS PRESS:—Will planting castor beans clear the gophers out of an orchard? If not, what are the successful methods?—SUBSCRIBER, Newcastle.

We have often heard of the castor-bean gopher-scourge, but only recall one case in which the writer declared on his own experience that it was effective. If it is, we should like to know it.

Scores of gopher remedies have been given in our columns during the last few years; perhaps it will be of value to many new readers to have brief statements of various methods of destruction. We therefore make the following compilation:

Wrap three or four grains of poisoned wheat (such as sold by druggists) in a Malva leaf and place the same in the gopher holes. A little strychnine, powdered and placed upon a slightly moistened leaf of Malva, will answer equally well. An orchardist of experience says he has succeeded this way in catching the old ones, which are too wary to be caught with traps.

Take plump raisins, open them part way at the stem end, and with the blade of a pen-knife drop in a little strychnine, close them up and drop in their holes. This is no doubt effective, but we have always feared to use it in a garden where children are running about, because if the gopher should happen to throw it out, the raisin is such an inviting object to a child that we have feared the consequences. We have had good success by using pieces of apple, cutting away all the skin, so that if it should be thrown out the moist piece would be covered with dirt and not look inviting to a child. A raisin having a dry exterior would not collect dirt, and would appear in all its charm if lying on the ground. Where there are no children about we would use raisins.

I never allow a day or two to go by without having the man go through the orchard with poisoned wheat in a bottle, with a spoon, and every hole he finds he reaches in the hole, as far as the spoon can go, a spoonful of wheat, and marks the place. We sometimes use poisoned carrots, leaving two pieces in each runway, one each side of the opening made. We have lost no trees for a year or two back.—T. C. De Long.

I consider the simplest and most efficient remedy to be the poisoned carrot, cutting the carrot up in small pieces and then putting poison and rhodium oil on it; I have never known the gopher to refuse it.—R. J. Trumbull.

Take a round-pointed stick and shove it in the ground near the gopher mounds until it strikes their trail, then put in a lot of poisoned wheat. Close up the hole with some grass, level down mounds, so if it don't kill all the gophers you will soon discover their new mounds. If there are many mounds I put the poison wheat in a number of places. I have kept them out of 25 acres of alfalfa with little expense for years in that way.—Franklin Ritter.

Take a piece of carrot; make it round about the size of a walnut; cut it into halves; pulverize some strychnine upon the back of a plate with a table-knife, very fine; spread it on each half to the outer edge; very little will do; put the halves together and run a piece of wood, skewer fashion, through them to hold them together, and roll it down the gopher hole. If you get tired of waiting to catch a hole open, open the last one closed up with a large spoon. This dose is a dead shot. I had a patch of carrots, and it attracted all the gophers in the neighborhood; but the runs are so full of dead gophers that I can't induce one to call upon me now. I have not seen a sign for weeks.—G. W. T. Carter.

Carbon Bisulphide.

Take old rags and make them into balls of about one inch in diameter (not tied very tight). Then take a flexible rod—a plum or cherry sprout is as good as anything, two or three feet in length. Split one end of it far enough back to open and hold a ball in the split end. Then dip the ball thus held in the bisulphide, which for the convenience of using should be poured into some open-mouthed vessel. As soon as the ball becomes saturated lift the rod with the ball attached carefully from the fluid in the vessel, letting it drain a moment. Then insert it with the aid of the rod, as far into the squirrel hole as convenient. Then suddenly withdraw the rod and the work is done. Repeat this process with all the adjacent holes. Stop with damp earth and stamp down. In this way a pound of the fluid may be effectually extended to 50 or 60 holes.—Wm. C. Blackwood.

Smokers.

Since the handy bellows for blowing smoke into gopher holes have been introduced, many have come to rely upon them for gopher destruction. We know orchardists who assured us not long since that they considered the smokers the solution of the gopher problem.

Trapping Gophers.

The most favorable time for trapping gophers is during the rainy season and in summer before

the ground becomes dry and hard. In order to trap gophers successfully a liberal supply of common sense and patience is very essential to the trapper. In the first place, the habits of the gopher must be studied and learned. It is well known that gophers come to the surface in the night, and generally close their holes in the morning soon after daybreak. They frequently emerge again about noon, and a third time late in the afternoon. It is best to set the trap in an open hole, as the gopher will be sure to return to fill it. Still the holes may be opened if the dirt is still fresh, with a good prospect of the gopher's return. Therefore the trapper may make his rounds three times a day, as above indicated. In the second place, care should be exercised in preparing the hole for the insertion of the trap. The trapper should assure himself that he has found a straight hole for a distance of at least 10 inches, with no lateral branches, otherwise the gopher in pushing out the dirt will likely enough thrust the trap to one side, cover it up or spring it without being exposed to its grasp.

In the third place, the trapper should be supplied with at least two varieties of traps—one for the larger gophers and the other for the smaller ones. The common iron gopher trap, which springs downward, is excellent for the former, and the small wire trap, which springs upward, is generally successful with the latter. It is taken for granted that the size of the hole is indicative of the size of the gopher. Either trap should be inserted nearly its full length into the hole, pressed down firmly, and a little dirt piled at the outer end to prevent its being easily pushed out. After the trap is set it is well to cover the opening with some grass or weeds. Sometimes the holes require a little enlarging, but care should be taken to make the fit as close as possible, that the body of the gopher may be kept near the center, and thus more exposed to the prongs of the trap.

In the fourth place, the trapper should have a small spade and a little gouge-shaped implement for trimming the hole.

Gopher Pitfalls.

"About the 1st of June, when grass and grain are drying up, the little animals go foraging on the surface during the night, and must be provided against. This I did very successfully by cutting around the tract a smooth ditch, the width and depth of the blade of a spade. At intervals of 50 yards or more, I sunk a hole in the bottom of the ditch, and placed in it an old five-gallon coal-oil can, leaving the mouth open, and level with the bottom of the trench. The first morning I took 39 out of the cans, and averaged 20 to 30 every morning, until the neighboring cats took them out as fast as they got in. I then soon got rid of those inside the tract. The ditch must be kept clean, and if any roads cross the tract, set up a board at night, to compel them to tumble in the ditch."—H. W. Crabb.

HOW THE FISH GOT THERE.—The Truckee Republican suggests the solution of a problem referred to by one of the RURAL's correspondents some weeks ago. It may be remembered that the water from a hot artesian well in Sierra valley, after flowing a short distance, had formed a small pond where before there was only a dry depression in the ground without communication with any other stream of water, and that a short time after the formation of this pond numbers of small fish were to be found in it. The query was how they got there, or how was the spawn deposited, it being unreasonable to suppose that they came from the well, for they would have been cooked, and fish spawn cannot retain any vitality in dry ground. The question admits of but one solution, namely, this: Most of the brook minnows lay their eggs upon water-grasses and other aquatic plants. Their eggs being glutinous, adhere to the grass and other plants, mostly near the surface of the water, and wild duck swimming among them gather large quantities of the eggs upon their feathers. There are some varieties which feed mostly at night, visiting small ponds and even temporary large mudholes. Impregnated fish eggs are thus transferred in their feathers and become detached in whatever water they alight. The streams of Sierra valley are full of minnows and it is also a great resort for ducks. It is highly probable that ducks visited this newly-formed pond with fish eggs on their feathers and thus stocked the pond with fish.

AGRICULTURAL DIRECTORS APPOINTED.—The Governor issued commissions on the 8th inst. as follows: H. C. Ransome of Del Norte and G. C. Barber of Humboldt, directors of Agricultural District No. 9; Geo. H. Bragg of Santa Clara, J. R. Weller of Santa Clara, directors of Agricultural District No. 6; P. Plumey of Alameda, Samuel Ganble of Contra Costa, George Bement of Contra Costa, directors of Agricultural District No. 1; M. L. Marsh of Nevada City, a member of the District Board of Agriculture for District No. 17, vice George L. Threshkill, term expired; also, J. W. Thompson of Quincy, Plumas county, and J. J. Reavis of Bieber, Lassen county, members District Board of Agriculture No. 11.

MEXICAN ORANGES FOR CHICAGO.—A Guaymas dispatch speaks of the orange exports from Hermosillo and Guaymas as very important, three different American parties having bought the entire crop, which amounts to 40 carloads, one-fourth being from Aranjuez, the most celebrated orange grove in Sonora. The exports are mostly for Chicago.

ENTOMOLOGICAL.

Other Washes for Scales.

Last week we gave the first part of a bulletin issued by the State Board of Horticulture, giving washes for scale insects. The following are additional remedies for scales and for other pests:

Peach Moth—(Anarsia Lineatella.)

The first brood of worms bore into young limbs of peach trees, the second into the fruit. The bulk of the pupæ evidently harbors in the ground. Dusting with gas lime, in about the same manner as for woolly aphis, might prove a remedy. Any infested limbs should be cut off and burned, and no hiding-places for them allowed. It is in the spring that they show their work most plainly, by the withering young shoots. These must be cut off and destroyed. Spraying during winter with any of the winter washes is recommended, as it has been found that since spraying of peach orchards for the purpose of killing scale insects, much less of the moth has been seen.

Codlin Moth.

The fighting of this insect must be principally done in the spring and summer, the line of defense being indicated in my report. The winter work must consist in reducing the hiding-places of the cocoons. As these are often found many inches below ground, the soil around the tree should be removed and the bark scraped. If the trunk has very rough bark, it also should be scraped; and if it is covered with lichens or moss give it a spraying with a weak solution, the strength of which is indicated above.

Woolly Aphis.

Gas lime (used with moderation), the refuse from gas works, is both a lasting destroyer of the insect and a fertilizer. Use from 1½ to 2 shovelfuls of fresh gas lime per tree, spreading it over the surface around the tree to cover about six feet in diameter. If the soil is deep and well-drained, a much larger quantity may be safely used. Care should be taken not to pile the gas lime around the neck of the tree, as the solution of gas-water formed by the rains might scald the bark. To prevent possible migration from the roots to the upper branches, place a shovelful of fresh ashes around the base of the tree. The dressing with gas lime should be done as early as possible, so that the rains may have full effect on it and carry it into the ground. For the form of woolly aphis infesting the top, the daubing of kerosene on the infested knots is a fair remedy; also the following rosin solution, originally recommended by Prof. C. V. Riley: Four pounds of rosin, 3 pounds of sal soda; water to make 36 pints. Dissolve the sal soda in a few pints of water. When thoroughly dissolved, add the rosin. Heat until dissolved, and add water finally. For aphis use 1½ pints of solution to the gallon of water. Use at a temperature above 100° F.

This remedy has also proved an excellent one for the plum aphis, and is applied in spring, as soon as the aphis makes its appearance.

A Summer Wash.

Recommended by Sol. Runyon of the Sacramento river for scale-insects on deciduous trees—sprayed on fruit.—Ingredients for one barrel of 50 (measure) gallons: Weight about 450 to 500 pounds: 10 pounds caustic soda, 98 per cent; 10 pounds potash; 40 pounds tallow; 40 pounds rosin. First—Dissolve the potash and soda in 10 gallons of water. When dissolved, place the whole amount in the barrel to be used. Second—Dissolve the tallow and rosin together. When dissolved, add the same to the potash and soda in the barrel, and stir well for five minutes or so. Leave standing for about two hours; then fill up with water, stirring well as every bucket of water goes in. Use the following day, one pound to the gallon of water; apply warm.

Lime, Sulphur and Salt.

The following remedy was highly recommended by the Tulare County Horticultural Commissioners, who claimed that they had obtained better results with this than from the use of caustics: 25 pounds of unslacked lime, 20 pounds of French sulphur, 15 pounds of common salt. To mix the above take 10 pounds of lime, and 20 pounds of sulphur, and 20 gallons of water; boil until the sulphur is thoroughly dissolved; then take the remaining 15 pounds of lime and 15 pounds of salt; slack the lime, and add enough water to make the whole 60 gallons.

A Similar Remedy.

In this connection we publish a similar remedy, said to have been first used by Mr. A. T. Covell of Fresno county. Mr. Covell's remedy is: 50 pounds of unslacked lime, 20 pounds of French sulphur, 15 pounds of salt, prepared as follows: Place 10 pounds of lime and 20 pounds of sulphur in a heater with 20 gallons of soft water. Boil for half an hour or more, until both lime and sulphur are dissolved. The sulphur must be thoroughly dissolved and mixed with the lime; the mixture will then be of an amber color. Next place in a cask or box 40 pounds of good lime and pour upon it enough soft, hot water to thoroughly slacken the lime and keep it in a liquid form. After the lime is thoroughly slacked, add 15 pounds of common stock salt while the material is hot. When the salt is well dissolved mix the two lots together, with sufficient water to make 60 gal-

lons of spraying material, which will then be a thin whitewash. The material should be strained after being thoroughly mixed—a good piece of burlap answering well for the purpose. Apply the mixture with a spray pump, using a rubber plate in the nozzle instead of the brass plate.

Notes from a Texas Reader.

EDITORS PRESS:—It has always been my desire to visit your State, but as circumstances would not admit, I have contented myself with subscribing for your paper. As there is a great similarity between the climates, your paper is especially valuable here, for every one that can irrigate does so. I only have a small piece of ground that I can irrigate, but your paper has been a cheap investment, because I have to learn from the experience of others whose whole interest depends on it.

Hardy Vines.

I have tried 32 different kinds of foreign grapes, and so far have found but two that will stand our late frost with impunity. One is called the White Calable. It may be of interest to some one to know what it will stand here. One year it put out and set a fruit in the middle of March. There came a freeze (not a frost) and killed out all I had but this one. I had the Mission vines five years old, doing well, the main stems being two inches in diameter. The White Calable it only killed off the green wood and the vine put out again apparently as pretty as ever. In April there came a frost and killed off this crop, but to my astonishment it and the Black Spanish put out again. It seemed to me that the crop that set again matured better fruit than ever, for some bunches weighed over two pounds, the best I ever got. While the Black Spanish is just as hardy, the fruit won't stand much wet weather. Irrigate with limestone water, hence my land gets so heavily charged with lime that some varieties won't grow at all.

Cactus Fodder.

In your issue of November 26th I read the piece headed "Cactus Fodder" with much interest. You ask for experience from some one that has fed it to stock. I have been feeding the prickly pear 10 years, and I can tell you in any region that is subject to severe drought like this it is hard to beat for milk cows—if it is used right. I go out in bad weather and build up a fire and burn the stickers off a lot, and pile them up where they are handy to get at. I would recommend scorching them thoroughly, as it checks that tendency they have to relax the bowels too much. In feeding my cows I give each a washpan full of cottonseed: ditto bran; and then I cut up with a butcher-knife a five-gallon bucket full of prickly pear. I give this night and morning. Sprinkle a little salt over the green pear. If anyone reads this who has nothing green to feed to his milk-stock, just try it and see for yourself the difference in the yield of milk. I think enough of the cactus to plant them out in all of the out-of-the-way places. I throw a leaf down and throw a shovelful of dirt on one end and it takes root. This feed is not good alone. Double the quantity of bran is just as good as the cottonseed. I have a cow that has acquired such a taste for the cactus that she will go off and eat them fresh with the stickers on. She gets her mouth so full of sticks that she can't shut it; she has done this for three winters. I don't see that she looks any the worse for it.

Texas.

From the way people are pouring into your State it does seem to me that they will have to swarm, and, as Texas is the only State where they can get good cheap lands, I think we may soon look for a boom here, for it is going to rain again here, and when we do make a crop here we make it all. I like to read in your paper of the great yields of your soil, and it may be of interest to some of your readers to know what we can do here, for this drought has been greatly exaggerated. My neighbor, who never fails to raise small grain, raised one year 52 bushels of wheat to the acre, and some of them on choice land make 90 bushels of corn to the acre. There was one year that my bees did so well that I thought I would put the best stand I had on the scales to see how much they were bringing in each day. That stand increased until it brought in 15 pounds of honey in one day. The bees were working on horse-mint mostly, and the honey after getting fully ripe is quite good enough. Horse-mint is the best honey plant we have here, but this year it was so unusually dry that I don't think I got anything but Mesquit honey, which only comes in these extreme droughts. When I used to attend a vegetable garden, I have sold many a cabbage for 50 cents each. I never could supply the demand for strawberries at 50 cents a quart and other things in proportion. I have raised the Sharpless strawberry that measured over five inches around.

As you are all ahead in most everything, I sent some pecans to a man in your State, who had 10,000 pecan trees that he planted. I sent him some samples of mine, asking him if he had anything better to return the compliment. He wrote me he did not have anything so good, but if I would send him some grafts off that tree to send the bill with it. Respectfully yours,

E. E. RISSEN.

San Saba, Texas.

Santa Cruz and Environments.

EDITORS PRESS:—Much as I had previously heard of the attractions of Santa Cruz as a place of resort or permanent residence, a visit to the place in person was necessary to a full realization of its just claims. It is a lovely place. Even the inclemency of the weather during my stay of three days at the opening of the present month was not enough to conceal its charms, though naturally things could not have so bright an appearance to the stranger as they would present under glowing sunshine. The city contains a permanent population of about 5000, and during the summer season a transient population of 1000 or 2000 more, who come to bathe in the placid bay, and recreate in the elysian atmosphere that perpetually hangs over it during the season. The engraving on the opposite page shows the appearance of the beach during the season. As one would expect in a place chosen for residence, it contains many really elegant homes, and even the less pretentious dwellings are almost invariably surrounded by beautiful grounds ornamented with a great variety of flowers and shrubbery.

The principal street, Pacific avenue, being covered with asphaltum, affords an excellent drive at all seasons.

The assessable property of the city, as obtained from the assessor's books, is \$2,049,359 net, which, taking into consideration the fact that but little manufacturing is carried on, is not a bad showing.

The Development Association of Santa Cruz, composed of some of the most wide-awake and enterprising men of the city and county, is doing a good work in bringing to the knowledge of the outside world the wonderful undeveloped resources of Santa Cruz county. To the courteous and efficient secretary, I. H. Raymond, I was placed under many obligations for favors while staying there. The people of Santa Cruz owe it to themselves to do all in their power to encourage this association by which they are so ably represented.

On my way to Santa Cruz by the coast road from San Mateo, I had occasion to visit many fine dairy farms, among the most extensive of which was that of G. P. Laird of Davenport, consisting of 2600 acres with barns, dairy and outbuildings in keeping with the size of the place, upon which the proprietor maintains 200 head of good dairy cows.

We spent Monday night with Mr. Dingwall, proprietor of Davenport hotel, Davenport. Mr. Dingwall has the faculty of making his guests feel at home. Davenport was, some 20 years ago, one of the liveliest places along the coast between Frisco and Santa Cruz, being a shipping point for a considerable section of country, the commodities being lime, lumber, and tanbark. The decline in such industries took place about ten years ago, but there are yet visible many signs of the business activity of that period, and doubtless when the coast railroad is built, which is but a question of time, Davenport will again figure prominently as a business center. The inexhaustible supply of lime rock in the neighborhood will some day prove an immense source of wealth to the country.

The San Vicente ranch, two miles from the landing, has an extensive supply of rock from which large quantities were shipped in former years. This tract of land is owned by Reese, Davis & Co. of your city.

On Saturday morning, the 3d inst., the weather presented some tokens of clearing up, and I concluded to drive up into the Ben Lomond settlement to obtain some facts of interest to your readers regarding the fruit-growing and wine-making industries for which that section is becoming favorably known. Following what is known as the Empire Grade, the first place that attracted my attention as worthy of special notice is the fruit farm of P. T. Stribling, four miles from town. This gentleman has an orchard of 20 acres of the choicest varieties of fruit, samples of which I examined, and must say were fully equal to the best I have seen throughout my travels of the season. The elevation of Mr. Stribling's farm is 1000 feet, and seems to be a favorite region for oranges and lemons. One orange tree to which I paid particular attention, four years from the seed, contained 25 fine, large oranges. Some months ago a quartz ledge, specimens from which assayed \$75 per ton, was discovered on Mr. Stribling's farm, and now the proprietor has a five-stamp mill in operation, and some startling developments therefrom are not among the improbabilities of the future. This prediction is not based upon a superficial foundation, from the fact that in the early fifties there was a boulder discovered a short distance from here from which over \$40,000 was obtained. The lucky discoverers were Mr. F. A. Hihn and others. The former gentleman now ranks as the richest man in Santa Cruz county.

Mr. A. G. Rose, adjoining Mr. Stribling, has also a very fine young orchard of about 35 acres.

The next gentleman we called upon was Mr. Geo. W. Peterson, who is also extensively engaged in fruit-growing.

Thence 1½ miles, still up-grade, I come to the Ben Lomond Wine Co.'s vineyard and winery, of which J. F. Coope, Esq., is a shareholder and the manager. Darkness had now set in and I accepted with alacrity Mr. Coope's kind invitation to dine and remain over night. The next morning I was shown through the wine-cellar,

which contains 30,000 gallons ready for shipment, the product of this year. Mr. Coope has here 70 acres in vines, 30 of which are in bearing. The company own 500 acres of good land here, which they are planting to vines as fast as it can be cleared. Everything about the place is done after the most approved system. The land even is cleared by steam. The apparatus for grubbing is the invention of Mr. Coope. He pulls up the trees of 10 acres without removing the machine or engine. A tree four feet in diameter is lifted out of the ground in the incredibly short space of three minutes. His wine-house also displays like skill and ingenuity in its arrangement. It is built on the slope of a slight hill, the ground on the upper side of the building being even with the second story, so that the wine grapes can be unloaded on the second floor, and the barrels in the lower story can be filled from the vats above with the least possible labor. Then when it comes to shipping, three tons of wine are loaded in 10 minutes by means of an elevator, requiring but two men to operate it. Mr. Coope makes the Riesling wines a specialty. Besides what is grown on the company's farm, all the wine grapes of the settlement are purchased and made into wine at the Ben Lomond winery. This elegant vineyard, though 2500 feet above the sea, and being within a few feet of the very summit of the Coast Range, is fortunately blessed with an abundant supply of good water—an important factor in the successful production of good wine. A reservoir containing 120,000 gallons of water stands just above the winehouse.

An hour before sundown the rain, which had been falling almost incessantly for 36 hours, ceased, the clouds suddenly vanished, and the sun shone forth in all his glory. Without the least exaggeration, I can say I never beheld a richer scene than lay before me. Standing upon the very summit of the highest mountain within 20 miles, I gazed in profound admiration upon a panorama more magnificent than seemed pos-

sible for an artist to produce on canvas. To the south and west five miles, but seemingly only a few steps below my feet, lay the shining waters of the Pacific. Southeast 10 or 12 miles distant was spread out the beautiful city of Santa Cruz. Eastward towered 1500 feet above me Loma Prieta, and a little farther to the left could be distinctly seen Mt. Hamilton, crowned with the Lick observatory, the brass mountings of which glittered in the effulgent

THE VETERINARIAN.

Is It Anthrax?

EDITORS PRESS:—It must be evident that when careful and thorough details are not given, it is impossible for a veterinarian to say positively the cause of death. "Subscriber"

it is necessary to personally examine the post and ante-mortem. It looks very much like that disease termed "anthrax." And I would advise the owner to be careful to satisfy himself whether it is or not, because this ailment is a dangerous malady and is extremely likely to affect the other live-stock. In a previous issue of the RURAL may be seen a long letter, in reference to cremation of animals affected with anthrax, and other matters relating to the disease generally. The fact of two animals having died points to the probability of some disease affecting all the animals. Let "Subscriber" pass his hand over the skin of the remaining affected animals, if any, and if he notices a crackling sensation, it indicates, to some extent, the above-mentioned disease. Then let him take some of the blood and examine it under a microscope; or, if not accustomed to the use of that instrument, it would be well to get some physician or some one understanding the affair to manipulate. To one having once seen the "bacillus anthracis," he will easily recognize them. Lameness in one limb, especially the hind quarters, is somewhat diagnostic of anthrax. Make inquiries, also, as to the previous history of the animals, as to whether any diseased cattle have been buried in the pastures where they have been fed. Let "Subscriber"



SCENE ON THE BEACH AT SANTA CRUZ IN THE RIGHT OF THE SEASON.

rays of the sun. Then the stately redwoods, clothed in evergreen foliage, studing the sides and crowns of the hills on every side, interspersed with neat homesteads, vineyards and orchards, was, taken all in all, truly a soul-inspiring picture to behold, and well worth all the vexation I experienced the day before in wearily dragging through the mud 15 miles up-grade with the rain beating me mercilessly in the face and causing me to almost wish I had been born on another planet or not at all.

L.

THE 17th District Agricultural Association's fair-grounds and other property were sold by the sheriff, December 8th, to satisfy a mortgage.

says that "he found a young steer dead, without any apparent cause; last evening another came home lame in the left shoulder; this morning it died. When the hide was removed, the shoulder was swollen, the blood of vessels covering the fore leg seemed to have ruptured, causing blood to be diffused all through the muscles of the fore leg, the muscles under the belly were in same condition, as was stifle joint of right hind leg. The heart and arteries leading to it were charged with clotted black blood. What is the disease? Is there a remedy? If so, what?"

These particulars are much more explicit than are usually given in such cases. But, of course, to make a correct and certain diagnosis,

make further inquiries, and let me know, and we shall be pleased to afford any further answers to question.

ROBERT J. DAWSON, V. S.

225 Geary St., S. F.

THE Stock-Growers' Journal says that Herefords endured the horrors of last winter in Montana better than any other bulls. When a bull was found in the round-up he was sure to have a white face.

PROF. SAMUEL PIERPONT LANGLEY, LL. D., has been chosen secretary of the Smithsonian Institution, in place of the late Spencer F. Baird.

Music Books for Young and Old.

No nicer book has appeared for a long time than **Songs & Games for the Little Ones**

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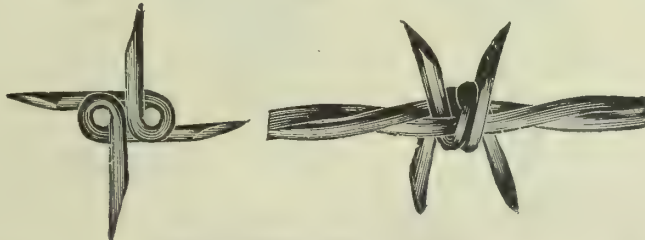
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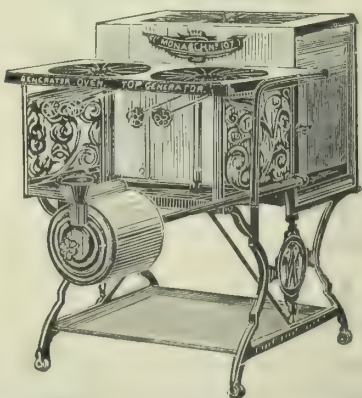
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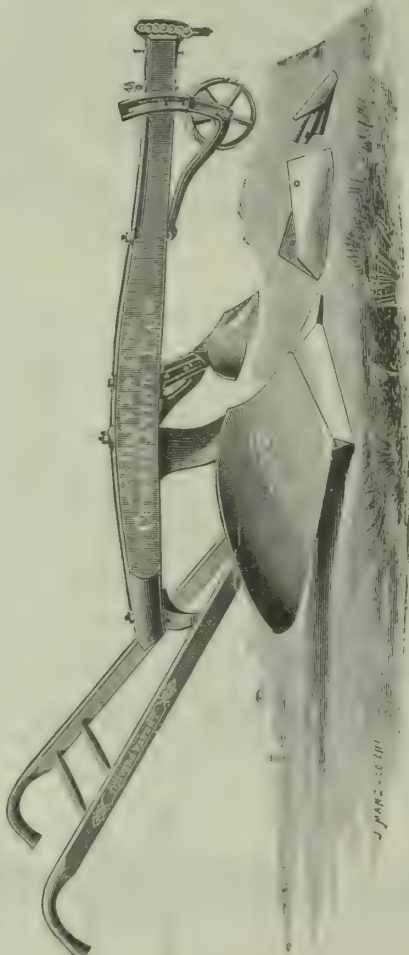
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PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.]

DATE.	Portland.				Red Bluff.				Sacramento.				S. Francisco.				Los Angeles.				San Diego.			
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.
Dec. 8-14.																								
Thursday.....	.34	42	S	Cy.	.04	52	Nw	Cy.	.10	50	N	Cy.	.19	49	Nw	Cy.	.00	64	SE	Cl.	.00	62	E	Cl.
Friday.....	.68	50	S	Cy.	.01	54	Nw	Cy.	.00	50	Nw	Cy.	.03	54	N	Fr.	.00	66	S	Cl.	.09	62	W	Cl.
Saturday.....	.14	50	S	Cy.	.00	60	N	Fr.	.00	50	N	Cl.	.00	55	NE	Cl.	.00	72	W	Cl.	.00	64	Nw	Cl.
Sunday.....	.26	48	S	Ry.	.00	48	Com	Cy.	.00	52	S	Cy.	.00	57	N	Cy.	.00	68	SW	Cl.	.00	72	NE	Cl.
Monday.....	.28	50	S	Fr.	.19	56	N	Cl.	.16	50	N	Cy.	.04	54	N	Fr.	.00	68	SW	Cl.	—	—	—	—
Tuesday.....	.01	42	Nw	Cy.	.00	58	N	Cl.	.00	56	N	Cl.	.00	63	N	Cl.	.00	70	NE	Cl.	.00	64	N	Cl.
Wednesday.....	.00	46	S	Cy.	.00	62	N	Fr.	.00	52	SE	Cl.	.00	61	SE	Cl.	.00	64	SW	Cl.	—	—	—	—
Total.....	1.71				.24				.26				.26				.00				.00			

EXPLANATION.—Cl. for clear; Cy., cloudy; Fr., fair; Fy., foggy; — indicates too small to measure. Temperature. Wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

Time for Settlement.

Before the new year savings in upon our circle we hope all old subscribers who have been indulged with credit on our books will honor our confidence, square up the record on our large mail-list, and make things lovely with the publishers by payment for another 12 months in advance.

We intend that our old friends shall patronize a still better journal for 1888, although we have not been lacking in enterprise and costly efforts for our readers in the past.

If you cannot keep ahead in your accounts with every one, let the publisher, who furnishes food for the mind and soul—the highest qualities of manhood—be the first, rather than one of the last, to be paid; yet the very last rather than one of the first to part company with if, perchance, economy forces you to sever relations with any old providers.

The late expensive improvements made in issuing our journal in its present style, together with the approach of the new year, and further betterments for the benefit of our readers, renders it important that all pay up arrearages and remit in advance for 1888.

Please do not wait for further notice or louder calls, friends. Can you not afford to owe any business man in preference to an editor or publisher? You cannot, however, dispense with any other desirable article with so irreparable a loss as a good newspaper.

Dec. 3, 1887.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING DECEMBER 6, 1887.

- 374,334.—BLOWER FOR STOVES OR GRATES—O. J. Backus, S. F.
 374,339.—STEAM THRASHER—Geo. S. Berry, Visalia, Cal.
 374,520.—DRIER—C. F. R. Caspari, S. F.
 374,397.—CUTTERS FOR REAPERS—L. W. Clark, Albany, Ogn.
 374,456.—GALVANIC BATTERY—F. J. Crouch, Eugene City, Ogn.
 374,176.—GRATE—F. H. De Guerre, S. F.
 374,178.—CLUD-CRUSHER, ETC.—Donoho & Gates, Vacaville, Cal.
 374,483.—AX—C. Maloney, Lower Lake, Cal.
 374,489.—HAIR TONIC—J. S. Moore, Corvallis, Ogn.
 374,373.—R. R. DANGER SIGNAL—Quinn & Crossley, Daggett, Cal.
 374,556.—STOVE—R. A. Rew, Pomeroy, W. T.
 374,378.—DAM AND RESERVOIR—Harriet W. R. Strong, Los Angeles, Cal.
 374,330.—STAY-SAIL HANK—J. O. Wikman, Eurcka, Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates and in the shortest possible time.

W. R. STRONG & Co. have issued their catalogue of seeds, plants and nursery stock for the winter of 1887-8 in a handsome illuminated cover, which is beautiful in design and expressive of the growths and horticultural industries of the State. The planter will find a great variety of things suited to the different parts of this State, and its pages should be studied.

FELIX GILLET of Nevada City sends us his new catalogue, which shows that he is progressing well with the especial line of nuts and fruits for which he has secured a name all over the State and beyond. Mr. Gillet prepares his catalogue with great care and readers find much practical information in it aside from his business announcements.

INVITATIONS ACKNOWLEDGED.—We are indebted to Mills College for a cordial bidding to the "Musical and Rhetorical," on Friday evening, Dec. 3d; also to Rev. E. B. Church for a courteous invitation to the closing exercises of Irving Institute, in this city, at 2 o'clock that same afternoon.

STATE BOARD OF SILK CULTURE.—In answer to a correspondent, and for the information of any others who may not know, we state that the office of the State Board of Silk Culture is No. 21 Montgomery avenue, San Francisco.

The Olive as a Standard Tree.

W. M. Boggs, Commissioner from the Napa district, in his report to the State Board of Horticulture, has this to say about the remarks recently published, that the olive should not be trained as a tree, but rather as a bush with extending limbs, so that the fruit may be gathered by hand without bruising: "I will simply say that the method recommended will not be the course that olive growers will pursue in California. The 'dwarfing' of trees in California was extensively experimented on in the earlier days of fruit-tree planting. I should much prefer to follow the advice of such men as Ellwood Cooper, Mr. Pohndorff and Mr. Flamant than to follow or look to a European method or to a European for advice as to the planting and training of trees in California. They will have to come to the California methods of doing the work both in tree culture and viticulture. Our soils are new and not exhausted. Our land is not limited to terraced hillsides and rocky flats. There is no scarcity of land and no necessity for crowding our orchards or dwarfing our trees, and also dwarfing our fruits. The larger and more thrifty our trees the better the quality of our fruits, nuts and oil. Mr. Block of Santa Clara remarked before the board at our last meeting: 'I would prefer the advice and opinion of the American plowboy to one of these foreigners on the cultivation of the soil in America, and as to gathering the fruit, trust to Yankee ingenuity for the rest.'"

A Sure Thing.

There are very few things in this life of which we may be absolutely certain, but this is one of them: that Dr. Pierce's "Pleasant Purgative Pellets" have no equal as a cathartic in derangements of the liver, stomach and bowels. They are very small and their action is pleasant. Purely vegetable, perfectly harmless. 25 cents a vial. All druggists.

To Consumptives.

Reader, can you believe that the Creator afflicts one-third of mankind with a disease for which there is no remedy? Dr. R. V. Pierce's "Golden Medical Discovery" has cured hundreds of cases of consumption, and men are living to-day—healthy, robust men—whom physicians pronounced incurable, because one lung was almost gone. Send 10 cents in stamps for Dr. Pierce's book on consumption and kindred affections. Address, World's Dispensary Medical Association, 663 Main St., Buffalo, N. Y.

The Beauty of Woman

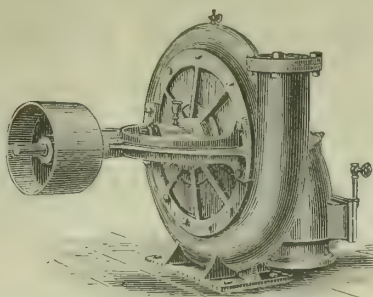
Is her crown of glory. But alas! how quickly does the nervous debility and chronic weakness of the sex cause the bloom of youth to pass away, sharpen the lovely features, and emaciate the rounded form! There is but one remedy which will restore the faded roses and bring back the grace of youth. It is Dr. Pierce's "Favorite Prescription," a sovereign remedy for the diseases peculiar to females. It is one of the greatest boons ever conferred upon the human race, for it preserves that which is fairest and dearest to all mankind—the beauty and the health of woman.

Thorough Cultivation.

One word in regard to the profit resulting from a proper preparation of the soil. And as one example will go farther than a great many precepts, the case of a farmer of Shawnee county, Kansas, may be mentioned. He took especial pains to make the soil compact for his wheat sown in October. At the harvest in July he thrashed out 56 bushels and 30 pounds per acre of wheat weighing 61 pounds per bushel. And no doubt the majority of farms in the United States are fertile enough to produce as much as this, if the crops were not damaged through the poor mechanical preparations of the ground against which manure or natural fertility cannot prevail. The average yield of wheat is 15 bushels to the acre. No doubt with perfectly prepared soil this yield would be double. What then is the actual value to the farmer of an implement that is perfectly adapted to this requisite preparation of the soil, such as the "Acme" Pulverizing Harrow, Clod-Crusher and Leveler has proved itself to be beyond all question of doubt.

A prominent agricultural writer, who is a practical farmer, after demonstrating clearly that an increase of five bushels of winter grain may be obtained with one dollar's worth of extra pulverization of the soil (a net increase in money value of \$4 per acre above cost), says: The great benefit conferred on farmers by a general introduction of the "Acme" Pulverizing Harrow, Clod-Crusher and Leveler becomes obvious.

ZANTE CURRANTS.—We have received a very beautiful little souvenir box of Zante currants from Mrs. J. W. Pew of the Mirabelle vineyard, Fresno. The currants are as good a sample as we ever saw produced in this State, excellent color and flavor and clean. The style of packing is excellent. Such a product must become a favorite in the market.



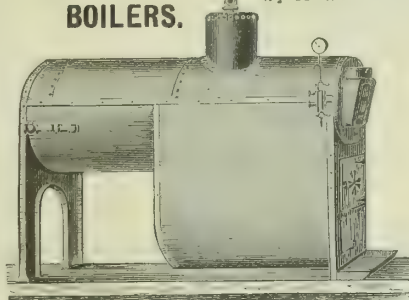
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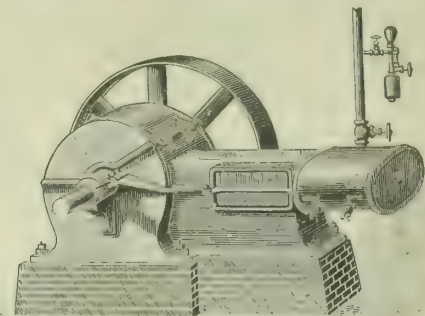
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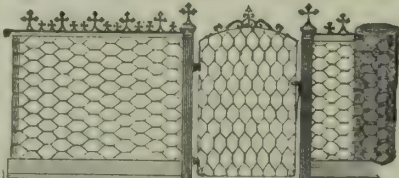


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NOBEL'S GELATINE-DYNAMITE,
Best and Strongest Explosives in the World.
As other makers IMITATE our Giant Powder, so do they Judson, by Manufacturing
a second-grade, inferior to Judson.
BANDMANN, NIELSEN & CO, General Agents, San Francisco.

Farmers and Fruit-Growers, Attention!
To grow large and profitable crops and at the same time to make the farm
better each year, is the problem for the farmer.
FERTILIZE! FERTILIZE!
NITROGENOUS SUPERPHOSPHATE.

UNIVERSITY OF CALIFORNIA, Nov. 3, 1886.
DR. J. KOBIG—Dear Sir: I have analyzed your sample
of "Nitrogenous Superphosphate," with the
following result:
Soluble Phosphoric Acid.....12.90 per cent
Reverted Phosphoric Acid......95 "
Insoluble Phosphoric Acid......2.83 "
Potash.....2.23 "
Ammonia.....1.87 "
Nitric Acid.....2.95 "
The above amount of Nitric Acid is equal to 0.85
per cent Ammonia, therefore, total of Nitrogen calcu-
lated as Ammonia, 2.72 per cent.
This Fertilizer is a Valuable Manure for vine-
yards, orchards, gardens, farms, and I recommend its
use by the cultivators of the soil generally, in Cali-
fornia. Yours truly,
DR. E. A. SCHNEIDER.

University of California, College of Agri-
culture.
BERKELEY, Nov. 20, 1886.

DR. J. KOBIG, San Francisco—Dear Sir: I take pleasure
in adding my testimony to that of Dr. Schneider as
to the high quality of the "Nitrogenous Super-
phosphate" Fertilizer, analyzed by him at your re-
quest. It is a high-grade article, and as such re-
turns the user a better money value than a low-grade
fertilizer. It is especially well adapted to use in
California, on account of the predominance in
it of Phosphoric Acid, which is generally in small
supply in our soils. Yet it is desirable that "com-
plete" fertilizers be used in our orchards and vineyards,
and yours is of that character in furnishing
Potash and Nitrogen as well. Very respectfully,
E. W. HILGARD.

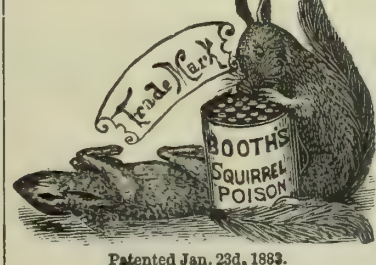
H. M. NEWHALL & CO., Agents, 309

On board cars at Sobrante, Station of the C. P. R. R., 20
miles north of San Francisco, at \$30 per ton, by the
MEXICAN PHOSPHATE & SULPHUR
CO. H. DUTARD, President, room 7, Safe
Deposit Building, or
and 311 Sansome St., San Francisco.

GRANGERS' BUSINESS ASSOCIATION,
SHIPPING AND COMMISSION HOUSE.
OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.
Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL, AND ALL KINDS OF PRODUCE SOLICITED.
Money advanced on Grain in Store at lowest possible rates of interest.
Full Cargoes of Wheat furnished Shippers at short notice.
ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries
and Merchandise of every description solicited.
E. VAN EVERY, Manager. **A. M. BELT, Assistant Manager**

Booth's Sure Death Squirrel Poison
For Squirrels, Gophers, Birds, Mice, Etc.



Endorsed by the Grange and Farmers wherever used.
The Cheapest and Best.
Put up in 1-pound, 5-pound, and 5-gallon Tins.
Every Can Warranted.
This Poison has been on the market less than two years, yet in
this short time it has gained a reputation of "Sure Death,"
equaled by none. By its merits alone, with very little advertis-
ing, it is now used extensively all over the Pacific Coast, as well
as in Australia and New Zealand.
SEND FOR TESTIMONIALS.
MANUFACTURED BY
BOOTH & LATIMER, San Luis Obispo, Cal.
Special Terms on Quantities in Bulk.

\$250.00 Free! Free!
A GREAT OFFER.

In order to extend our list of names, we will put into a box a card bearing the name of each person who sends
us the names and post-office addresses of ten young gentlemen or ladies between the ages of 15 and 25 years, who
would be likely to attend a Business College or Normal School. These names must be sent in before the 4th day of
February, 1888. On that day Messrs. Trask & Ramsey, in the presence of the whole faculty of the Business College
and Normal Institute, will draw out the names of five persons, to whom will be presented the following scholar-
ships. These scholarships will entitle the persons to whom they are issued to instruction in the largest and best
conducted private school on the Pacific Coast.
BUSINESS COURSE, six months, \$50.
SCIENTIFIC COURSE, one year, \$50.
SHORT-HAND AND TYPE-WRITING, 6 months, \$50.
NORMAL COURSE, one year, \$50.
TEACHER'S REVIEW COURSE, nine months, \$50.
CONDITIONS.—Applicants for any one of these five scholarships must be between the ages of 15 and 25 years, and
must not be residents of Stockton.
A person drawing either one of these scholarships can have his choice of either of the five courses of study
named above.
Write your name and post-office plainly, and state which one of the scholarships you are an applicant for.
CATALOGUE FREE. Address,
TRASK & RAMSEY,
Business College and Normal Institute, Stockton, Cal.

An Ingenious Invention
You Can Make Money
WITH THE
Novelty Clothes Rack
An indispensable convenience for the kitchen and
laundry. Send for illustrated circulars explaining
territorial rights in exchange for land.
W. C. AIKEN, St. Helena, Cal.

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Wholly unlike artificial systems.
Any book learned in one reading.
Recommended by MARK TWAIN, RICHARD PROCTOR,
the Scientist, HOBBS, W. W. ARTOR, JUDAH P. BENJA-
MIN, Dr. MINOR, &c. Class of 100 Columbia Law stu-
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of Penn. Phila., 400 at Wellesley College, and three large
classes at Chautauque University, &c. Prospectus Post
FREE from **PROF. LOISELLE, 237 Fifth Ave., N. Y.**

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DALTON BROS.,
Commission Merchants
—AND DEALERS IN—
CALIFORNIA AND OREGON PRODUCE,
Green and Dried Fruits,
Grain, Wool, Hides, Beans and Potatoes.
Advances made on Consignments.
308 & 310 Davis St., San Francisco
[P. O. Box 1936.]
Consignments Solicited.

ALLISON, GRAY & CO.
SUCCESSORS TO
LITTLEFIELD, ALLISON & CO.,
501, 503, 505, 507 and 509 Front Street
and 300 Washington St., S. F.
General Commission Merchants.
GREEN and DRIED FRUITS.
Poultry, Eggs, Game, Grain, Produce and
Wool.

MOORE, FERGUSON & CO.,
WOOL, GRAIN, FLOUR
—AND—
General Commission Merchants,
310 California St., S. F.

Members of the San Francisco Produce Exchange
Personal attention given to Sales and Liberal Ad-
vances made on Consignments at low rates of interest.
GEO. MORROW. [Established 1854.] **GEO. P. MORROW**
GEORGE MORROW & CO.,
HAY and GRAIN
COMMISSION MERCHANTS,
39 Clay Street and 28 Commercial Street
SAN FRANCISCO, CAL.
SHIPPING ORDERS A SPECIALTY.

O. L. BENTON & CO.,
Commission Merchants,
Wholesale and Retail Dealers in
Poultry and Wild Game, 65, 66, 67 California
Market, S. F. All orders attended to at the
shortest notice. Goods delivered Free of Charge to
any part of the city.

WETMORE BROTHERS,
Commission Merchants,
Green and Dried Fruit, Produce, Eggs, Etc.
Consignments solicited. 413 415 & 417 Washington St.,
San Francisco.

EVELETH & NASH,
COMMISSION MERCHANTS
And Dealers in Fruit, Produce, Poultry, Game, Eggs,
Hides, Pelts, Tallow, etc., 422 Front St., and 221, 223
225 and 227 Washington St., San Francisco.

WOLF, BROWN & CO.,
General Commission Merchants
And dealers in California and Oregon Produce,
321 Davis Street, San Francisco, Cal.

P. STEINHAGEN & CO.,
Fruit and General Commission Merchants
BRICK STORES:
408 & 410 Davis St., San Francisco

WITTLAND & FREDRICKSON,
Commission Merchants.
All Kinds of Green and Dried Fruits.
CONSIGNMENTS SOLICITED. 324 Davis St., S. F.

SPRAY PUMPS.
Now is the time to buy. Do not waste money on poor
pumps with leather valves, but buy the "CLIMAX
SPRAY PUMPS," the only pump having all its
parts made of non-corrosive metal, and the very
best Spray Pump in the market.
Send for circulars and prices. Hose furnished to
farmers at wholesale prices.
CAL. FIRE APPARATUS MFG CO.,
18 California St., S. F.

BEST TREE WASH.
"Greenbank" 93 degrees **POWDERED CAUS-**
TIC SODA (tests 99.3-10 per cent) recommended by
the highest authorities in the State. Also Common
Causitic Soda and Potash, etc., for sale by
T. W. JACKSON & CO.,
Manufacturers' Agents,
104 Market St. and 3 California St., S. F.

BADEN FARM HERD
Of Short Horn Cattle and Dairy Cows.
Catalogues and Prices on application to
ROBERT ASHBURNER,
Baden Station, - San Mateo Co., Cal.

S. E. MARKET REPORT

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Dec. 14, 1887.

Showery weather the past week in several agricultural districts caused more plows to start in those favored sections, but, as a rule, good soaking rains are wanted everywhere in this State. Considerable attention is drawn to Congress to see what will be done on the tariff question. Leading wheat-growers think that free coal (duty is \$2 per ton) will benefit wheat by sending more vessels here with coal that will take wheat away; it is also claimed that cheaper tin (duty free) will hold fruit-canners, and therefore fruit-growers. But these wool-growers, as a rule, believe that a reduction in wool will lower the price on that product, so that it is hard to please all. The grain markets at the East and abroad hold strong, contrary to all former years around the holidays. To-day's cable is as follows:

LIVERPOOL, Dec. 14.—Wheat—Easier. California spot lots, 63 1/2 d @ 63 9/16 d; off coast, 34 1/2 @ 34 3/4 d; just shipped, 34 3/4 d; nearly due, 34 1/2; cargoes off coast, slow; on passage, slow and probably cheaper; Mark Lane wheat, weaker; wheat on passage to Continent, 204,000 qrs.; wheat and flour on passage to U. K., 1,561,000 qrs.; wheat and flour in Paris, quiet; sea here in English, showery.

Foreign Review.

LONDON, Dec. 12.—The *Mark Lane Express* says: English wheat is decidedly weaker. The demand has lessened, while the damp weather has tended to deteriorate the condition of grain. The sales of English wheat during the week were 66,838 quarters at 31s 2d against 68,345 at 33s 1d for the corresponding period last year. Foreign wheat is further depressed. The mild weather on the Baltic and Black Seas enables a continuation of extensive shipments, which combined with the large stock and increased arrivals of American flour have made trade slack. The values of English and foreign wheats were unaltered in today's market, but all kinds were slow of sale. Flour is dull.

Eastern Wool Markets.

NEW YORK, Dec. 12.—Wool is quiet. The manufacturers are buying only for their absolute wants.

The President's message causes considerable comment, and there are dealers who predict additional dullness until Congress settles the question involved. Sales: 20,000 lbs. X and XX, 31 @ 33 1/2 c; 10,000 lbs. Delaware fine, 35; 10,000 super pulled, 36 @ 37 c; 50,000 lbs. Montevideo, 25 @ 25 1/2 c; 35,000 lbs. Eastern Oregon, 16 @ 19 c; 50,000 lbs. Territory, 17 @ 24 c; 25,000 lbs. Spring California, 14 1/2 @ 19 c; 30,000 lbs. scoured California, 40 @ 49 c; 24,000 lbs. spring Texas, 21 @ 22 1/2 c; 10,000 lbs. black, 13 c; 12,000 lbs. scoured spring, 50 c; 342,000 lbs. on private terms.

At Boston, trade is good; Philadelphia is quiet.

California and Foreign Raisins.

NEW YORK, Dec. 12.—Five brands of California raisins are quoted in the market to-day. Two Crowns L. M. are \$1.65 @ 1.75; Three Crowns L. M., \$1.90 @ 2.25; Three Crowns, London, \$2.15 @ 2.30. Foreign raisins are quoted as follows: Two Crown, loose new Malagas, \$1.75 @ 1.80; London layer new Malagas, \$2.75. The packages of foreign raisins are not uniform in size with the California packages.

Eastern Grain Markets.

NEW YORK, Dec. 14.—Wheat—12 M. 89 1/2 @ 89 3/4 c for cash, 87 1/2 c for Dec., 88 1/4 @ 88 1/2 c for Jan., 89 1/4 @ 89 1/2 c for Feb., 90 1/4 @ 90 1/2 c for March, and 92 1/2 c to 92 3/4 c for May.

Dried Fruits.

NEW YORK, Dec. 12.—Dried peaches still are salable at 27 @ 28 c; apricots, 17 @ 36 c; prunes, 13 @ 15 1/2 c. Canned cherries, \$2.60 @ \$2.65 per dozen.

Miscellaneous.

NEW YORK, Dec. 12.—The stock of walnuts has been absorbed.

For yellow mustard seed there is no call. One-pound boxes of comb honey are popular here. State is quoted at from 16 @ 17 c; strained, 9 c. Hops are positively flat.

The steamer Colon, which arrived on Wednesday, brought 4993 bags beans, 1013 bags mustard seed and 7620 sbs barley.

Local Markets.

BAGS—Spot dull and easy, but June-July delivery are steadily held at 7 1/2 c to 7 3/4 c.

BARLEY—The past week has witnessed a strong market for both sample parcels and futures. Operations on Call have been quite active, but the fluctuations were small. To-day's sales are reported as follows:

Morning Session: Buyer season—800 tons, 97 1/2 c; 200, 97 1/2 c; 200, 97 1/2 c. Buyer 1887—300 tons, 87 1/2 c; 100, 87 1/2 c @ 87 1/2 c. Afternoon Session: Buyer season—400 tons, 97 1/2 c; 400, 97 1/2 c; 200, 97 1/2 c @ 87 1/2 c.

BUTTER—The market is easy and in buyers' favor, owing to improving pasturage increasing the supply, and dealers pressing the market with old stock.

CHEESE—New scarce and strong but old, in good supply, with the market soft.

EGGS—Accumulating stocks cause some shading, particularly for consignments held a few days.

FLOUR—The market is gradually gaining strength, but no advance is established.

WHEAT—Sample parcels strengthened under strong holding and a good demand. Local millers confine the bulk of their purchases to Oregon. Futures have been quite active, with slight but attractive fluctuations for scalpers. To-day's sales of futures are reported as follows:

Morning Session: Buyer season—200 tons, \$1.47 1/2; 300, \$1.47 1/2 @ 1/2 c. Afternoon Session: Buyer season—100 tons, \$1.47 1/2; 900, \$1.48 @ 1/2 c.

MANY of the gardens of Sacramento are decorated with Japanese persimmon trees loaded down with fruit. One small tree only two years old bore 35 persimmons this year.

Market Information.

The following are the receipts of the principal items of California produce at San Francisco from the beginning of the harvest year to date, compared with the corresponding period in the previous harvest year:

	July 1 to Dec. 11, '86.	July 1 to Dec. 10, '87.
Flour, qr. sbs.	2,317,232	1,681,797
Wheat, cts.	8,155,986	4,521,669
Barley, cts.	1,716,778	1,461,617
Oats, cts.	103,579	119,456
Potatoes, sbs.	481,165	557,393
Corn, sbs.	35,886	106,337
Rye, sbs.	14,232	11,382
Buckwheat, sbs.	4,448	742
Beans, sbs.	273,557	311,850
Bran, sbs.	229,544	225,262
Hay, tons.	56,938	64,121
Salt, tons.	12,448	8,780
Wool, bls.	44,293	37,650
Hides, No.	53,480	48,631
Raisins, 20-lb boxes.	97,334	64,327
Quicksilver, flasks.	6,810	12,968
Hops, bls.	12,006	13,356

The receipts of certain articles of produce from Oregon, Washington Territory and other distant points, for the same period, compare as follows:

	July 1 to Dec. 11, '86.	July 1 to Dec. 10, '87.
Flour, sbs.	31,077	95,159
Wheat, cts.	168,542	385,449
Barley, cts.	1,403	75
Oats, cts.	176,945	82,960
Corn, cts.	46,544	12,590
Wool, bales.	9,054	6,986
Bran, sbs.	26,418	20,040
Hops, bales.	648	106
Hides, No.	14,863	13,028
Potatoes, sbs.	25,091	2,247

Cereals.

The wheat exports from San Francisco for November and for the first five months of the current cereal year were as follows:

	For November.	July 1 to Nov. 30.
Great Britain.	548,952	3,997,134
France.	6,693	6,693
Central America.	2,283	2,283
Miscellaneous.	841	3,446

Totals. 556,486 4,009,556
In 1886. 1,946,382 6,591,211

The average value of the shipments each month compares as follows:

	1886.	1887.
July, \$ cts.	\$1 25	\$1 80
August.	1 32	1 79
September.	1 35	1 42
October.	1 35	1 32
November.	1 38	1 35

It must not be forgotten that in clearing wheat cargoes the price is purposely given at less than purchased. This is probably done to deceive farmers.

Beerbohm's of Nov. 25th says that the estimates of the probable supplies for a period of four months (say from the present date to March 25th) are usually vague, and necessarily give only an approximate idea; nevertheless, with India practically out of the field, and the quantity to be expected from the Pacific Coast known almost exactly, it really only remains to estimate the probable supplies from the Atlantic ports and from South Russia, and the likely extent of the English farmers' deliveries. This is attempted in the following table, which is given with a view simply to furnish data upon which to base opinions as to the probable future movements:

Quantity on passage due to arrive March 25, 1888.	1,488,000
Will probably be delivered to the continent	75,000
Probable shipments from Atlantic ports (wheat and flour) from Nov. 19 to March 4 (15 weeks at 125,000 qrs. per week).	1,875,000
Probable supplementary shipments from India up to Feb. 11 at 25,000 qrs. per week.	300,000
Further supplies from South Russia up to, say, Feb. 28.	500,000
Probable imports from Austria-Hungary (wheat and flour).	200,000
Probable imports from Germany (wheat and flour).	175,000
Other countries.	50,000

Total probable supplies of foreign wheat and flour. 4,513,000
Possible English deliveries on the basis of the deliveries in 1885-86. 3,200,000

Total probable supply. 7,713,000
Estimated requirements for consumption for four months from Nov. 25 to March 25, 1888. 8,750,000

Deficiency. 1,037,000

From this it results that stocks, which in first hands at the present moment amount to probably 2,225,000 to 2,500,000 quarters, will have to be drawn upon in the next four months to the extent of over 1,000,000 quarters. With regard to the above estimates, it need only be added that the assumed exports from the Atlantic ports are based on the opinions expressed in the United States that the total exports for Europe during the rest of the season cannot exceed 150,000 quarters per week in wheat and flour. The estimated further supplies from Russia are based on our imports thence in the corresponding period of 1885-86. Austria-Hungary is put down for 20 per cent more than in that last year. English farmers are expected to supply 3,200,000 qrs, or about the same as the year before last, when the crop was estimated at nearly 10,000,000 quarters, while the present year's crop is not believed to have reached that figure.

The above figures, it will be thought, furnish sufficient argument to justify the recent improvement in prices, and are, allowing every possible margin for error of judgment, evidently in favor of a healthy winter's trade in wheat and flour.

The local wheat market has ruled strong throughout the past week.

There have been several sales of desirable parcels of No. 1 white shipping favorably situated at an advance on last week's quotations. Although the daily press quoted \$1.41 1/2 as an extreme, yet it is a well-known fact that good sellers sold at an advance on the above. The stock is well concentrated, while there is said to be quite a short interest on the market, which if forced to fill would send values well up. The engaged tonnage in port receives quick dispatch, which goes to show that the large bulk in store is held by exporters. Millers' wants are chiefly met from Oregon, but lately receipts from that quarter have fallen off.

Barley has held to strong prices throughout the week, under an increased consumptive demand from rail-road builders. Purchases have been made in this market and also in the interior. The receipts at this port are considerably below the consumption. There is also a fair export demand. Brewers are picking up all desirable parcels obtainable at concessions on current quotations.

Oats are stronger under an improved demand and only moderate receipts.

Corn is stiff, with choice grades scarce and wanted. Some parcels have been placed at an advance on quotations. The market at the West is strong, with the bulk of receipts of poor quality.

Rye is scarce and fetches good prices. Choice has sold at an advance with the closing very strong. Buckwheat is without essential change, although some parcels have been placed at an advance.

Feedstuff.

Choice hay is very scarce and wanted. What is now choice was only good in the fore part of the season. The demand continues strong, with a light supply reported. Straw is also in good demand. Carrots meet with a good call at current quotations.

Bran and middlings are offering freely, but as the demand is good, prices keep steady. Ground barley and cracked or feed corn have a stronger tone, with a good consumptive call ruling.

Fruits.

Oregon is sending us, quite freely, several varieties of apples, which meet a good market, as do California, for the better and more choice-conditioned. Defective apples are slow, and placed with some difficulty, except at concessions.

Pears, if choice and in good condition, have ready sales. Poor are slow.

Grapes are in liberal supply for the season, but as usual, at this time of the year, have poor sale.

California limes and lemons move slowly. California oranges come in sparingly, and are hard to quote. It is claimed that receipts will be quite liberal before the end of the month.

Dried fruits are dull, but holders are not pressing the market, owing to light stocks, and it being well known that after January, buyers again enter the market. The stock of canned fruits is not within one-third what it was at this time last year. Raisins are well cleaned up. It is claimed by well-informed parties that not over 15,000 boxes are in the State. The East has drawn more heavily than ever before known. It is thought that before another season, prices will appreciate.

Live-Stock.

Beef continues in liberal offering, and that, too, of good quality. The market is kept down by free offerings from distant points. Calves are wanted and fetch good prices. Mutton sheep are fairly steady. The quality is good, with concessions only obtained from pressed sellers. Acorn-fed hogs come in sparingly. Grain-fed hogs are in fair receipt, with prices well maintained. Packers are taking more than last year. In horses, there is nothing new to add since last week's report.

The following are the wholesale rates of slaughterers to butchers:

BEEF—Extra, 7 1/2 @ 7 3/4 c; first grade, grass fed, 6 1/2 @ 7 c; second grade, 6 @ 6 1/2 c; third grade, 5 1/2 @ 5 3/4 c.

MUTTON—Ewes, 5 1/2 @ 6 c; wethers, 6 @ 6 1/2 c. LAMB—Spring, 7 @ 8 c.

VEAL—Large, 6 @ 7 c; small, 6 @ 8 c.

PORK—Live hogs, 4 1/2 @ 4 3/4 c for heavy and medium; hard dressed, 6 1/2 @ 7 c per lb; acorn fed, 4 @ 4 1/2 c; dressed, 5 1/2 @ 6 c; soft hogs, live, 3 1/2 @ 4 c. On foot, one-third less for grain or stall fed, and one-half less for stock running out.

Vegetables.

Potatoes held strong up to Saturday, when upon heavier receipts and only a fair demand prices shaded off. The market closed barely steady. Sweet potatoes move slowly and in buyers' favor.

Onions have a stronger tone for choice good keepers, but soft are easy and in buyers' favor.

Cabbages are strong and in request, chiefly for shipping. The market is stronger than usually obtains at this season of the year.

Root vegetables are steady, with a strong tone reported.

Tomatoes have come in more freely, but the demand is slow.

Miscellaneous.

Flaxseed crop at the West is short, and prices rule strong and higher.

Free shipments of mustard seed are being made abroad, and also to the East. The stock is greatly reduced.

In grass seed there is nothing new to report. Hops have been taken more freely. The bulk received were sold before picked.

Wool is slow, but then the stock is about all cleaned up.

Beans hold very strong, with a slight advance paid for the more choice. Shipments to the East continue to be made.

Poultry has ruled in buyers' favor throughout the week, but closed steadier for the more choice.

Salt is strong, at an advance for imported, but unchanged for domestic.

Domestic coal is \$1 per ton higher, and imported, \$2 per ton higher—just equal to the duty.

Deerskins are advancing, but beef hides are weak and low.

The tonnage movement compares with last year at this date as follows:

	1887.	1886.
On the way.	332,227	203,494
In port, disengaged.	93,280	63,390
In port, engaged.	21,250	63,700

Totals. 446,757 330,590

To obtain the carrying capacity add 60 per cent to the registered tonnage.

San Francisco, Dec. 14, 1887.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

BEANS AND PEAS.	WHEAT, Dec. 14, 1887.
Bayo, cts.	2 00 @ 2 35
Butter, cts.	2 00 @ 2 30
Peas, cts.	2 25 @ 2 30
Red, cts.	2 00 @ 2 30
Pink, cts.	2 00 @ 2 30
Large White, cts.	2 00 @ 2 30
Small White, cts.	2 10 @ 2 35
Lima, cts.	2 10 @ 2 30
Red Peas, cts.	2 00 @ 2 10
do green, cts.	1 50 @ 1 75
do Niles, cts.	1 50 @ 1 75

POTATOES.	WHEAT, Dec. 14, 1887.
Burbank, cts.	75 @ 1 15
Early Rose, cts.	50 @ 75
Golden Wonder, cts.	70 @ 1 00
Petauma, cts.	75 @ 1 00
Tomatoes, cts.	85 @ 1 00
River reds, cts.	45 @ 60
Humboldt, cts.	— @ —
do Kidney, cts.	— @ —
do Oregon, cts.	75 @ 95
do Poona, cts.	75 @ 90
Salt Lake, cts.	— @ —
Sweet, cts.	1 00 @ 1 50

South's per ton, 50 1/2 @ 75 00
North's per ton, 50 00 @ 75 00

CHICKEN.
California, cts. 6 @ 7
German, cts. 7 @ 8

DAIRY PRODUCTS, ETC.
Butter, cts. 37 1/2 @ —
do Fancy brands, cts. 45 @ —

Pickled roll, cts. 23 1/2 @ —
Firk, new, cts. 25 @ 27 1/2

Eastern, cts. — @ —
do Mallard, cts. 3 00 @ 3 50

do Sprig, cts. 1 25 @ 1 50
do Cheese, cts. 1 75 @ 2 25

do Eggs, cts. — @ —
do Wild, cts. 1 00 @ 3 00

do Turkey, cts. 1 00 @ 1 18
do Dressed, cts. 18 @ 20

do Turkey, cts. — @ —
do Tail and wing, cts. — @ —

do Chicken, cts. — @ —
do Common, cts. — @ —

do Quail, cts. 1 00 @ 1 50
do Rabbits, cts. 4 00 @ —

do Hares, cts. 1 25 @ —
do Venison, cts. 6 @ 8

Straw, bales, cts. 40 @ 70
Extra, City Mills, cts. 4 00 @ —

do Country Mills, cts. 3 75 @ —
Superfine, cts. 3 25 @ —

GRAIN, ETC.
Barley, feed, cts. 85 @ 95

do Brewing, cts. 1 00 @ 1 15
Chevalier, cts. 1 15 @ 1 30

do Coast, cts. 95 @ 1 15
Buckwheat, cts. 1 00 @ 1 25

do Corn, cts. 1 15 @ 1 25
Yellow, cts. 1 10 @ 1 20

do Small Round, cts. 1 30 @ 1 35
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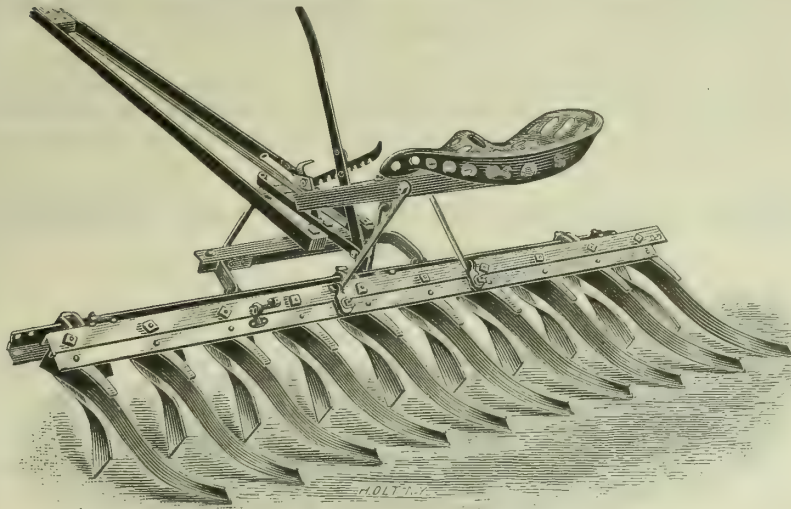
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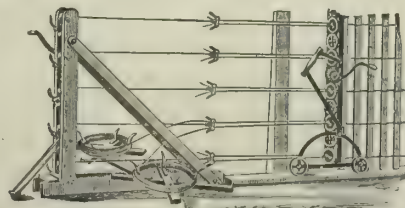
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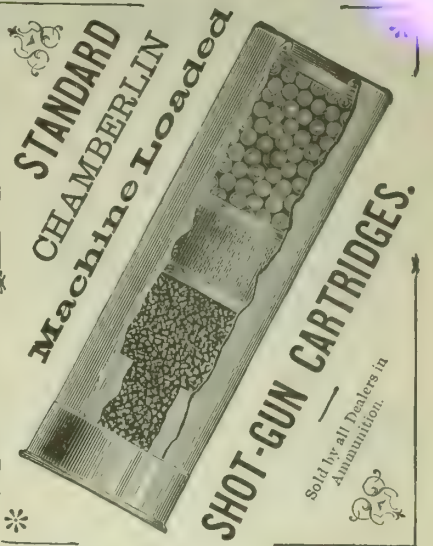
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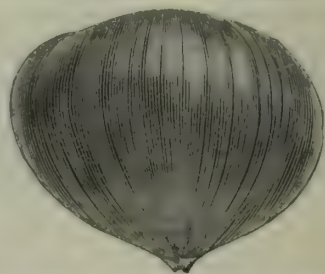
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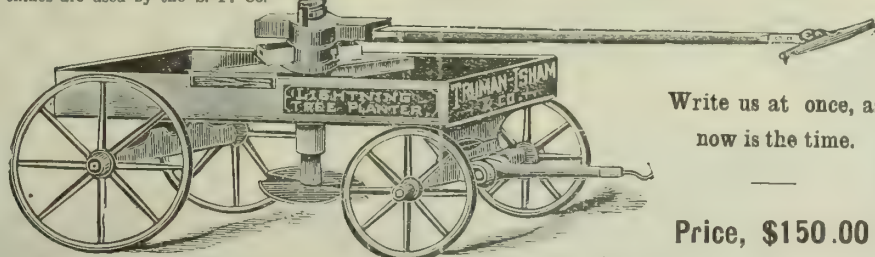
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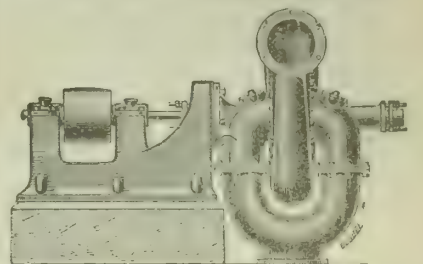
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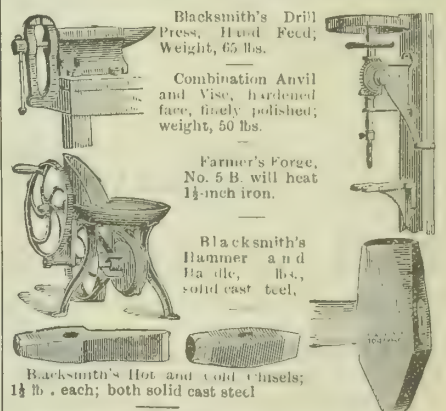
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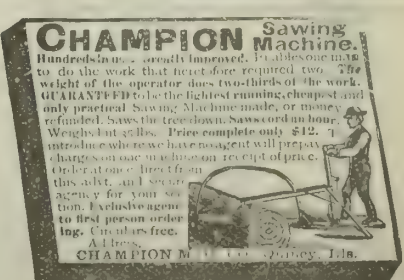
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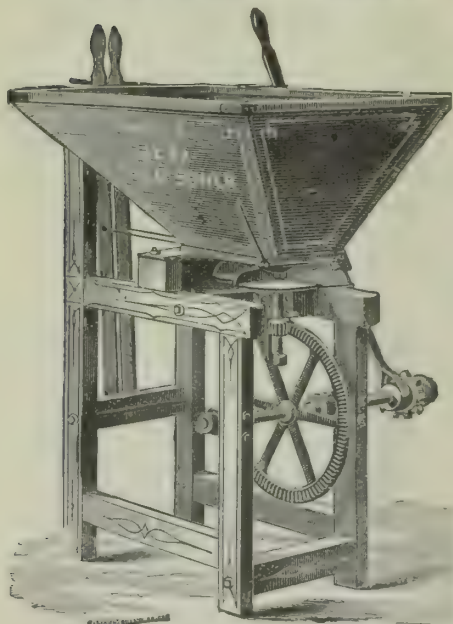
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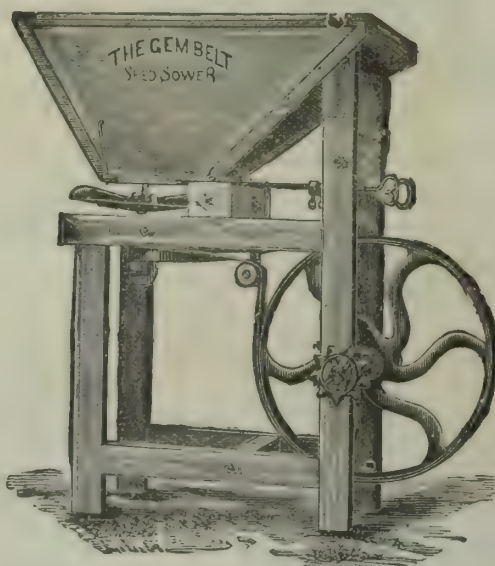
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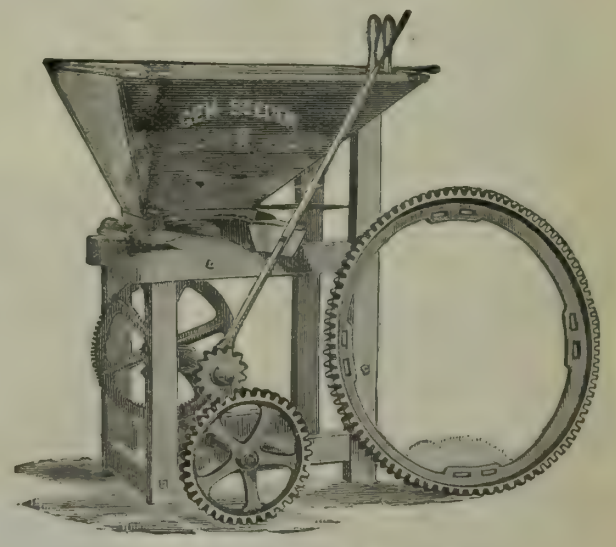
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PACIFIC RURAL PRESS

TWENTY-PAGE EDITION.

Vol. XXXIV.—No. 26.

SAN FRANCISCO, SATURDAY, DECEMBER 24, 1887.

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Forestry.

The State Board of Forestry is proceeding with its work vigorously. In addition to the efforts to preserve the existing forests by prevention of illegal cutting, careless firing, etc., by posting everywhere notices that all trespassing will be prosecuted, and by appointing guardians to see that these notices are observed, we are glad to see that the work in formation of new forest plantings is going forward. The establishment of forest stations for the propagation of promising trees in considerable quantities, and for testing all trees, native and foreign, to determine their adaptations, is certainly a wise movement on the part of the Forest Board. In this work they are securing co-operation from public-spirited and generous citizens, and the prospect is that a vast work will be accomplished at a comparatively slight expenditure of public money. We have already mentioned the contribution of desirable land at Santa Monica for a forest station, and we just have a note from Mr. Abbot Kinney, Chairman of the Board, to the effect that Hon. John Bidwell will set apart 50 acres of Rancho Chico for the uses of the Board. This is an excellent act on the part of Gen. Bidwell; and quite consonant with his other manifestations of public spirit.

The board intends to proceed actively with practical work at its stations. As forest officer to establish the nurseries and plantations at the Santa Monica station the board has elected Mr. H. Rowland Lee, whom we believe to be well qualified for this work. He was trained by study and practical work in tending nurseries and private establishments in Great Britain and then took a course in the Royal Gardens at Kew under Sir Joseph Hooker, and obtained certificates of proficiency in the scientific branches of his profession. Coming to America he continued his training by practical work in one of the leading gardens of Toronto, Canada, always pursuing horticulture both as a science and an art. Before coming to California he spent some time in the Southern States in similar work and studies. During the last few months he has been employed in the experimental gardens of the State University at Berkeley, where he has given full satisfaction. Under the instructions of the board Mr. Lee will make collection of seeds and plants available in this part of the state and then proceed to Santa Monica so as to get full benefit of the growing season. With

reference to the work at the Chico station we shall have better information hereafter.

COLORED COLONISTS.—A colony of colored men recently settled in Shingletown, Shasta

CEREAL VALUES.—The December report of the Department of Agriculture relates mainly to farm prices of agricultural products. The average value of corn is 43.8 cents per bushel, against 36.6 last year and 32.8 in 1885. In 1881

The Religious Ideal.

The embodiment of the religious ideal has been the longing desire of the human heart in all ages. The conviction of spiritual existence has been so irresistible and so thoroughly possessed the imagination, that the whole material universe has been peopled with gods and goddesses who lived in the woods, fountains, rocks, ocean, air and among the stars. To personify the Deity was the highest aim of classic art. But with all its beauty, a shadow hung over it. There was a sadness in their joy—a sense of something wanting. The story of Pygmalion was the common dream of men. They felt after a divine life, longed for it with a certainty of its reality which their unaided senses seemed incapable of grasping. That conviction silently shaped itself into an unconscious prophecy. The loftiest music and poetry raised its voice to it. At length, in the fullness of time, what the hearts of all nations had longed for was announced by the angels singing, "Glory to God in the highest, on earth peace, goodwill toward men." The Life was manifested; that Life was the light of men, and the heart of humanity has been satisfied.

To portray some shape of that life has been the supreme effort of Christian art. The manger, the baptism, the transfiguration, the cross, the crown and many other things have been the joy and inspiration of the painter and sculptor. It was not till the fifth century that art attempted a representation of the Mother of Christ. A chronological arrangement of the pictures of the Virgin would exhibit in a remarkable manner the growth of the Roman Catholic idea. The Virgin has been the principal theme of the great masters, but the grandest success was attained by Raphael. His madonnas are very numerous, and represent the Virgin in various ways—now as the ideal of female beauty, now as a loving mother with a pretty babe, and now as the Queen of Heaven. Among the symbolical representations may be mentioned, Mary with the white mantle of love under which she receives the faithful, with a half-moon or globe under her feet, and now sitting on a cloud

holding the child in her arms. The picture on this page adheres closely to the realism of modern art, and represents a young mother in the sweet consciousness of her first born.

GLADSTONE will spend the holidays at Milan



THE MADONNA OF THE ROSE.

county. They have already secured land, and will follow farming; but part of them are co-operators and will work the fine cedar of that locality into various utensils. They seem to be intelligent, and most of them belong to the Baptist church.

it was 63.8, during which year the estimated product was 1,194,916,000 bushels. The average value of wheat is 69 cents, being three mills higher than the average for last year, and for oats 30.7 against 29.8 last year. The barley average is 52.2 against 53 last year.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Santa Ynez Valley.

[No. 3.]

Horticulture.

EDITORS PRESS:—During the past few years horticulture has been gradually pushing its way to the front of all of California's great industries, and, with the impetus given to it by the past season's success, it may soon claim to be the greatest of our industries. There have been years of experiment, and some of them discouraging years, and yet all of them advancing this interest until something like a definite impression has been gained as to the future reliability of fruit-growing as a legitimate and profitable enterprise, and, moreover, a stability gained which shall remain unshaken hereafter. Many years of observation have given me the firm conviction that upon horticulture will California's greatness in the future most largely depend. Upon this pursuit in some of its farms have most of those who have looked with long eyes toward California been building their hopes, and to those who have already entered upon this pursuit the love of it has overriden all discouraging features and has strengthened the will to overcome every difficulty and achieve success. Many have failed from various causes, some of which will hereafter be pointed out, to achieve the success so fondly anticipated, while many have gained all the success they have deserved. Many difficulties have stood in the way and have been one by one overcome by the persistence of the pioneers in this work, until now it is quite possible for the industrious and capable person to enter upon this pursuit with a reasonable assurance of freedom from serious mistakes, and an also reasonable certainty of financial success.

The choice of location in which to embark upon a horticultural enterprise has been up to a recent date a factor of uncertainty. Gradually the adaptability of certain localities to the perfect maturity of certain desired fruits is being ascertained, and the very serious questions of years ago in this respect have to a great degree become settled. The great variety of fruits which may be profitably grown in the right localities is only an evidence of the stability and profit of fruit-growing when rightly undertaken. The factors entering upon the choice of location should be carefully weighed before starting. Haphazard work should not have a place now. Facts should be sought and the lessons taught should be acted upon with a steady persistence which knows no failure. There is no business where a greater amount of "stick to it" is required than in this. A tree does not grow in a year to fruitfulness. Patience must have its perfect work. Yet in no country in the world is such early fruitfulness and profit from trees known as here. In fact, I believe that one of the great hindrances to a more rapid settlement of our State by Eastern agriculturists has been the greatness of our facts, which have been received as fairy tales rather than sober truth. The day of prosperity for our State has fairly dawned, however, and the East is fast finding out our advantages.

Being familiar with most of the fruit-growing localities of the State, their respective products and advantages, I feel I cannot do a better service to the many who intend to follow horticulture than to call attention to the

Santa Ynez Valley

As a most desirable field for their efforts. As familiar as I have been for years with the fruit-growing enterprises of the State, I was surprised to note upon my recent investigations of this valley the great advantages it possesses for horticulture upon a large or small scale, and this surprise was intensified that such a region should be so comparatively overlooked. Now, however, that the large ranches are being subdivided, this region will take a decided position in fruit-growing, and not many years hence will become one of the prominent sources of supply of many of our best fruits. The peculiarly favorable aspects of latitude, climate and protection heretofore alluded to will tell immensely in the future for successful horticulture in this valley.

The Olive.

One of its most noted products will undoubtedly be that of olive oil; and this valley possesses the factors which will make it markedly prominent in this production. I believe that the essentials of a good olive are a suitably even temperature, impregnated to some extent by the sea-air, and yet in order to make the enterprise successful, freedom from the pests which beset the olive directly on the sea-coast.

Although some, like Mr. Ellwood Cooper, have the courage to battle with the black scale, and like him, to succeed in spite of such obstacles, yet it is far easier to take advantage of nature's beneficent acts in behalf of man, and plant the olive where evidently nature designed it should have a home and thrive. Now, here, of all other places in California, has nature provided all these requisites for the olive. There is hardly a portion of all this great valley with its surrounding foothills where the olive has not a congenial soil, and certainly not a spot where it has not a congenial climate.

The tree will grow vigorously, receiving ample moisture from rich, well-drained soil, in all portions of this valley. The black scale does not thrive on the olive here, and the trees possess a vigor and a remarkable brightness and cleanliness of wood that is a guarantee of health and fruitfulness. It is far enough away from the sea-coast, while getting the sea air, to give the proper atmospheric nourishment to the olive, and yet kill out the black scale by climate alone. This fact is becoming so evident that many thousands of olive trees have already been planted here by single individuals. The largest planting of olives in the State is already to be found here, and this will be in the future the most prominent olive-growing district in the United States. It will be hard to estimate the value of these lands in the near future for olive-growing. The variety now solely grown is the so-called Mission olive, and which has so far proved the most successful for oil and pickling. Other varieties, after some years of experimenting, may be found to equal this, and possibly some can be found superior, but at this date there is no other variety that will be safe to plant in quantity.

The trees are grown from the cutting. Probably the best method of growing the cuttings is to take from the new growth of wood that which is not too large, and in short lengths of about 10 or 12 inches, and starting under a frame in hot-bed, so as to secure a good rooting, and then transplanting in nursery for a few months until the season for planting out in orchard arrives, when these nursery trees at one year of age are to be placed permanently. The distance, perhaps, most suitable in ordinary planting is 24 feet square. Some plant 30 feet apart in septuple form, and Mr. Cooper advises 20 feet square. Most olive trees are grown so as to allow a trunk of five or six feet before any branching is allowed, and, in many parts of Europe, according to Prof. Dwinelle, who has recently been making observations there, the preferred method is to grow in bush form, when the fruit can be easily gathered by hand without bruising. The care necessary in picking, treating, crushing, and expressing, is well repaid in the profits from a first quality of oil. For fuller information in regard to olive culture the treatise of Ellwood Cooper, Esq., published in 1882, and various essays by the same gentleman on the olive and published in the reports of the State Board of Horticulture, may be referred to.—[Another important contribution from Mr. Cooper will soon appear in the RURAL.—EDS. PRESS.]

No fruit tree can be grown that is longer lived than the olive. Trees may be seen at the various Missions now as old as the Missions themselves, and the trees in vigorous health, while the ruins around them testify to the utter neglect shown everything.

The profits of olive-growing are in many cases very large. The trees as yet planted in the Santa Ynez valley are young, but with the greatest promise. The limits of this article will not permit entering into the particulars of olive-growing and the preparation of the oil. This will no doubt become the leading industry of this valley in time.

Already have some 25,000 olive trees been planted, and these are growing most thriftily. Of these Mr. Selby has 5000, Mr. W. A. Hayne with Mr. Gould 5000, Mr. Ben Hayne about the same number, and the Messrs. Boyd as many more. These gentlemen intend largely increasing their respective plantings. Mr. Henry D'Urban also intends planting a large area for himself and English friends, probably amounting to a section of land.

The Grape.

While the olive may take the prominent position, yet the grape will probably share the warm meads with it. The greatest success with the grape has been met by Mr. Louis Janin, who has thoroughly tested the value of these lands for grape culture. Not only will these succeed for wine purposes, but the Muscat grape for raisins attains perfection in this genial climate. It will be remembered that one of the most prominent raisin-growing regions of the State, the Orange and Santa Ana district, is in nearer proximity to the sea than the main Santa Ynez valley.

The lower and more level valley lands will, no doubt, be monopolized by the

Deciduous Fruits.

Some of these valleys as plain lands along the river are so rich that these fruits reach the greatest productive capacity, the greatest size, and the perfection of quality. This is the southernmost portion of the State where some of these fruits can be grown profitably. I may instance the cherry and the almond. I witnessed in the orchards of Mr. L. Janin and that of the De La Cuesta family the greatest success in orchard-growing. There is no place in the State where finer trees of equal age can be found, and nowhere that I know of, except in this valley, can orchard districts be found without some of the pests which infest fruit trees. I will say that here, as yet, there are none of these pests. I carefully examined the apple and pear trees heavily laden with fruit, and there were no codlin moth larvae (worms in the fruit). The same careful examination showed that there were no scale insects of any species, and a critical search of the almond trees showed that no red spider existed here. These facts are remarkable, and I cannot too strongly urge upon fruit-growers in this valley to guard their advantages with most scrupulous care,

and under no circumstances allow infested trees or fruit to be brought into the valley at all. I can only reiterate what I, in an official way, often advised, that no chance should be given insect pests to gain a foothold in localities that were free from them. Only the most rigid quarantine measures can successfully resist their invasion, and the example of Riverside consistently followed out four years, and that recent emphatic bundling out of the town of Pomona of a carload of pest-laden trees with their owner, may be commended for future use. In no more important case than this will the force of the old adage, "an ounce of prevention is worth a pound of cure," be felt.

I would like to see the ideal fruit-growers' paradise here established where perfect union of purpose and action shall impel all to keep free from pests a locality nature has so blessed. If this be done, the welcome dollars will respond to the call of the industrious horticulturist and many of them jingle in his pocket instead of being sunk in the whale-oil soap barrel. I may also allude to the great scarcity of *hare* (jack rabbits) in this valley, which in many localities necessitates the expensive construction of rabbit-proof fences. This expense can be avoided here altogether. I was particularly impressed with the freshness and cleanliness of the bark of the fruit trees here. This indicates perfect health, and where such vigor is present abundant fruitfulness may naturally be expected.

Among the best of the apples here succeeding finely, I noted the Yellow Newtown Pippin, which is the choice coast apple of the San Francisco market. This tree here is a heavy bearer and the fruit perfect in every way. Among the pears the Winter Nelis is remarkable for its profuse bearing. This and the Ester Beurre are favorites for winter pears, while the Bartlett is the chief summer pear. A particularly fine and valuable shipping pear to grow here would be the Fox Seedling cull named "P. Barry," which is to be eaten in January.

The apricot tree here grows with the greatest vigor and fruits heavily; the varieties best suited to this locality are the Moorpark and the Royal. The Moorpark is the finest apricot, however considered, in every respect, but its peculiar habits of fruiting render it necessary to plant in the proper localities to become a source of profit. No other apricot possesses the flavor and richness of the Moorpark when canned, and no other equals it in size. These coast valleys are the natural home of the Moorpark. The profits from this variety this season along the coast have been immense where canneries have been accessible, and in drying where that method has been preferred. The apricot is not subject to scale pests, and is a safe fruit to plant anywhere it will succeed.

The peaches grown in the Santa Ynez valley are of the very finest quality, reaching immense size and possessing the highest flavor. This fruit is always in demand, bringing high prices, and the supply has never yet reached the limit of consumption. With all fruits the grower should be on his guard against planting too many varieties if he wishes to succeed in marketing satisfactorily. A few varieties of the choice peaches should be selected from, and the intention should be to grow for canning chiefly. The Early Crawford and the Foster best fulfill this object for yellow freestones, and the Heath Cling for a white, and the Lemon Cling for a yellow among the old varieties. There are, however, some new varieties, which are even preferable—more particularly of these I would name the Sellers Cling, a large, high-flavored, yellow peach, free from red at the pit and putting up beautifully, and as a companion to this the Tuscan Cling of the same color and freedom from redness at pit. The White Cling of peculiar value is the McKevitt—pure white to the pit and of the choicest flavor. For drying purposes, as well as canning, the Muir (yellow freestone) is a favorite; but succeeding better yet near the coast is a peach called the Loomis Seedling, grown by Mr. Loomis of Patchen, Santa Cruz mountains. This peach gives the highest percentage, free from waste, of dried fruit of any peach known. All these I have personally tested and grown excepting the Tuscan Cling, and know their suitability to the coast valleys.

The luxuriant growth of trees here is illustrated by the extraordinary growth of from 12 to 15 feet of new peach wood which I noticed in the De La Cuesta orchard.

The French prune is a decided success here in this valley, and when we consider the enormous consumption of this prune in the United States, and the further fact that even then only a portion of the people have ever tasted this dried fruit, we are safe in saying that one of the chief industries of the Santa Ynez valley will be prune-growing. The moist, well-drained and exceedingly rich and mellow plain lands of the river valley are especially suited to the production of the prune. There is no fruit product so easily prepared for market as this. Shaken off the tree (not picked), dipped in water to cleanse from dust, dipped in lye and then spread out to dry, taken up at the proper time, packed in boxes and stored away ready for market, it is a product as good as gold to the owner. A few acres of this fruit in the right locality will support a fair family of not too extravagant habits, and in the care and management of this crop every member of the family may engage. The one variety to plant is the so-called French prune. Among the plums I noted the Yellow Egg, which is the choicest of canning plums.

The cherry cannot be grown with profit in

the southern portion of the State, and the limit of production may be set at the Santa Ynez range of mountains. This valley is the southernmost region where success may be attained. The varieties that should be chosen are the Black Tartarian for a market table-cherry, and the Napoleon Bigarreau, Centennial and Black Bigarreau (or Gros de Mezel) for canning and table. The black cherries are free from the attacks of scale insects. The Napoleon Bigarreau (or Royal Ann) is the white cherry particularly valuable for canning. The small fruits, blackberries, raspberries and strawberries, will find the best of soil adapted to their growth along the river-bottom lands. There can be had lands as moist as may be desired for that purpose.

The nut succeeding here is the almond. The English walnut is somewhat doubtful as yet. The almond, as is well known, has been almost a universal failure in Southern California, and like the cherry its limit is the Santa Ynez range. As fine almond trees as can be seen in the State are grown in the De La Cuesta orchard, vigorous, healthy and fruitful, and free from the pest universal over the State—the red spider.

The coast valley portions of San Luis Obispo and the northern portion of Santa Barbara county have long produced the finest almonds, and this nut will become one of the prominent products of the Santa Ynez valley. It will not be advisable to plant the Languedoc variety so called, for it has, as a rule in most of the regions where it is grown, proved a poor producing tree and the hulls are very difficult to remove, especially if once wet by rains. These need also to be sulphured to fit them for commerce. Without question the best almond to plant are seedlings that succeed well where originated and some that have become of world-wide reputation. The prominent ones of these varieties are the Hatch seedlings, originated by A. T. Hatch, Esq., of Suisun. These seedlings are heavy bearers of the finest-flavored nuts, and do not require sulphuring for market and are, moreover, easily hulled. These requisites are not overlooked by those who have had experience in almond-growing. These fruits with the almond I have considered more fully by reason of the probability of their forming the chief horticultural products of this valley.

I have no need to dwell upon the importance of the remarkable freedom from insect pests observable in this valley—we should be thankful that such a locality exists—and I need not dwell upon the agricultural products of this region; suffice it to say that no finer milling wheat is grown than that produced here, and it has induced Mr. Steele and his associates to decide upon the erection at an early day of one of the largest flouring establishments on this coast, to be situated in the center of the valley, and to cost fully \$100,000. The more particularly vegetable products of the valley lands are illustrated by the enormous growth of potatoes, 100 sacks to the acre, which I saw being turned out of the ground on the Llano Grande. Also from the same ground enormous quantities of beans and English mustard seed at the rate of one ton to the acre.

I saw here on the Llano Grande a natural stand of wild-oat hay, so dense as to make it difficult to force a way through, and where cut and cured, it gave a yield of hay of over three tons to the acre.

On this mellow alluvial soil anything and everything can be grown in luxuriance and profusion. Water in inexhaustible quantities and of the purest quality is found at a depth of 15 to 20 feet from the surface.

This valley will rapidly develop the largest fruit industries, and will, in the near future, become one of the most noted for health, and one of the most prosperous communities of the State.

S. F. CHAPIN, M. D.

Auburn, Dec. 15, 1887.

Sierra Valley Notes.

EDITORS PRESS:—Winter seems to be trying to take this mountain valley within its icy grip. The mercury has been down to zero, while in Clover valley, on the road between Sierra and Indian valleys, it has marked 8° below zero.

We have had several days of hard winds which sent the accumulation of months of dust in great gray suffocating clouds along the stage-road, and other less frequented highways. Such winds from the southwest we usually consider sure harbingers of a storm, but as yet we have had only two or three slight siftings of snow, and the ground is too dry for fall plowing, which in this region seems something of a necessity, as the winter often lasts well into the spring, leaving the farmer but a short time to get his crop in before the growing summer weather.

When last heard from, the work on the Nevada & California railroad was being pushed forward down Long valley. Work on the Sierra & Mohawk railroad was suspended about 11 months ago, and was resumed only for eight or ten days in July, since which time much property belonging to the road has been sold off at sheriff's sale. It seems that some moneyed company should find this railroad a profitable investment, for there lies in this part of the Sierra Nevada a large tract of country rich in agricultural and mining resources, as well as much valuable timber.

Artesian well-boring is still going on in this valley. E. Healey has just taken his large machine into winter quarters, having closed his

season's work by boring the largest well in the valley on the desert land entry of D. M. Glosster. I do not know the capacity of this well, but the water fills a four-inch pipe, three or four feet above the ground, and is thrown with much force.

Thanksgiving has passed with the usual festivities; and the oncoming holidays have made further demand for the fat turkeys of our poultry-yards. Eggs, too, have gone up to 50 cents per dozen, a price which, though unsatisfactory to the purchaser, is well pleasing to the farm-wife depending on their sales for her pin-money. M. P. A.

Beckwith, Dec. 13, 1887.

Ventura.

EDITORS PRESS:—Why is it that this county is seldom referred to in your columns? Is it because you have so few subscribers here? Is it because your subscribers have too much else to do with practical husbandry, or is it that the plow is heavier than the pen and unites one to handle the smaller point of steel? Certainly your columns should have glowing words from this "right little tight little" county. Little? Yes; but of greater agricultural and horticultural importance than others of far greater area. Small and young, yet the exports of farm products from this county for the last 10 years exceed in value \$10,000,000, and yet out of a possible 700,000 acres susceptible of cultivation less than 200,000 have ever felt the "harrowing work" of the farmer. The yield of grains, fruits and nuts is marvelous, and when it is considered that but little or no irrigation is required, that the climate rivals far-famed Santa Barbara, and, we claim, excels Los Angeles, the wonder is why there are so few intelligent farmers and fruit-growers here located. Not that I would intimate that our agriculturists were non-intelligent, but simply there are so few of any class. Our broad acres, with silky soil, lavish water supply and genial temperature, are capable of supporting a hundred families where now one "tickles the soil to find it laugh with harvests."

We need intelligent farmers, men who cultivate the soil with brain as well as brawn, and if they be not found among your readers, where can they be found? And it is only necessary to state facts to engage the attention of your readers.

Barley here will average a larger crop than in any other county in the State.

Lima beans will run from 1250 to 1750 pounds per acre, other beans will produce equally good results, and other farm products will not fall far behind.

Quite a number of our fruit-growers have obtained from \$150 to \$200 per acre from apples, pears and orchard fruit.

From English walnuts the grove-owner has netted from \$150 to \$250 per acre.

Everywhere are signs of evident prosperity. In the county-seat substantial improvements are the order of the day, and yet we have no "boom." We, in Ventura, are too busy raising crops to spend much time in raising prices.

Ventura county is worthy of your notice, and in the future the RURAL PRESS will acknowledge the error of its way, if in the nearer future it does not pay heed to this fair county of the Southland.

There are some—I will swear to at least one—that welcome the RURAL PRESS that comes weekly, but strongly, to help the tillers of the soil, and I am glad to acknowledge the debt I owe to the brains of my weekly visitor.

San Buenaventura. W. G. WILDE.

[Ventura county is not more heard of because our readers (and we have many of them) do not take the interest in showing forth the faith that is in them that the dwellers in other counties do. But we have not been altogether remiss ourselves. Our special correspondent, "McD," gave us several carefully prepared letters, and we have had others. The burden is, however, a local one. Our readers must claim the privilege which we offer to all, to write us freely and still truthfully and accurately of all local agricultural progress, and how it is attained.—EDS. PRESS.]

THE ORNITHOLOGIST.

The Fate of the English Sparrow.

Our readers will remember our allusions to the branch of the Department of Agriculture styled "Economic Ornithology," which was established some two years ago, and by a law passed in July, 1886, was set at work upon the investigation of the food, habits, distribution and migration of North American birds and mammals, with special reference to agriculture, horticulture and forestry. The scientist in charge is C. Hart Merriam.

A publication has just been issued which gives the result of a careful inquiry into the history and deeds of the English sparrow in this country, of which we give the following outline as prepared by an Eastern exchange:

In 1850, a year when the "measuring worm" was most wantonly active in New York and Brooklyn, crowding the trees of parks and streets, some philanthropic citizens of Brooklyn imported eight pairs of English sparrows. They were carefully housed in winter and let loose in the spring. In 1852 another importation was

made. From these sprang unnumbered woes. A few square feet then bounded their ambitious flight. Now, after a lapse of 35 years, they range over 1,000,000,000 square miles of the United States and Canada. They "spread themselves" slowly at first, but soon set out to undertake the conquest of a continent. They now occupy all the States from Maine to the Mississippi, and possess Kansas and Missouri. They are found in detached settlements along the Gulf and in Texas, and will soon cover all the area in which are their outposts and colonies. At Salt Lake City they overrun an elliptical region as large as Vermont and form a cordon around the Golden Gate. For the last 15 years they have spread at the rate of 60,000 square miles a year. They adopt all routes and means of travel. They entered the Eastern provinces and Canada by free rides on boats and cars, and made themselves a home at once. The undaunted bird is a free commoner, and wherever he goes he settles himself down with alacrity and furnishes teeming colonies for fresh fields. If accident bears him a thousand miles from his accustomed habitat, he is at once the active agent of new diffusion.

The statistician of the ornithological division furnishes some appalling figures anent the increment of these birds. They fairly beggar the results of geometrical progression and eclipse all common arithmetical calculations. We can only summarize his statements, and submit them to the credulity of our readers. A pair of sparrows produces five or six broods in a year with four to six young in a brood. Assume the product to be 24, half males and half females—with the old birds, 13 pairs in all. These 13 the next year produce 312 birds; add the 13 pairs and you have 338. Go on with this calculation for 10 years, assuming that all live out that period, and the result is thus given, sanctioned by the Executive, published by Congress and distributed to a long-suffering people:

End of 10th year—Number of pairs of young, 127,253,992,476; number of pairs breeding, 10,604,499,373; total of pairs, 137,858,491,849; number of birds (total), 275,716,983,698.

Now we know, officially, how many English sparrows there are or might be; the next thing is to determine in what manner they are to be disposed of. "Uncle Sam" has fought and overcome enemies worse than sparrows. He is not to be intimidated by these petty birds, even though they come in billions of flocks.

By circulars sent to all parts of the country the Government invited information as to the habits of the sparrow. The statements returned are made the basis of an indictment of which the following are the leading points: The English sparrow has expelled native songsters, which are unable to maintain their ground against his determined belligerency. Among the familiar birds once visiting our gardens and fields, but now less frequently seen, are robins, bluebirds, song sparrows, wrens, yellow-birds, orioles and others. These have been frightened away, often killed and their eggs and young destroyed and even eaten by these feathery cannibals. Gardens, fields and fruit trees suffer in the absence of insect-eating birds, and the sparrow eats birds, fruit, berries, grapes, peas, beans, grains, etc., and allows insects to prey at will upon them. If he ever had a relish for insects he has lost it and feeds instead upon the products he was expected to protect. He has not lived up to the contract under which his labor was imported. He defaces buildings. The trees in which he lives are often alive with caterpillars, who even spin their webs in the very homes of their supposed enemy. A street in Albany is especially pointed out as alive with sparrows, while elms and horse-chestnuts were stripped of their foliage by the tolerated insects. The sparrow and the caterpillar are in a "combine" against arboreal insects. These statements are established by the testimony of hundreds of careful observers, by expert entomologists and by conditions obvious to any one who will pay attention to the situation. To be sure the sparrow and the songbirds are often seen in association upon the same grounds, but the association is not friendly, as the cautious movements of robins and wrens indicate. They always keep an eye at least upon their foe and avoid his approach like a pestilence. The New York State Entomologist, Prof. Lintner, advises "a relentless war" upon these sparrows. Mr. Gurney, an English entomologist, says sparrows, in their best estate, do one-fifth of good to four-fifths of harm, and in many instances "they do nothing but harm." In England the damage caused by sparrows directly is put at several million dollars annually. The sparrow, true to the characteristics of his life, is in his death a delusion and a snare. His remains are sold in the markets under the posthumous title of "reed-bird," and some dealers report their sales by thousands every month. The sparrow is indeed an excellent article of food. There is no reason why he should not be toothsome. He is nurtured on the most approved diet, and he has ample time to wax fat and juicy.

The English sparrow is already under the ban of law. In New York State an Act passed last winter makes it a misdemeanor to feed or protect him. His destruction is legalized, and the way is clear to a general war of extermination. He is a wary bird and is "up to trap." He scents afar off the appliances that would disturb his peace. The Department of Agriculture suggests various expedients for disposing of this bird, his nests, eggs and young. They are to be attacked by day and by night. Their colonies may be easily destroyed by the

free use of water or by tearing them down with rakes. They may be fed in some convenient spot for a few days, at a regular hour, and then, when they are massed together, they can be killed with small shot. Nets may be spread for them or grain may be watered in a solution of nux vomica or arsenic and disposed in their feeding-places. These seem to be cruel methods, but a sparrow's life is no dearer to him than that of a rat or fly or a mosquito is to one of these interesting torments, whose destruction is undertaken as a matter of course. The safety of the people is the supreme law, and if the sparrow is the enemy of the gardener and the farmer, if he is to be classed with vermin, he must meet the doom of his pestilent class.

THE FIELD.

A Beet Sugarie Established at Watsonville.

According to the *Pajaronian* of last week, the first evaporator of the Western Beet-Sugar Co. is to be located in Watsonville. It is stated that at a meeting recently held the directors of the beet-sugar company met a number of committees from towns desiring sugar factories and tendering valuable sites and other considerations to secure the first evaporator. Dr. Ford offered on behalf of the citizens of Watsonville and Pajaro valley a site for an evaporator, and Mr. Spreckels then informed the other visiting committees that Watsonville had been selected as the place for the first evaporator, and that in time he would visit the localities represented and consider their advantages as locations for evaporators to be erected in following seasons.

The *Pajaronian* gives the following outline of the local aspects of the enterprise: Claus Spreckels and C. A. Spreckels have been in town since yesterday noon, for the purpose of signing contracts with the farmers to cultivate sugar beets next season. The contracts vary materially from those in use at the Alvarado factory, and are far more in the interest of the producer. Summarized, the farmer agrees to plant a number of acres in sugar beets in 1888, the seed to be furnished by the Western Beet Sugar Co.; he is to prepare the soil at the proper time, and is to carefully cultivate, thin out, and harvest the beets; to deliver the beets clean and in good condition, with the tops closely cut off, at the factory at Watsonville; and the amount to be delivered, to be increased or diminished as the requirements of the factory may direct. Beets weighing over three pounds, or those grown mostly above ground, or defective, and unfit to be manufactured into sugar, will not be received unless said beets contain at least 13 per cent of sugar, according to polariscope test. In the event of any earth being left upon said beets, the weight thereof shall be deducted from the total weight of said beets. The pulp is to be divided equally between the farmers' and the factory and the refuse lime is to be divided pro rata between the farmers growing the beets. The sugar-beet company agrees to pay \$4 per ton for all beets cultivated and delivered in accordance with the terms of the agreement, on the first day of each month after the beets are delivered, and it further agrees to pay a further sum of 50 cents per ton for each degree in polarization over and above 14 per cent; provided, however, that the coefficient purity of the same is not less than 84 per cent. It also offers a bonus of \$500 to the farmer, cultivating from 10 acres upward, who will raise the best crop of sugar beets in 1888—that is, showing the highest percentage of saccharine, and \$250 to farmer, cultivating from 5 to 10 acres, whose beets show, in that class, the greatest percentage of saccharine matter. This is an incentive to careful cultivation.

Contracts for nearly 1200 acres were signed yesterday, and it is probable that the balance of the required acreage will be obtained to-day. Mr. Spreckels will put in 250 acres on his Aptos ranch, but will not compete for the premiums offered. They are offered for the farmers of this valley.

Mr. Spreckels and son were accompanied by their draughtsman, Mr. Waters, and they jointly examined the site yesterday, with reference to the location of buildings. The company proposes to begin the work of grading as soon as possible, to be followed by the laying of foundations so as to have everything in readiness for the erection of buildings and the placing of machinery as soon as possible. The site comprises the John Wintgen tract of 15 acres, which cost \$8000 (and which, very fortunately, was bonded by Judge Gaffey two months ago); the Peckham property of six acres, \$5000; and 3½ acres of J. Kennagh's place, at \$500 per acre. The total cost was \$14,300. These tracts will be thrown into one, and it will have a long and ample railroad frontage, and thorough drainage to the slough. Water is abundant on this tract, and no better or more centrally located site could have been selected near town, and it is in every way satisfactory to Mr. Spreckels and associates.

OIL ON TROUBLED WATER.—The Nautical Society of Hamburg has offered a prize of 500 marks for the best essay on the subject of calming the sea by the use of oil. An exhaustive description of experiments of the effect of oil made up to the present time is required, also a criticism of the apparatus used thus far, and especially complete directions for its use by large steamers and sailing vessels.

THE STOCK YARD.

Curious Things About Shorthorns.

William Warfield, a writer on Shorthorns, presents the following interesting statements: In the early days of Shorthorns there was a tremendous preponderance of light colors. The cattle of the county of Durham and of the Ridings of Yorkshire—the parts of England from which the early Shorthorn breeders made their selections—were then, as now, red, white, and roan. It is said on good authority that there were also cattle which showed brown and black markings. The improvers had in mind the preservation of the two qualities of meat and milk. We are told explicitly that they observed the superior beef qualities of the light colors, and selected them as the progenitors of the improved cattle. In the early days white was more common than red, roans than any other two colors, with a strong majority of light roans. Among the reds the tendency was strongly toward yellow-reds. Many are described as yellow, some as dun. All dark colors were disapproved of. Nearly all the famous sires of the early days were white or light-roan, except James Brown's red bull and the great Hubback, which was yellow-red and white. Dark color was looked on as an indication of too much of the unimproved blood. This was objected to on its own account, and because the best judges esteemed light colors more highly for feeding and handling. After Shorthorns had gained a firm hold in America, many Western men began importing, and, ignorant of the historical value of light colors, and having a personal fancy for deep reds, they sought them in England. They were at first hard to find; easier, perhaps, than 50 years before, for there is a recognized tendency for a dark color to gain on a light when intermixed, but still very hard. The demand, however, as usual, created the supply, and breeders actually bred reds for the American market. The example thus set by these importers rapidly spread, and soon the attempt was made to create a prejudice against all colors but deep red and to put all others under the ban. This, of course, was resisted by all those who had the best interest of the cattle at heart, and the best judges, as well as the owners of roan cattle. To have disqualified roan Shorthorns would have been simply to have ruled out the best half of the breed. It might have proved the best thing possible for the Shorthorns, however, for if the roans had been cut off and bred separately by those independent of mere fancy they might have escaped the blight of speculation that began at this time, and have preserved a higher average excellence than has been maintained. The best judges still maintain the superiority of light colors, and, though largely banished from the show ring because the judges in many States cannot rid themselves of prejudice, they still assert themselves at fat-stock shows, and the roan Schooler and Cleveland are as incomparable in this day as the Durham ox and the "white heifer that traveled all over England as a show cow" were in theirs. There are hopeful signs that this prejudice is yielding to sound judgment. Men have ceased to expose their ignorance by claiming that white coats, which nature ever dons to save from Arctic colds, are signs of delicacy. Only two classes remain—the esthetic, who wants a red cow to harmonize with his green pasture, and the man who wants a red cow because he wants it, and it is nobody's business why he wants it red. Some day we will like tough beef, perhaps, but let us hope instead that we will learn to take a cow on her merit and not on her color, and if we like only red, to breed red, and sell red cows, without detracting from the merits or sale of our neighbors' roans.

Dehorning Cattle.

EDITORS PRESS:—In a recent issue of the PRESS I noticed an article on dehorning cattle. I have watched the progress of this seemingly powerful opposition in the East for more than a year. Some two months ago I came to the conclusion to try it, and sent to Mr. H. H. Haaff, Chicago, for his tools and book "On Dehorning." After making stanchions according to directions, and fixing the rope for holding the animal, I awaited a favorable opportunity to try the experiment. This morning was my chance, being slightly stormy, and having a dry cow besides the milkers in the corral, we decided to dehorn the old white cow. Father said she was too mean to be hurt, and we got her in the stanchions and tied, and I will admit I was very nervous at first, but before the first horn was off I was over that. I sawed both horns off in less time than I can write it, turned the animal loose, and she went out and began eating with the rest of the cattle. I will say right here that the pain, as compared with branding or castration, is as a drop to a bucketful, and they do not bleed scarcely any. I thoroughly agree with Bro. I. C. Steele in his opinion of the operation, and believe it should be practiced by every one, wintering stock and feeding them in barns or sheds. Not only will it be merciful to the cattle, but save 20 per cent of the feed. I think any one after reading and studying Mr. Haaff's book will be convinced that, as Mr. Haaff says, "it is a positive kindness to the animal."

Yours respectfully,

F. B. MORE.

San Ramon, Dec. 1, 1887.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Judge Blackwood at Oakland.

We give our readers a taste of the admirable speech delivered by Bro. W. O. Blackwood at the joint meeting of Temescal and Eden Granges, December 3d, and published in this week's *Patron*. After gratefully complimenting the sisters on the excellence of the table they had spread, and speaking of the State Grange's action in respect to female suffrage, he turned to "the day we celebrate," and his remarks were in part as follows:

The Order of the Patrons of Husbandry has already accomplished great things. Of these I will not now speak. Isaac Newton, when on his death bed, being congratulated on the great discoveries in science he had made, replied that in view of the immense field yet to be explored, he had merely toyed with the pebbles on the border. So in view of the immense work yet to be accomplished by the Grange organization, it has as yet only removed some of the obstacles found at the entrance of its field of labors. It is confronted on the one hand by the organized capital of vast resources and strength, and on the other, by the multitudinous element in the great labor centers of the country in which permeates to a most alarming extent the seeds of anarchy, looking to the dissolution of all present forms of government, and on its ruins organizing something new, and as, this element hopes, something more equitable. The Granger element of our country, as between the extremes of capital and labor, occupies a middle ground. By reason of their numbers and force of character, the Grangers of the country can hold in check the undue and oppressive encroachments of organized capital on the one hand, and the unruly and discontented labor element on the other. To accomplish this, he must rise above the plane of party politics, he must cease to shout I am for Paul, or for Apollon or for Cephas. He must cease to be a party man as such. He must rise to the plane of American citizenship and act as such. He must use his best efforts to secure as many Grangers as possible to seats in the State and National Councils. But his duty does not end here. He must appoint and send honest, trustworthy, intelligent members of the Order to the so-called third house to further legislate in the agricultural interests, or to prevent extravagant, injudicious and vicious legislation. In our own State we have had much of such legislation, among which, in my opinion, is the appropriating large sums of money from the State treasury to the support of district and county fairs, so misnamed. If properly named, they would be called district and county horse-races and general gambling resorts. In my opinion it is an outrage upon the moral sense of the people to tolerate much less to appropriate the public monies for any such demoralizing purposes.

Yes, if the Grange ever accomplishes the high purposes had in mind by the founders of the Order, it must become a potent factor in and about our legislative hall. It must see to it that capital shall not become the oppressor of labor, and, on the other hand, it must see that labor shall respect capital and not destroy it, that law and justice shall be dealt out to all with an even hand as far as human imperfection will permit.

TEMESCAL GRANGE had a harmonious election of officers at their meeting on Saturday last. It was voted to heartily accept the invitation of Eden Grange to have a joint installation of officers at Haywards on the second Saturday of January. Appreciating Brother Coulter's fine address on the anniversary of the Grange birthday, \$5 was voted toward paying his expenses, which it is hoped he will accept with the cordial good will of the Grange. It was also voted to discuss the tariff question at the next meeting, Saturday evening, Jan. 7th.

WORTHY MASTER OVERHISER has been visiting friends in Newark, N. J., and the State Grange at Trenton. He passed a night with Bro. Whitehead, N. L., and says he found him the brightest Granger he has ever met in the work of the Order. Then, after a trip to Brooklyn, N. Y., Bro. and Sister Overhiser accompanied the National Lecturer to the Pennsylvania State Grange, at Harrisburg, where they were pleasantly occupied at last accounts—Dec. 13th. They expect to get home again by the middle of January.

AGE OF THE ORDER.—In his able and interesting address at Sacramento's celebration of the Grange birthday, W. P. M. Johnston corrected an error into which a number of writers and speakers have fallen, concerning the age of the Grange. It is only 20 years old, and not 21, as has frequently been stated. It was on the 4th day of December, 1867, that the National Grange was organized at Washington, and the first board of officers installed.

JACOB HODGEN, of Frankfort, Ind., a member of the Grange and an occasional correspondent of the *RURAL PRESS*, is out here for a six months visit and was a welcome caller at our sanatorium a few days ago.

BENNETT VALLEY cordially invites all Patrons in good standing to attend their installation and harvest feast on the 7th prox.

Grange Elections.

LODI.—T. O. Shaw, M.; S. Ferdem, O.; Sister S. L. Aldrich, L.; C. W. Norton, S.; R. Pixley, A. S.; A. A. Gurnsey, C.; F. N. Smart, T.; J. D. Huffman, Sec.; C. P. Allison, G. K.; Sister Alice Allison, P.; Sister C. W. Norton, F.; Sister Nellie Hutchins, Ceres; Sister J. D. Huffman, L. A. S.

LUCERNE.—B. D. Vanderburg, M.; S. Walker, O.; F. S. Shore, L.; C. Paddock, S.; E. Walker, A. S.; Sister J. Van Tassel, C.; J. Van Vlear, T.; Sister M. Newton, Sec.; L. B. Coats, G. K.; E. Sellers, P.; B. D. Vanderburg, F.; L. B. Coats, Ceres; L. Richmond, L. A. S.

MAGNOLIA.—V. W. Still, M.; D. Bilderback, O.; W. H. Cunningham, L.; C. C. Ragedale, S.; Wm. Gautier, A. S.; J. R. Nickerson, C.; Mrs. A. M. Still, Sec.; H. A. Curtis, G. K.; Mrs. M. L. Bilderback, P.; Miss Susie Still, F.; Miss Eva Dickson, Ceres; Mrs. M. F. Gautier, L. A. S.; G. W. Cunningham, Trustee.

MARCH.—W. W. Wilbur, M.; R. K. Stevenson, O.; May Patridge, L.; A. W. Cilley, S.; R. A. Moon, A. S.; Kate Wilbur, C.; E. A. Noyes, T.; S. F. Noyes, Sec.; B. F. Stevenson, G. K.; Nannie Stevenson, Ceres; Annie Gilpatrick, P.; Lydia Porter, F.; Lizzie Stevenson, L. A. S.; A. M. Porter, Org't.

PLACERVILLE.—P. J. Isabel, M.; Albert Kramp, O.; A. S. Cook, L.; Wm. Cook, S.; J. C. Marsh, A. S.; Mrs. Wm. Hendrix, C.; J. P. Allen, T.; P. J. Munson, Sec.; Albert Norris, G. K.; Mrs. A. Kramp, P.; Mrs. Chas. Sandfoss, F.; Mrs. A. E. Olmstead, Ceres; Mrs. Combellack, L. A. S.; Miss Lina Lapham, Organtist; Jacob Lyon, Trustee.

PLUMAS.—William A. Sperry, M.; R. G. Hamlin, O.; A. B. Huntley, Lec.; Mrs. Hattie E. Bringham, S.; A. Kerby, A. S.; Miss Jennie Trimble, C.; W. E. McNeil, T.; M. B. Bringham, Sec.; Alexander Kerby, G. K.; Miss C. W. Huntley, P.; Mrs. W. E. McNeil, F.; Mrs. J. R. Enasco, Ceres; Mrs. Annie Ross, L. A. S.

SAN JOSE.—K. Pomeroy, M.; L. J. Watkins, O.; A. R. Woodhams, L.; D. H. Coates, S.; Edward Webb, A. S.; Sister D. H. Coates, C.; G. W. Tarleton, T.; O. F. Alley, Sec.; H. G. Keesling, G. K.; H. Pomeroy, Ceres; J. R. Holland, P.; N. Lillick, F.; Jennie Sanders, L. A. S.

SANTA ROSA.—Edward W. Davis, M.; Chas. D. Bonner, O.; Jonathan Roberts, L.; Eldad A. Rogers, S.; L. J. Hawkins, A. S.; Mrs. J. H. Newman, C.; John Strong, T.; Miss Martha Lumsden, Sec.; Lewis F. Chinn, G. K.; Mrs. S. J. Allen, P.; Miss Fannie Gamble, F.; Miss Ida Goda, Ceres; Miss Ella Sutherland, L. A. S.

STOCKTON.—C. Gratton, M.; M. E. Alling, O.; Mrs. E. M. Stowe, L.; Mrs. M. F. Merrill, S.; Miss Lizzie Root, A. S.; Mrs. M. Kuhl, C.; Joseph Adams, T.; M. T. Root, Sec.; Mrs. J. L. Beecher Sim, G. K.; Mrs. James Marsh, Ceres; Mrs. Eva J. Sturcke, P.; Miss Anna Smythe, F.; Mrs. S. P. Sabine, L. A. S.

TEMESCAL.—Saturday, Dec. 17: S. Goodenough, M.; W. Renwick, O.; N. Sewall, S.; A. T. Dewey, A. S.; Mrs. S. H. Dewey, O.; L. Frink, T.; Mrs. N. G. Babcock, Sec.; John Paine, G. K.; Mrs. Eliza Brooks, Ceres; Mrs. Whiddon, P.; Mrs. John Paine, F.; Mrs. Jones, L. A. S.; Miss Anita M. Dewey, Org't; W. Renwick, Trustee.

WALNUT CREEK.—J. Foster, M.; O. Sharp, O.; A. Holbrook, L.; J. W. Jones, S.; T. B. Jenkins, A. S.; Mrs. M. Larkey, C.; J. Larkey, T.; Miss M. Baker, Sec.; J. Baker, S. K.; Miss E. Kirch, P.; Miss L. Sharp, F.; Mrs. C. S. Whitcomb, Ceres; Mrs. T. B. Jenkins, L. A. S.

VALLEY.—Frank L. Loucks, M.; C. T. McClellan, O.; C. N. Wright, L.; J. Lieber, S.; P. G. Loucks, A. S.; Mrs. D. B. Dudley, C.; Chester Dudley, T.; E. A. Majors, Sec.; Geo. P. Loucks, G. K.; Flora Minaker, Ceres; Elise Gambs, P.; Mattie Wright, F.; Helena Gambs, L. A. S.; J. T. Walker, Trustee.

NOTE.—The Secretaries of Granges are requested to forward reports of all election and other matters of interest relating to their Grange and the Order.

Grange Installations.

Wheatland—Dec. 31.

Alhambra—Jan. 7.

Bennet Valley—Jan. 7.

Danville—Jan. 7.

Yuba City—Jan. 7.

Eden—Jan. 14.

North Butte—Jan. 14.

Santa Rosa—Jan. 14.

Valley—Jan. 28.

THE JOURNAL OF PROCEEDINGS at the late session of the National Grange is already printed, and will soon be mailed, together with that of the California State Grange for 1887, to Masters and Secretaries of this jurisdiction. Other Patrons can obtain copies of either or both, while the limited supply holds out, by sending stamps for mailing-expenses to A. T. Dewey, Sec. Cal. S. G., 220 Market St., S. F.

MERCED GRANGE, says the *Argus*, is taking steps to have 100 colored servants brought to Merced county from the South, to take the place of the Chinese now employed.

DR. TRIMBLE, the National Secretary, writes: "California did grandly at Lansing."

JUDGE W. O. BLACKWOOD, master-elect of Eden Grange, is on a tour to San Diego. He will visit Elsinore and other places and return by Jan. 14th for installation of officers. We hope our readers will enjoy the benefit of some of his notes of observation.

THE Lakeport *Avalanche*, having seen in our columns the likeness of the Pomona of the State Grange, remarks that Mrs. Roache is a fine, intellectual-looking lady, and the short biographical sketch proves her to be all she looks.

LUCERNE GRANGE is reported by Sister Minnie Newton, Secretary *pro tem*, to be in a thriving condition and to have given a successful public entertainment on the anniversary of the Order.

GRANGES all over the State are electing officers for the ensuing year, and making quarterly reports more regularly and promptly than has happened in California before for many years.

BRO. WEBSTER's family, who are still at East Oakland, expect him up from Creston for a holiday's visit.

EDEN GRANGE has invited Temescal to a joint installation and Harvest Feast, Saturday, Jan. 14th.

The Oroville Fair.

The First Butte County Citrus Fair, for which so lively preparations have been making, was happily opened on Tuesday. The display, as previously announced, is made within a canvas tent, covering a space 50 by 150 feet, and high enough to inclose half a dozen well-grown bearing orange trees, 20 to 25 feet in height, loaded with their ripened fruit.

The whole interior is neatly trimmed with boughs and festoons of evergreens—fir, cedar, citrus, and pepper—set off with bright-hued oranges, lemons and holly berries, and brilliantly electric-lighted.

The exhibits are said to embrace fully 40,000 oranges and lemons, contributed by about 400 different persons, and arranged in many ingenious and pleasing designs.

Although the fair is, in name and character, dominantly citrus, there are other fruits in great diversity and abundance.

Fine pomegranates and handsome Japanese persimmons of many varieties are there. Yellow pippins, red Astrachans, and about 30 other kinds of apples are displayed. Winter pears, fresh grapes, figs and tomatoes, almonds, chestnuts, black and English walnuts, pecan-nuts and olives are among the products to be seen, while limes attest the mildness of Butte county's climate. A fine collection of grains grown in the district interests the farmers; and the showing of flowers and pot-plants is greatly admired.

Gov. Waterman, before the formal opening took place, had already telegraphed to the *S. F. Chronicle*: "The citrus fair at Oroville has the finest display of fruits and fancy designs I ever saw. It will pay any one to come and see it." At the exercises Tuesday evening Senator Jones called the closely packed assemblage to order and introduced the Governor, who made an informal address, in which he alluded to his mining experiences on the Feather river and at Bidwell's Bar. He said he had been at the last-named place that very day, but all things had changed, and now the far-famed orange tree was the only landmark recognizable. "That tree is the pioneer of the grand product and industry being celebrated here to-night."

He said that he visited this section last winter and was satisfied it possessed as good a soil and climate for oranges as could be found in the State. The completion of the railroad to the north opens up a new and unlimited market for citrus fruits throughout the Northern and Northeastern States and Territories. He advised every man and woman to engage in orange-growing, as it would soon become a very profitable industry, and an over-supply could not be grown. He said he would not bother much with lemons and limes, as they were very tender growers, but the orange tree was hardy.

He advised growers not to plant anything but budded trees, as they would commence to bear in two or three years, while seedlings would require eight years or more before bringing returns.

He said that while he believed that Butte county was going to rival any part of the State in producing citrus fruits, we need not have any strife with any other section. He belonged to California and not to any particular corner of it. All the State was grand, and he would sooner live in the poorest place in California than in the best place east of the Rocky mountains. "Don't tell here, in Butte county," he continued, "how you can beat Los Angeles, or San Bernardino, but go to work and beat them with your superior fruits and products, and when you hear of anybody in the southern part of the State talking against this part of the State, you may know that they are either weak-minded or real-estate agents, for most of the people there are above such a dishonorable course."

Remarks of congratulation were also made by Ex-Gov. Perkins and Hon. J. K. Luttrell, and the latter is booked for another address during the fair, which is to continue until Saturday evening.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

STUMP-LIFTING.—Livermore *Herald*: J. D. Smith has had considerable experience lately in removing oak stumps by the slow method of grubbing them out, and has been desirous of securing a more expeditious way. So Thos. Varney, president of the Bank of Livermore, a notable inventor of important processes in the manufacture of giant powder, sent up an expert workman thoroughly familiar with the use of the explosive. A monster stump, solid and tough, the remains of an enormous oak which formerly stood on the Bowles place, was selected for the experiment. An excavation was made and a small shot put directly beneath the stump. This was set off and considerably enlarged the chamber, which had originally been made with a crow-bar. In this chamber was placed a package containing 8 lbs. of low-grade giant powder, costing 9 cents per lb. When this was exploded that stump rose into the air, and the work of a week or 10 days was accomplished in less than a second. The result was a complete success, and in order to allow our farmers a chance to see the work done by the charge, he has left the shattered stump just as it lay after the explosion.

Amador.

SEEDLING ORANGES.—James McCauley, an Amador pioneer and one of the solid citizens of Ione, sent the *Record Union* a fine box of oranges, Dec. 12th. In the letter which accompanied the fruit he said: "The oranges I send are 'seedlings,' grown within the limits of Ione City, on gravelly hillside land, with but little irrigation and no care. The tree from which they came is seven years old, planted by Phil Kennedy as a curiosity in his yard. I send this sample as a simple proof of what our gravel foothill lands are capable of producing. In addition to these oranges, we have for the last few days been enjoying the luxury of green peas, grown in the hills near Ione. It seems to me that our agricultural people are behind the times in developing the resources of our chaparral lands. But little irrigation is necessary to grow fruits or vegetables on these foothill lands, and that only in the early summer when water is abundant. Innumerable ditches, formerly used for mining purposes, run all through the foothills of Amador, and but little repairing is needed to put them in order. With the waning of our placer-mining interests, and its network of ditches, it seems opportune that the miner should turn his pick into the pruning-hook, and from the wreck and wash of his ancient gold mine he should now gather a harvest of golden oranges. True, there is no vast area of these lands capable of producing oranges, but there are numerous little vales and hill-sides susceptible of their highest cultivation, and when taken in connection with the cultivation of deciduous fruits and vegetables, are sufficient for homes for many families."

Contra Costa.

MANGOLDS.—Antioch *Ledger*, Dec. 10: Monday morning J. T. Renas brought to Antioch a wagon-load of mangel-wurzels, every one of which was a giant. One beet weighed by L. Meyer tipped the beam at 59 pounds, and it was taken at random from the top of load. The monster roots were raised on the sediment land in the Marsh creek country, not far from Iron House district schoolhouse. Mr. Renas says he raises from 35 to 36 tons of beets per acre and from 25 to 30 tons of carrots.

Lake.

WINTER SPECIMENS.—Clear Lake *Press*, Dec. 17: Mr. A. Anderson has sent us from his ranch near Copsey Springs a bouquet of sub-tropical plants grown in the open air and gathered in December after the coldest weather known here for years, and which shows no signs of frost. The collection contains grapes in green foliage, branches of apple, peach, orange and other fruits, with fig branches bearing fruit, roses, castor beans and many plants which we cannot name.

EARLY LAMBS.—Already young lambs are making their appearance among many sheep folds here. Rather early, we should think, judging from the new feed but recently started, and unless much attention is given them both young and old will perish before shearing time arrives.

Mendocino.

SHEEP DECREASING.—Covelo correspondent Ukiah *Press*: There are not as many sheep in Round Valley township by 40,000, as there were five years ago. This great decrease has been caused principally by lack of care. Years ago herding sheep meant staying with them in the day, and corralling them at night. This has been discontinued, and now they are turned loose upon the ranges like a band of Spanish cattle, and are allowed to go where they please. The consequence is they are destroyed by bears, panthers, coyotes, eagles, etc., and are absolutely unprotected. The sheep-raiser is fortunate who can make his old stock good at the end of the year. Under the old system it was not uncommon to have an increase of 70 or 100 per cent.

Los Angeles.

EDITOR *PRESS*: Farmers hereabouts are busy as bees sowing barley and wheat. The ground has been in excellent condition since the rain; but it is getting pretty dry again, as the north wind prevailed yesterday and last night beyond

anything we have had from that direction since I have been here—some two years. There will be a much larger acreage than usual sown to barley and wheat in this valley this season and less corn planted. Vineyards are being dug up preparatory to sowing alfalfa and other crops, the reason for which is the low price of grapes and mysterious death of the vines. D. J. O.—*Spadra, Dec. 14th.*

ENORMOUS ROSE-BUSH.—Orange *Tribune*: There is a climbing rose-bush over the door of Henri F. Gardner's home, of the white La Marque variety, which covers the entire front of the house, a surface of 884 square feet. The main stem is 56 feet long and measures 19½ inches in circumference. It was planted 12 years ago and commemorates the birth of Mr. Gardner's oldest child.

Napa.

ST. HELENA SAMPLES.—Independent: Mr. Beach sends to the State Board of Trade rooms, S. F., to-day, for W. H. Castner, the following articles: Italian chestnuts, English walnuts, almonds (soft-shell), popcorn, Dent corn, late seedling prunes, late wild plums, Japanese persimmons, Italian medlar or bread-fruit, Texas streaked apples. Let others come to the front at once and not have Napa's space lying idle.

Placer.

EXHIBIT SENT SOUTH.—Auburn *Republican*, Dec. 14: The carload of oranges for Los Angeles was made up at Newcastle yesterday and went off by the afternoon passenger train. It contained nearly 25,000 oranges and a large quantity of persimmons, raisins, olives, etc. A large banner was attached to the car, reading "Placer County Citrus Products for Los Angeles." The gentlemen accompanying the exhibit are E. W. Maslin, J. J. Morrison, J. F. Madden, P. W. Butler and Robert Jones. W. B. Lardner will go down next Friday.

EXTENDING IRRIGATION.—D. Van Lennep is making a preliminary survey for a new ditch from the point where the Bear river branch crosses the Grass Valley road to the vicinity of Lincoln. The present ditch to Lincoln was constructed for mining purposes in early days and did not take the course of the highest ground. The new ditch is designed to follow the trend of the highest hills close along this side of Bear river so that water may be conducted to thousands of acres now given up to brush and the grazing of a few head of stock. The soil in that locality is good, like all the foothill soil, and if the new ditch is built this spring, as is now the intention, a new fruit-growing district will be opened up which will afford room for hundreds of new homes.

Sacramento.

RAISINS.—Bee: It will surprise most people to learn that in the month of November last 788,370 pounds of raisins were shipped from Sacramento. In October the shipments were even larger. About all of this heavy product is from the raisin belt included in the strip a distance of 20 miles west of Sacramento. It may be asked why more raisins are not packed in Northern California. The reason is plain enough. The finest shipping grapes in the State are grown in this section, and our vineyardists have preferred to ship to Chicago, Boston and New York the product right from the vine.

San Joaquin.

WOODBRIDGE DOTS.—Cor. *Lodi Sentinel*: The irrigation floodgates have been opened, and our summer-fallowed land is receiving great benefit therefrom. . . . In the yard of the Plummer hotel is a small orange tree which is well loaded with luscious fruit. Some of the oranges are ripe and of excellent flavor. . . . Our town is flooded with excellent mountain apples, which for flavor cannot be beaten.

STEAM PLOWING.—On his ranch about six miles southeast of Lodi, Robert Coffee has running an eight-horsepower traction engine, drawing two four-point ten-inch gangplows, which turn over about 20 acres of land per day. Two men are all that are needed to run the business, and the cost will not amount to 50 cents per acre. Indeed, the parties in charge agreed to plow 18 inches deep for Middlekauff & Co. for 50 cents per acre.

Santa Barbara.

GLOBE BEETS.—Lompoc *Record*: Mr. Shoults has brought in a sample of Globe and Tankard stock beets such as he has a small 30 acre patch of. The Globe weighs 60 pounds and is not the largest in his field by any means.

Santa Cruz.

A CHAMPION SPUD.—Surf: Not peerless in name only, but in attainments also, was the wonderfully huge and handsome potato from the ranch of K. F. Redman in the Pajaro Valley, presented to the Development Association by the grower. This potato measures 29 inches in circumference the long way and 14 inches the other, and weighs 4½ pounds. It is not a monstrosity in shape nor an aggregation of tubers grown together, but simply the growth of one season from one eye, smooth, fair, and perfectly sound.

Santa Clara.

PRIZE ORCHARDS AND VINEYARDS.—San Jose *Herald*, Dec. 14: The committee appointed at the late fair have made their awards on sweepstake orchards and vineyards, as follows: Vineyards—C. P. Howes, 80 acres, on Saratoga and Mountain View road in Collins' School District, 1st premium, \$75; Mrs. E. Cornish, 40 acres, 2d premium, \$25. Orchards—J. H. Flickinger, on Berryessa road and Lundy Lane,

220 acres, 1st premium, \$75; Orvis Stevens, Coyote, 35 acres, 2d premium, \$25.

GILROY CANNERY.—San Jose *Herald*, Dec. 17: Yesterday articles of incorporation of the Gilroy Fruit-packing Co. were filed with the County Clerk. The announced objects of the company are to carry on a general manufacturing and merchandising business in canned and dried fruits, vegetables, etc. The capital stock is fixed at \$20,000, divided into 800 shares of the par value of \$25 each. The Directors are O. M. Welburn, James C. Zuck, L. A. Whitehurst and Thomas Rea of Gilroy and William Buck of San Felipe.

Solano.

EDITORS PRESS: The nights are cold and frosty without much signs of rain. The roads are good, but rough. The grass is growing rapidly and the hills look quite green in places. Everybody is busy. Those who have ground to plow for hay are plowing as fast as possible. We have had between two and three inches of rain, and the ground plows well. Adobe lands are working exceptionally well, as they are not wet through, and "doby" never does work well unless it can be plowed between the wet and the dry.

Quite a large number of trees will be set out near here this season. W. B. Long will set out 3000 peach trees. There is much more demand for peach trees than for apricots. Parties in S. F. are offering to make contracts for dried peeled peaches here at 18 and 20 cents per pound, and take all that can be delivered for the next five years. There is a large profit in raising and drying at these prices, and quite a number will set out peach orchards who would not have done so otherwise.

A large portion of California will raise good apricots, but the number of acres that will raise good peaches is comparatively small.—G., *Vacaville, Dec. 20, 1887.*

Sonoma.

WILL APPLES PAY?—*Courier*: A gentleman living not far from Petaluma has about ten acres mostly in apple orchard. He will sell this year over 5,000 boxes of apples. He knows how to pack and ship his fruit and having good varieties always gets the best price. He estimates his income this season over expense at \$5,000. This will give him \$500 per acre. But suppose his crop would only bring in one-fifth of this sum—it would still pay better than grain or potatoes. When men say that apples properly selected and cultivated will not pay, they don't stop to consider. An old apple grower informs us that they will pay even if the crop has to be sold for an average of 25 cents a box.

PICKLING OLIVES.—S. Rosa *Democrat*, Dec. 17: Guy E. Gross, has finished harvesting the crop from his large olive orchard on Rincon Heights. The olives are well developed, and have arrived at a perfect maturity. The whole crop will be pickled.

Sutter.

THROUGH LAVA TO WATER.—Noyesburg Cor. *Farmer*: Many of the wells about the Buttes have failed to supply the usual amount of water this season. I have a dug well, 34 feet deep, and had a windmill in it until a year ago. It not affording sufficient water, I put in a steam pump which worked very finely, but would pump the well dry in 10 or 15 minutes. I concluded to bore deeper—should have dug deeper but for the hardness, which was of lava formation, and the trouble of keeping the water out while digging. L. P. Denney of Gridley started a ten-inch hole and drilled four feet, but making slow progress, concluded to try a five-inch hole. This he continued to the depth of 36 feet, all the way through lava, being satisfied that it would supply all the water needed. We replaced the pump and pumped four hours with no apparent diminution of the water, in the meantime filling my tanks, which hold 6500 gallons, with pure, cold, soft water.

ARIZONA.

OAT HAY.—Florence *Enterprise*: The experience of the farmers of this valley in growing oats has been somewhat varied. Some of them met with no encouragement, and abandoned all efforts in that direction, while others pronounce it the best and most profitable forage crop that can be cultivated. The latter, however, raised oats exclusively for hay and harvested very heavy crops. Whether satisfactory results would have attended a mature crop of oats after the thrasher had separated them is still an uncertain question, but there is no good reason assigned for any failure in their cultivation.

ALFILERILLA has made its appearance in many places along the San Pedro and adjacent ranches. It is now several inches high and furnishes the best of feed for cattle. Ten years ago not a single spear of alfilerilla existed in Pinal county, but it gained a foothold from a flock of sheep brought from California to Canyon de Oro, and from this small beginning it is rapidly spreading over the country this side of the Santa Catalinas.

FIG ROOTS.—The roots of the fig-tree sometimes reach down in the ground to an astonishing depth after moisture, and almost rival the blue-gum in this respect. In repairing his pump placed 12 feet below the top of the well, Mr. J. C. Harris found a few days ago that the roots of an adjacent fig-tree had followed the curbing down to that depth and possibly extended further. This is undoubtedly the secret of the wonderful success of the fig in this valley, as its roots seek the moisture from great

depths, and eventually become independent of the surface irrigation.

NEVADA.

INDIGNANT SHEEPMEN.—The sheepmen of Washoe county are up in arms against the railroad company, and many of the largest operators have decided that hereafter they will not lease land for grazing purposes, and will drive their flocks elsewhere. They complain that, although they pay the company the rental demanded, no protection is afforded them in the event of other sheepmen trespassing on the leased lands, which is not infrequent. The lands mentioned are those which the railroad company refuses to pay taxes on, and, in the language of a sheepman: "If the railroad company refuse to pay taxes on the land, what right has it to lease them?" The above conundrum is agitating the assessor's mind, and it is thought the courts will have to solve it.

Be Careful With the Gas.

Last week two Chico ladies came down to San Francisco to do a little Christmas shopping together. In the day-time they were out looking around and making their purchases, and at night they went to sleep at a private lodging-house, where, in the morning, they were found dead in their bed, having been suffocated by escaping gas. It is inferred that one of them blew out the light on retiring instead of turning the stop.

We note this sad occurrence in order to caution every one who goes from a place where gas-lights are not used, to visit the city where they are used—to caution him or her that gas-lights must always be extinguished by carefully shutting off the gas, and never by blowing out the flame. The latter is suicidal. And it is necessary not only to see that the light goes out when the stop is turned, but also to make sure that the stream of gas remains cut off; for some fixtures are defective, and allow the stop to be turned too far around.

Recollect this when you visit the city. If need be, ask some one at the house where you lodge to show you just how to handle the gas fixtures. It is a matter of life and death.

Silviculture Exhibition in Brussels.

EDITORS PRESS: At the great International competition of Science and Industry to be held in Brussels in 1888, there will be a competition in Silviculture, the nature of which is indicated by a circular just issued. Applications must be filed before January 15, 1888, and entries made before April 15, 1888, with Armstrong, Knauer & Co., 822, Broadway, New York. The importance of Forestry is becoming better recognized every day. Already several Forestry Bills have been introduced into Congress, and it will not be long before there will be a demand at paying rates for those skilled in Silviculture. Our forests protect our valleys from torrents and keep up the flow of our springs and streams through the dry season. As they protect us so we must protect them. Forestry offers a promising career for young men and for those skilled in it in this country. The Brussels Exhibition holds out fine inducements to Foresters. It will pay to take an active interest in its Silviculture competition.

ABBOT KINNEY,
Chairman late Board of Forestry.
Lamanda Park, Cal.

We would print the circular to which Mr. Kinney alludes if it were possible to give space to it. Suffice it to say that provision is made for competitive exhibition of almost everything that can be thought of concerning the art and science of forestry. The circular may be seen at this office, or any one interested can no doubt get a copy by writing to the American agents for the Brussels Exposition, Armstrong Knauer & Co., 822, Broadway, N. Y.

SOLDIERS' HOME AT SANTA MONICA.—The Board of Managers of the National Home for Disabled Soldiers has located the Pacific Coast Branch at Santa Monica. The people of that locality offered as an inducement to make the selection 350 acres of land, worth \$300 per acre, besides \$100,000 in cash. General Black, one of the Board, says the climate is perfect, and the site, though it overlooks the ocean, is sheltered by the mountains, and is easily accessible by railroad. The Commissioner also added: "California cannot be over-praised. It is a land of oil, wine, fruits and flowers, with the riches of Ophir, and the most energetic people in energetic America."

GRAPE GROWERS' MEETING.—A regular meeting of the Grape Growers' and Wine Makers' Association of California will be held at the Grand hotel, San Francisco, on Tuesday, the third day of January, 1888, at 11 o'clock A. M.—E. H. RIXFORD, Secretary.

THE northern citrus belt means to be represented in Southern California. Marysville sends ripe oranges, lemons and Japanese persimmons to be shown in Los Angeles, and the Placer Board of Trade is this week dispatching thither a carload of citrus exhibits.

A FINE life-size portrait of Queen Victoria, in colors, surmounts the calendar for 1888, with which Jos. A. Hofman of this city reminds his journalistic friends that he keeps books, maps, and stationery at 208 Montgomery street.

California Dried Fruits and Nuts.

Review of the Production of 1887.

George W. Meade & Co. of this city public service by the care they take in preparation of a general review each year of the California production of dried fruits and nuts. We are favored with advance proofs of their review for 1887, which our space does not allow us to present in full, but we give what seems to us the essential parts:

General Estimate of the Product of 1887.

			Pounds.
Raisins, 20th boxes..	800,000	Nectarines, sun-dried.....	100,000
Honey extracted	Lbs. 1,090,000	Figs, ".....	90,000
Honey, comb. ".....	250,000	Apples, evaporated....	550,000
B. eswax ".....	25,000	Apricots ".....	3,000,000
French Prunes ".....	1,750,000	"bleached..	50,000
German Prunes ".....	75,000	Peaches, evaporated, peeled.....	500,000
Apples, sun-dried.....	200,000	Peaches, evaporated, unpeeled.....	750,000
Peaches ".....	1,750,000	Plums, evaporated.....	50,000
Plums ".....	400,000	Nectarines ".....	50,000
Pears ".....	40,000	Walnuts.....	1,500,000
Grapes ".....	800,000	Almonds.....	500,000
Apricots ".....	200,000	Peanuts.....	250,000

California Raisins.—After a careful review, we estimate the out-turn for 1887 at 800,000 boxes, and divided as follows:

Fresno District, boxes.....	350,000
Tulare District, ".....	10,000
Riverside District, ".....	180,000
Orange and Santa Ana District, boxes.....	85,000
San Diego District, boxes.....	20,000
San Bernardino Co., boxes (outside of Riverside District).....	10,000
Yolo and Solano, boxes.....	125,000
Scattering—Yuba, Butte, Sacramento, Placer, etc., boxes.....	20,000
Total, boxes.....	800,000

Owing to heavy and untimely rains which did great damage in some of the largest raisin sections of the State, the output fell considerably short of calculations made early in the season, and which were based on the heavy yield of the vines. This, however, is not apt to often occur, and had it not been for this unfortunate turn of affairs the product, as at first estimated, would undoubtedly have reached 1,000,000 boxes of 20 pounds each.

The consumption of California raisins on the Pacific Coast and Territories we estimate at 100,000 boxes yearly.

As was the case last year, it will be noticed that Fresno again heads the list, and the development of the raisin industry in that portion of the State is not only wonderful, but startling. A few years ago Fresno county was looked upon as a barren plain, but to-day it is the great raisin section of California, and within a few years promises to be the raisin section of the world. It is in fact the home of the raisin, the apricot, the peach, and the nectarine; and all these fruits not only grow there in the greatest profusion, but they are ready for Eastern shipment from two weeks to a month earlier than any other portion of the State.

The outlook for the raisin industry of California is more than brilliant. We have the U. S. for a market, and when we have supplied that, we can go abroad. The writer of this stated a few years ago that it was only a question of time when California raisins would drive the imported from American markets forever. That time is rapidly approaching. It may be of some interest to know what quantity of fresh Muscat grapes were consumed in making these raisins this year. Here are the figures: 16,000,000 pounds raisins equaling 55,000,000 pounds of fresh grapes.

This will equal 3000 cars of green grapes alone for raisins, but it must be remembered that this does not include the great trains of these Muscat grapes shipped East in a fresh state, nor does it include the vast quantities used for home consumption and in canning, etc. Truly this is a wonderful land.

At present stocks here are about exhausted, and we shall enter the new year with small supplies and firm in the faith that next year with the new vineyards coming into bearing, and good weather, that California will turn out in the neighborhood of 1,500,000 boxes of raisins or 30,000,000 pounds, consuming in their manufacture at least 105,000,000 of fresh Muscat grapes.

We also append herewith the production of California raisins, from the year 1873 to 1887, showing the growth of this industry:

boxes.	boxes.
1873.....	6,000 1881.....
1874.....	9,000 1882.....
1875.....	11,000 1883.....
1876.....	19,000 1884.....
1877.....	32,000 1885.....
1878.....	48,000 1886.....
1879.....	65,000 1887.....
1880.....	75,000

Previous to 1873 but few raisins were put up here and as might be supposed of very inferior quality. The product continued to increase slowly until the year 1882, when new vineyards coming into bearing, it jumped rapidly until present figures were reached.

California Prunes.—The out-turn this year we estimate at 1,750,000 pounds. This was the "off" year for prunes and the crop was some less than last year, though in size the fruit generally run larger and better and has brought greatly enhanced prices, so the deficiency in quality has to a considerable extent been recouped by the increased value. We write on the California prune industry with as much pleasure as we do on raisins, for both

(Concluded on page 511.)



A Christmas Idyl.

[Written for the RURAL PRESS by Mrs. M. F. ROWE.]

Go sound the loftiest music,
And sing the grandest song,
That as the surging ocean,
Shall stir the soul's emotion
As its chorus rolls along.
Yet, let it be sweet and gentle,
Soothing the heart to rest;
And full of joy and gladness,
Banishing care and sadness;
Such as children love the best.

Hark! o'er the plains of Judah,
The chorus loud and long;
As rising high and higher,
From bright, celestial choir,
Bursts forth the joyous song.
A pause—a hush—a silence—
Then, a cadence low and sweet;
O'er all the senses stealing,
At vesper bells soft pealing
The echoes clear repeat.

"Glory to God in the highest!"
Angels rejoicing sing;
"For blessed peace is given
On earth as 'tis in heaven,
To-day is born a King."
Oh! wondrous heavenly music,
The echoing hills repeat;
Never can earth-born chorus,
Excel that anthem glorious,
So grand and yet so sweet.

Tell me a simple story,
A story, strange, but true;
Of heroic self-denial,
Of victorious faith in trial,
A story old, yet new.
Let it be full of wonder,
More than in fairy tale;
Yet, let its truth and beauty,
Lead in the path of duty,
With a power that cannot fail.

In language plain and simple,
I read of a wondrous life;
Of One, most pure and holy,
Who dwelt among the lowly.
Who, in this world's mad strife,
From turmoil, sorrows, cares,
Offered a perfect rest;
Brought joy to hearts so weary,
Light, where 'twas dark and dreary;
Spoke peace to troubled breast.

Go, and from quarried marble,
Carve me a form in stone;
That above all else shall tower,
That shall show the skill and power,
Of a Master hand alone.
A stone that shall stand unshaken
By the dashing waves of time;
That through all coming ages
The thought of men engages;
Majestic, grand sublime.

Then from the quarried marble,
A form rose, grand and fair;
Telling a wondrous story,
Crowned with eternal glory,
Behold it standing there,
Rising above life's ocean,
Where angry billows toss
Above the clouds that lower,
Rising in strength and power,
That form—a simple cross.

Paint me a lovely picture,
A beautiful scene and fair:
That, to weary, longing eyes,
Shall be a glad surprise,
As they gaze in wonder there.
A picture all resplendent,
With glorious sunshine bright,
That shall cheer despairing sorrow,
Pointing onward to to-morrow,
When darkness yields to light.

See, on the glowing canvas
Appears a beautiful scene;
A scene of early morning,
Bright flowers the earth adorning,
The hillside clothed in green;
The sun's first rays appearing,
Dispelling mists and gloom;
The form of One, all glorious,
Rising o'er death victorious,
An open, empty tomb.

Oh! art and rhyme and music,
Combine to tell his fame!
Who, from the courts of glory,
Repeat, ye winds, the story,
Unto our dark earth came.
Come, mortals, come, and gladly
Your choicest treasures bring;
Worship in awe before him,
With holy joy adore him,
To-day, accept your King.

Grass Valley.

INK AND PAPER ON THE EYES.—The revived discussion as to the combinations of ink and paper least trying to the eyes of readers has, in this country, brought into public notice newspapers printed with black ink on red and green paper. A German printer of Arnheim, on the other hand, enthusiastically advocates the use of blue ink upon green paper as the least hurtful tints for the eyes to dwell upon.

Christmas Among the Blizzards.

A Strange Story for Young California Readers.

[Written for the RURAL PRESS by PIONEER.]

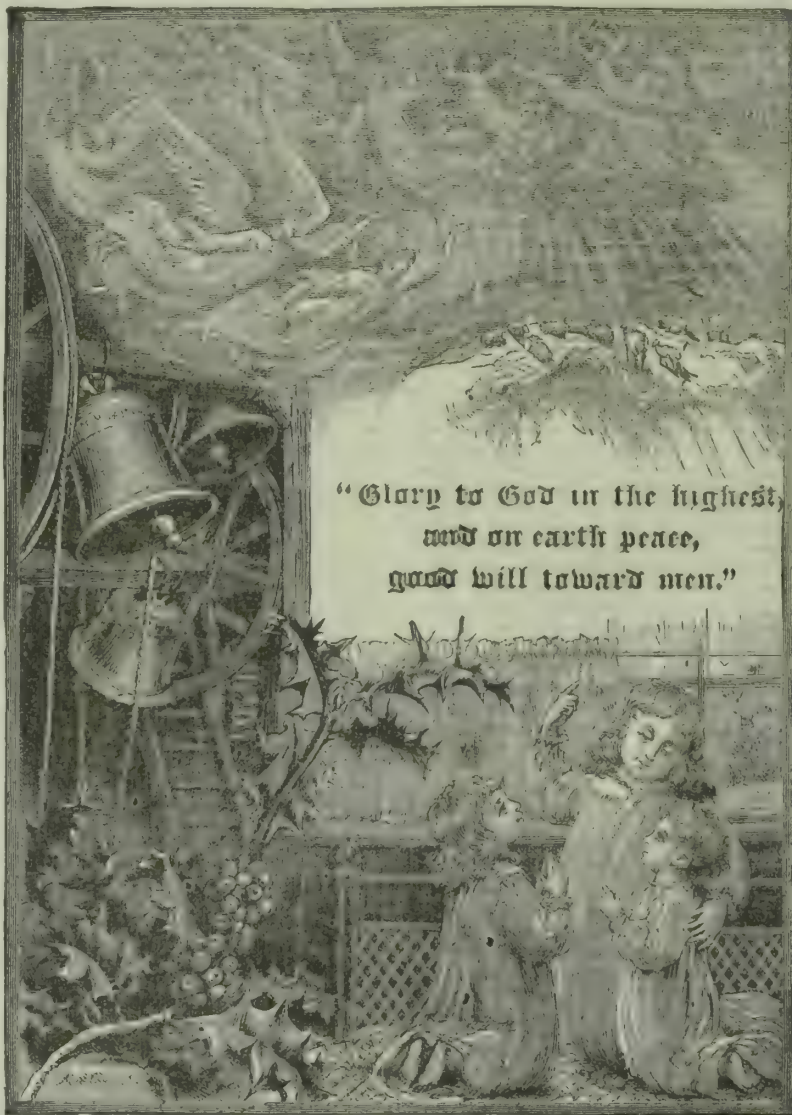
A rainy Christmas and a Christmas without children! How strange and unnatural it seems to me! As I lay awake this morning before daylight and listened to the "patter patter" on the roof, the memory of other Christmas days came to me most vividly—to those days when snow and storm were a never-failing accompaniment, as much so as the eager, excited chatter of the little ones who were awake before the sun, always, to find the stockings in and under which Santa Claus had placed his wonderful gifts. Among all those bygone Christmas days one stands out so clearly, and was preceded and followed by such strange scenes, that I think a little story of them may please you to-day.

On the 15th of October that year, came to the States of Iowa, Wisconsin, and to Dakota,

and tough. We were needed at home, and so bundled up with my feet in a bag of hot oats, I was lifted to my seat, and left a throng of doleful faces at the door. Shall I ever forget that terrible day's ride—the beginning of a time full of new and eventful scenes? Nothing more than frozen ears and fingers to my friend and terrible chills for myself, occurred, yet it seemed weeks instead of hours before we reached our home. Then came several mild days, and on the last of them, just at night, I heard the jingle of bells and the shouts of my two little grandsons, six and eight years old, and on running to the door, found a sled with a small box of coal, sent by my son from the Falls. He had sent half he had (so he wrote), but many tons would arrive in a day or two on the railroad. When it came he would send over a load, and come for the bags.

They were all excitement at being allowed to come for a day or two, and brought their skates, and a new Christmas sled, and some dainties for the table, hard to get on a farm; and that evening we had a jolly time, with stories and talk of Christmas joys.

But in the morning! Once wide awake, the



"Glory to God in the highest,
and on earth peace,
good will toward men."

"TELL ME A SIMPLE STORY, A STORY STRANGE BUT TRUE"—A Christmas Idyl.

a storm of unexampled severity—blizzards with snow so deep that no trains ran for several days on any road, and freight trains delayed at that time were in some places blockaded all winter.

To us in Dakota the fact that this storm came before our winter supply of fuel was secured, had a significance that in this land of mild winters and abundant fuel cannot be appreciated. In many little new towns in Dakota, what to burn and how to keep warm was the question of all importance for many long months thereafter.

There came some warm days in November, but not enough to melt the drifts which in many places were only thawed a little, to freeze again like icebergs ready to catch the next snow.

This winter found me in a farmhouse far from neighbors and from any public road; the children, who at that time formed my family, were teaching, and at school a dozen miles from me. I was brave enough to take advantage of a mild time the day before Christmas to go 20 miles to Sioux Falls, where a happy family of grandchildren and their parents awaited me.

On the Christmas morning the blizzard again raged with snow and sleet, but it was little heeded, so pleasant and happy were the surroundings. The day following, however, the neighbor with whom I went and I found to be one of the coldest in the season. It was pronounced dangerous in the extreme for us to go home. The thermometer stood at 30° below zero; the wind was high; the road partly bare of snow, and in other places was drifted on fences, and we had only a buggy. But the horse was grand and my young friend brave

and sound of the blizzard was in our ears, and the first rays of light showed us a storm so severe that one could not see a yard beyond the porch. The snow came in sheets, and the hired man when called from slumber announced that he dared not go out to the barn at present. As usual, I enjoyed the storm, and after a warm breakfast announced that "the stock must be fed, and if Charlie could not get to the barn I could;" but armed with a bunch of laths and imbibing a little of my courage, he concluded to go. The laths were to put up one at a time in the snow so as to aid him in finding the way back to the house. Strange as it may seem to you, this was necessary, as there were repeated instances that year of men lost and frozen in the way from the barn to the house.

Charlie made out at that time to feed everything and supply all the stock with water, but the storm increased; by night the drifts around the house were higher than the doors and lower windows. We were warm and cosy in the house—rather enjoying the storm—the boys happy because they were sure it would be impossible to get home for a few days. Little did any of us imagine that eleven weeks would pass before they even heard from home or saw a barn near us!

Next morning it still snowed, and still blew. It was impossible to open the stable doors, but a hole was cut in the roof and plenty of hay and corn taken to the animals within. Clothes-lines and laths made a safe guide back to the house.

That morning our nearest neighbor came on snowshoes (Norwegian ones) to ask if we "still lived," and what we had in the way of provisions. He knew that in some houses there would be great scarcity, but we of course had plenty

of everything, and some to lend if others needed sugar or flour, etc.

Brave words these, but the time came when we had no bread, nothing to make it of—bushels of wheat at the mill but no possibility of reaching it. We had five hundred bushels of wheat in the granary, so we would not starve. We boiled it, we hulled corn, we parched corn in a spider and ground it in a coffee-mill and then made pudding of it—the children enjoying the fun. While the sugar lasted the boys lived like princes, but when that was gone and even the milk failed us, they made no complaints. Their father inquired of this youngest: "You were hungry sometimes, were you not, Ernest?"

"Why, no," was the answer; "you see if there was nothing to eat in the house, when it was time grandma always had a good meal!"

There were some potatoes; once in awhile we killed a chicken to save its life. The boys had brought not even a change of clothes, but I made over some of their uncle's garments and had warm flannels and overalls with pistol-pockets, knife-pockets, etc., and thought they never were as well dressed in their lives.

The neighbor came over and made them snowshoes, and then when the sun shone I sat wrapped up at an upper window and saw them use them on top of the eight feet of snow, never daring to trust them alone. Several times friends from Canton, 12 miles off, on a tramp to Yankton (80 miles away where the Legislature was in session, which they had no way to reach except on snowshoes) called at the house with news from the children at school. On one occasion they brought word that the man where my daughter boarded was dead. My little fellows seemed saddened for the first time by this tidings, and the older one said:

"Why, grandma, would I know if my father died?"

I said I did not know how we could hear; but Ernie, patting his brother on the shoulder, remarked:

"Never mind, Paul; we can cry just as much when we do hear."

How did we keep warm? It is hard to tell. We burned all the corn that was in the crib (that in the field was burned, stalks, and all, below the snow). We burned up the new corn-crib and took down the partition in the granary for fuel, and we burned the cellar stairs. Cases all over the Territory were common where several families lived in one house and burned the others. We heated water whenever we made fires and filled jugs which kept us warm in bed, where we spent much time. Oh, the books that I read aloud to the boys in those days. They were allowed to paste up *Harper's Weeklies* by the stove in the kitchen, and enjoyed them many hours.

Once my son came home. He was seven hours coming the 15 miles. What a time we had! But he spent only two hours with us, as he must be back to the school he was teaching. He thought us so well off, and in comparison with those of whose homes he told us, we thought so too. His scholars all came on snowshoes, and the fact that the fuel for the school had been procured the summer before, made the schoolhouse the most cheerful place in the township.

In towns this same dearth of fuel continued for four months. No train went over the prairies. Two or three fires were all that could be kept in a town of 200 inhabitants. The people crowded together, cooked what little there was to cook, and hurried back to bed. In Sioux Falls, all railroad ties, the lumber in the yards, the grain in the elevators, was burned, sold to those who had money, given away to those who had none.

A time came at last when we heard that a train was expected to go from Canton to Sioux Falls, and I started on snowshoes with the boys for the main road, a mile distant. It was an all-day ride to get to Canton, on top of a load of wheat, but before evening we reached a friend's house, and waited two days before the train, heralded with cheers, came on and pulled out for Sioux Falls with my boys on board. Fifteen miles were compassed by the cars in eight hours, the little fellows sleeping quietly until their happy father took them from the train. That train did not come back to Canton. Next day came the melting of the snow, the destruction of bridges, the carrying away of whole towns; nearly the whole of Vermilion, with smaller villages, going down to the Mississippi. You are all aware of this destruction of life and property by the melting of the snow, which for so many weeks covered these States and Territories. It was the middle of May before the cornstalks were reached by the melting of snow, and the stable doors all unloosened so that the imprisoned cattle and horses could be brought out. I had read when a child of a storm in Pennsylvania, where grandmother and children were caught in a house and imprisoned many days, the house being entirely covered. Until the events of this winter it seemed like a fable; since then it is quite thrown in the shade by experiences of my own.

Mrs. CRAIK was prompted to write her last book, "An Unknown Country," which discusses the condition of the poor in the north of Ireland, by overhearing the remark of a laboring man, who, when rallied upon helping a little girl across the street, replied: "Ay, but a 'andful of 'elp is worth a cartload of pity."

MISS MURFRE (Charles Egbert Craddock) will spend most of the winter in Boston.

YOUNG FOLKS' COLUMN.

The Christmas Gift.

(Written for the RURAL PRESS by IRA A. ADAMS.)

I once knew well a little lad
Of years some three or four,
Whose parents were respectable,
Although most wretched poor.

Of children they had—let me see,
Jane, Kate and Caroline,
Tom, Jim and Jack, Sam, Frank and Fred,
The youngest of the nine.
And now, to Freddie's great surprise,
Another child was born;
"A Christmas Gift," his father said,
For it was Christmas morn.

But little Freddie's loving heart
With grief seemed running o'er;
He said: "Papa, you can't find bread
To feed one baby more."

"Remember, child," his father said,
"God loves his people still;
He'll ne'er send children little mouths,
But he'll send bread to fill."

"I know, but then you see," said Fred,
As tears rolled down his face,
"God always sends us little mouths,
And bread, some other place."

Bay State Garden, Calistoga.

Our Christmas Tree.

(Written for the RURAL PRESS by AUNT SUSIE.)

"Now, children, you must all go to bed, for to-morrow is Christmas, and you will want to be up early. I think Santa Claus will come soon after breakfast and bring or send a tree full of nice things. Run off to bed now."

So with a merry "good-night," three little boys who lived in the country went up to bed, their minds full of Christmas trees, Santa Claus, presents, and "lots of candy."

All at once mamma heard a little voice call out, "Say, boys, let's have a pillow fight. Santa Claus wouldn't think that was naughty, would he?" "Yes, indeed he would," called up mamma. "Go right to bed quick and be good boys."

So in a few moments all was still in their room, each boy sound asleep in a neat little bed of his own.

The next morning they were up early, and it seemed a long time to wait till after breakfast for Santa Claus to come. Every now and then a little boy would creep up to the parlor door (for they saw mamma go in and heard her lock the door) and call out, "Mamma, I want to come in."

She called back, "Not now, dear."

"What are you doing, mamma?"

"I'm sitting in a rocking-chair by the fire."

"I shouldn't think you could see to do anything with all the window-shades down."

"How do you know the shades are down?"

"Cause we went round and looked; we didn't peek in, 'cause we couldn't."

"Where is aunty?" calls out a merry little voice.

"I saw her in the kitchen awhile ago," answers mamma.

So off the boys ran to hunt up aunty, and all was still for a few moments, when little hands again tried the door, and finding it still locked, one of the boys called out:

"Aunty isn't in the kitchen, but the fried chicken for breakfast smells awful good."

Mamma took the hint and said: "Well, dear, you can tell Chin to put the breakfast on the table, and I will soon be there."

After breakfast everybody went to the parlor. The door was still locked, but all at once it opened, and such a pretty sight as the room was! All the pictures were trimmed with Christmas greens and all around the doors and windows, giving the room such a sweet, "woody" smell. But the most beautiful of all was a tall Christmas tree standing in the middle of the room and hanging full of all sorts of things. The window-shades were still down, so the many candles on the tree gave it a very bright appearance and threw a soft light all over the room.

The children exclaimed: "Oh! isn't it

pretty! Is there snow on it, and what is it shines so?" (Flour had been dusted over the tree, then "diamond powder" lightly shaken on, so it really looked like snow sparkling in the candle-light.)

The boys were clapping their hands with delight, when all at once they heard some one outside call, "Merry Christmas to all!" Then came a very loud knock on the door. One of the boys ran to open it, and there stood—who do you think? Why, just Santa Claus!

They invited him in, you may be sure, and wanted to know how he knew the way to their house.

"I always know where good boys live," he said. He wasn't very tall, but was so fat he

sorts of things that boys like—too many things to tell them all.

It didn't take them long to find a way to open the funny little bags Santa Claus handed them, and much to their delight found them full of "sweets." Everybody had an egg; some were yellow, some red, some blue.

"What are they for?" called the boys.

Santa Claus took one and found a little hole on one end, covered with blue paper. He said there must be something inside, so stuck his finger in and broke the paper; then he shook the egg and out dropped a piece of paper. He opened it and found a proverb on it. Every one looked at theirs, and sure enough there was a proverb on each one.

BREA

gone. Where he went, I am sure I don't know. He couldn't have gone up the chimney, for you see there is a blazing fire; never mind, you can each eat your tart, have a fine time all day with your presents.

They were busy, indeed, had so many toys, books, etc. They carried their prettily decorated eggs to mamma, and she read the proverbs for them. One was: "My son, be wise and make my heart glad;" the other, "Bow down thine ear and hear the words of the wise;" and the other one was "Even a child is known by his doings whether his work is pure and whether it be right."

"Now, mamma, we want to see what yours is," So she opened her egg, which was the prettiest of all, and they said: "It ought to be, 'cause its mamma's."

She unfolded the paper and read: "Her children rise up and call her blessed."

They all thought it was very good of Santa Claus to give them such nice messages, and all the better because they were "really and truly true."

Well, at last dinner-time, and aunty joined them. They all told her how jolly Santa Claus was; and one said: "We are awful sorry you didn't see him, aunty. He was big and fat, but his voice wasn't as big as we would have thought it would be. Sometimes it sounded just like yours. He left some nice presents for you, and told us to give them to you. Come in the parlor and see them."

Aunty followed them to the parlor, and was much pleased with her nice presents. She kept sneezing and blowing her nose, and said: "You see, boys, I couldn't possibly have come out to see Santa Claus with this dreadful cold, but it is too bad I missed all the fun."

When night came papa lit the candles on the tree again, and took off the little gilt bird-cages and things that had helped to make it pretty, and gave the boys the strings of peanuts and popcorn, and by eight o'clock three very tired, sleepy boys went up stairs to bed, well pleased with their Christmas-tree presents, Santa Claus and all. After they had gone up, one leaned over the banister and shouted down: "Aunty, we are awful sorry you didn't see Santa Claus. Do you think he will ever come again?"

"Yes, I guess so, dear," said aunty, "if you are good boys. Now go to bed and to sleep, and perhaps you will see him again to-night in Dreamland."

Royal Discipline.

The sons of kings and emperors, when in the army or navy, are expected to obey orders like common soldiers or sailors. They have no choice between obedience and punishment. The following is a striking case:

The Russian Emperor's third son, Alexis, is in the naval service. Somewhat more than a year ago, when holding the rank of midshipman, the flagship in which he was serving was wrecked on the coast of Denmark. The admiral ordered the life-boat to be lowered, and directed Alexis to take charge of the first boat. The royal midshipman declined to obey. It was peremptorily repeated:

"I, your commanding officer, order you into the boat."

"Admiral, I cannot obey you," replied the young prince. "It would not become the son of the emperor to be the first to leave the ship. I shall remain with you to the last."

"But I shall put you under arrest for disobedience of orders as soon as circumstances will allow me to do so."

"I mean no disobedience, but I cannot obey," rejoined the youthful hero.

In due time, almost the entire crew reached the shore in safety, only some four or five having perished in the transit from the ship. Among the last to land were the admiral and the Grand Duke Alexis.

Tents were hastily erected from the sails and spars of the ship saved from the wreck, and the rigid discipline of ship life was promptly resumed. The young prince was placed under arrest for his previous disobedience of orders.

As soon as possible, the Russian minister, at Copenhagen, was informed of the facts, and telegraphed them to the emperor, from whom he received the following reply:

"I approve the act of the admiral in placing the midshipman under arrest for disobeying orders, and I bless and kiss my son for disobeying them."—Good Cheer.



AFTER SANTA CLAUS' VISIT.

could hardly get in the door; had long gray hair—that is, longer than most men wear their hair—and a full gray beard. His eyebrows were very black, and his cheeks and nose very red. He had on a long overcoat and big top boots. He laughed when the boys stared at him, and was very jolly.

"Is all the family here? Shall I take the presents from the tree now?" he said.

"Yes!" "Yes!" shouted the boys; then they looked around to see if everybody in the house was in the room, and soon said: "No; aunty isn't here."

"Well, go call her in just a minute," said Santa Claus.

In a few moments they came back, holding a card, and said: "Her door is locked, and we found this card pinned on the door. What is on it, mamma?"

She took the card and read:

"If Santa Claus comes, tell him I am very sorry not to see him, but have a bad cold, and no one must disturb me. I will try to join you at dinner."

The boys felt sorry not to have aunty see the fun, for they loved her very much, but Santa Claus began to take off the gifts and they were so busy looking at theirs that they soon forgot whether aunty was there or not. They had all

Well, by this time the tree was nearly bare of pretty things. To be sure the strings of peanuts and popcorn were still on, and lots of little gilt things, but Santa Claus said he couldn't stop to take those off. "The room is too warm for me with this overcoat on," said he.

"Take it off, and stay to dinner with us," said papa.

"No, thank you," he replied. "I only stay in a house long enough to take the things off the tree. You know there are so many little boys and girls for me to make happy to-day, but I'm very hungry. Have you had your breakfast, boys?"

"Yes, Santa Claus; but if you are hungry, we can get you something to eat. There are some tarts in the pantry that are awful good."

"All right," said Santa Claus, "I'm very fond of tarts. Run quick and get me some," so off the boys ran as fast as they could scamper, and called to Chin to give them some tarts for Santa Claus.

He gave them each one and back they ran to the parlor, calling, "Here, Santa Claus, here are the tarts for you," but much to their disappointment, no Santa Claus was to be seen.

"Where has he gone?" cried the boys.

"Why, my dears," said papa, "I saw you run out, and when I turned, Santa Claus had



A. T. DEWEY.

W. B. EWER.

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SAN FRANCISCO:

Saturday, Dec. 24, 1887.

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The Week.

Everything gives way this week to the Christmas idea and activities. Trains leading to San Francisco have been thronged with rural and suburban people intent upon the toy shops of the metropolis and other places where gifts better suited to adult tastes can be selected. City people, too, have made good use of the beautiful weather, and have poured out their money for Christmas material as never before. One visiting the retail marts of the city might think there are enough people in California already without welcoming the thousands who are arriving and laying plans for thousands more. It has been a gala time for the shopkeepers, and the children will profit by it as well as they. Both can well afford to pass resolutions of thanks to the weather clerk, for the dry, sunny days are most important factors in the joint enterprise.

This week's *RURAL* bears the Christmas imprint upon it and will, we trust, carry to the homes of our friends assurance of our interest in their holiday joys. We hope all will enjoy to the full this happy season in this most happy year. Let each strive to make another happy and all will then doubly rejoice. With a thought as sincere as the words are trite, we wish all a "Merry Christmas."

THE LAST SPIKE.—The last spike on the railway from California to Oregon was duly driven on Saturday, Dec. 17, and the excursion to Portland which followed was a success in every particular.

Merry Christmas.

With each passing year this day dawns more gloriously than ever before, for the Song of the Angels is becoming more and more understood. Under the arctic influence of Puritanism, which hated all merriment, this day lay neglected for a hundred years or more. It was always dear in Germany, but in the dissenting regions of Great Britain and in our Colonial times, Christmas was a day partly wicked and largely stupid. But as religion became more imbued with the spirit of love, the church became ready to find more happy days in the year. Days of gloom fell into neglect; days of happiness came into new popularity. Thanksgiving has quite superseded the days of fasting and prayer. The floral emblems we see in special profusion in the churches at Christmas and Easter festivals show that religion has passed into a more genial and tropical climate. It has ceased to throw stones and prefers to gather the sweet lilies. It now finds in flowers, evergreens and music its most appreciative voice and litany. And one result has been that from year to year there is poured into the holiday sermons more of the spirit that laughs, sings and makes merry.

Christmas above all other days is the festival of unselfishness. More than any other day the hearts of the people are stirred by the angel song of peace and good-will. For the most part, those who observe other holidays propose to have a good time, to enjoy themselves, but the true spirit of this day is in helping some one else to have a good time. It is to all, old and young, rich and poor, the happy season of giving and receiving gifts, made more fragrant and beautiful by the thought of love that goes with them. It is a pleasant spectacle the country presents a few days before Christmas, when the bulk of the adult population through the streets purchasing gifts and keepsakes. The President quits work and goes shopping with his wife. Congress adjourns and grave senators and distinguished members forget their bills, committee work, and turn their attention to gift-making. The white flag hangs all along the line of party debate, and the North and the South shake hands. Even capital and labor, wealth and poverty, cease to show their teeth. In short, everybody is happy or tries to be, and the business of the day consists in devising pleasant surprises for children, relatives and friends. More than that, this day is the rift in the cloud that gives to every man or woman, however bowed down with cares and burdens of life, a glimpse of the blue sky. It would be a strange Christmas that failed to send a ray of human sunshine to every heart.

Let us be thankful this is so. Life is full enough of cares and sorrows at best. Happy they who, even for a few fleeting moments, can dream and idealize, recall sweet memories, and revel in rosy hopes. It is good for us all to have a season when we forget toil, strife, and ambition, and money-getting and the despotism of fashion, and yield to the sweet influence of nobler and better sentiments. Perhaps at no period in the world's history was the inspiration of a festival like Christmas more needed. This unceasing rush of modern life threatens to play havoc with our better nature. Already the words "A Merry Christmas" have a strange, hollow sound. The American people especially are a sad, nervous race, upon whom work has fallen as a pall, and to whom the joyousness of the heart is almost unknown. In fact, we are so far gone that we hardly know how to celebrate properly the few holidays we have.

Let us cherish our holidays and make them seasons of rest, joy, and pleasant reminiscences. Especially should we remember Christmas, with its religious suggestions, its lessons of charity and brotherhood, its memories of the long ago, its prophecies of the good time coming, when the human race, panting and footsore, will at last reach the goal of happiness. Such thoughts as these may sweeten the asperities of life and restore the fading picture of innocence and ideal blessedness. Coming as Christmas does near the close of the year, when we are about to post the books of our failures and successes, it may serve to remind us that wealth or position is not all of life, and that both combined may prove a curse if not accompanied by the happiness that is the fragrant flower of duty alone. In this spirit we wish all our readers, friends and patrons, and enemies, if we have any, a Merry Christmas.

The Eastern Horticulturists.

We have a note from W. H. Ragan, secretary of the American Horticultural society, stating that existing railroad rates make it necessary for the excursion of horticulturists to come first to the upper part of the state instead of to southern California, as announced before. This fact will enable the excursionists to accept the invitation of the San Jose Horticultural society as well as the invitation to Riverside, and that, consequently, the annual meeting of the American society "will be held in two sections, viz.: commencing in San Jose, on Tuesday, January 24, and continuing for two or three days, considering topics most important in that section, and reassembling at Riverside February 7, for a similar length of time, to be devoted to topics of greatest interest in southern California. This arrangement, without additional railroad expense, will enable our people to visit almost the whole of the exceedingly interesting state of California." This is the way in which the note from Secretary Ragan expresses it. He also states that from the interest manifested in the excursion there will come to California a large delegation of representative horticulturists and promises full particulars soon.

In recognition of the visit of the excursion to San Jose, the Central California Citrus Fair will open in Horticultural hall in that city on January 24th and continue until March 2d. We acknowledge receipt of a complimentary thereto from Hon. Cyrus Jones, president. There is every reason to expect that our San Jose friends will put forth unusual efforts in view of the coming of the Eastern horticulturists, and that there will be a most notable display. It is under consideration to entertain the Eastern visitors during their stay in the homes of the citizens, which would certainly be a most hospitable act.

Affairs relating to the Southern California Citrus Fair at Riverside, February 7th, seem to be progressing favorably. At a meeting of the San Bernardino Board of Trade last week, a committee was appointed to urge all the thriving settlements of San Bernardino county to take part in the fair at Riverside. We trust full co-operation will be secured not only in San Bernardino county but elsewhere, and that our guests will return with a true idea of California's resources and advantages.

Our Public Lands.

The annual report of R. P. Hammond, United States Surveyor-General for California, for the fiscal year ending June 30th, shows that during the year there were received 138 applications for surveys of mining claims, 80 applications for examinations and reports upon placer claims under General Land Office circular approved September 23, 1882, and 72 applications for surveys of the public lands. The report shows that the expenses of the office have been decreased from \$60,571 in 1882-83 to \$31,839.06 in 1886-87. The Surveyor-General calls attention to the fact that the immigration in the past year has been unprecedented. The permanent population has increased so rapidly that it is almost impossible to state accurately the addition. He believes, however, that the population of California is fully 1,200,000, as against 864,686, as shown by the last official census. Petitions are constantly being received asking for surveys. Owing to the meager rates allowed by Congress, it is almost impossible to get a competent surveyor who will make the surveys that are authorized and do the work conscientiously. The Surveyor-General suggests that Congress should be asked to appropriate at least \$75,000 for the survey of land in California for the next fiscal year, and he believes that every acre so surveyed will be settled upon and purchased from the Government as soon as placed upon the market; thus the amount appropriated will soon be returned to the treasury of the Government.

The finest strawberries of the year continue to be brought into the Petaluma market twice a week from a farm on Sonoma mountain, and which is in a warm belt that extends along that mountain for about fifteen miles.

CO-OPERATION.—Senator Stanford reintroduces in this Congress his bill to foster and promote co-operation, which was before the last session, and was described in our columns at the time.

Ramie.

There is a project under consideration in this city to form a corporation for the manufacture and placing on the market the ramie fiber. It is proposed that the company shall have sufficient capital to warrant farmers and land-owners in growing the plant in large quantities.

Experiments that have been already made in several parts of the State prove that the plant will grow luxuriantly with the smallest amount of care and cultivation. The conditions being a suitable soil of sandy nature, holding a great deal of moisture. On such soil two or even three crops annually can be grown. The plant is perennial and highly productive, and probably will not require replanting more than once in ten years. The cost of gathering the crop is very small, less than for any other marketable product. Should the projected company be formed and the fiber be properly manipulated, it is estimated that in a few years suitable land planted with ramie will yield an income of \$200 per acre annually, though, of course, things are liable to occur to interfere with all such estimates.

Fabrics made of ramie will compare favorably with silk for fineness, and surpasses that staple for durability. It can also be substituted for both wool and cotton.

Most attempts made hitherto in this State to manipulate the fiber have failed on account of the difficulty of separating the gum from it without destroying its texture. One of the promoters of the present project claims to have demonstrated that the difficulty has been overcome. He claims that with proper financial support he can place the ramie fiber on the market at a profit that will prove amply satisfactory to investors, thus adding another highly profitable and substantial industry to our steadily advancing State.

Courts of Conciliation.

There is a movement in some of the Eastern States toward giving legislative sanction to "Courts of Conciliation," or neighborhood tribunals for settling disputes without a regular lawsuit. It is thought that well-devised statutes authorizing this method of adjusting differences between citizens will obviate a deal of litigation.

This plan has been long and thoroughly tried in Denmark, and with remarkably gratifying success. The *N. Y. Evening Post* thus describes the functions and achievements of the Danish Courts of Conciliation:

Each local community is authorized to choose a tribunal called by this name, which consists generally of one judge and two assistants, selected with reference to their high standing in the public confidence and their qualifications for composing disputes. This tribunal has jurisdiction of every complaint upon which a civil action might be based, and no such action can be heard in any regular court until it has been laid before the Court of Conciliation and has resulted in a disagreement, so that every cause out of which an action might arise, except in criminal cases, comes first before this tribunal. The principals appear in person to tell their stories; witnesses are called in if necessary, but no counsel are allowed, and if the decision is accepted by both parties, the dispute is ended, lawyers' fees are saved, while the judgment has the same force as a judgment of an ordinary court. That the decisions are accepted in the bulk of cases appears from the fact that during the first five years of the system 116,483 cases were brought before the "Courts of Conciliation," of which 74,742 were there settled, and during the next five years 190,836, of which 121,970 were settled and only half of the remainder were ever carried to actual litigation.

This is a grand subject for Christmas week when "good will to men" is one of the sentiments underlying the dispensation. The subject is one of the greatest importance socially, sentimentally, economically and generally. Just think of the heartburning and hates, the loss of individual savings and industry, the immense expense to the public, which result from the operations of the courts in civil cases alone. Conciliation or arbitration should take the place of formal judicial proceedings, where contestants are by all the surroundings held up to the bitter end of their controversy. It would seem but a proper outcome of our progress in civilization that some better way should be devised to settle troubles which are often but misunderstandings at first but grow to be most deep-seated quarrels. Conciliation is a good word. It is infinitely better than litigation.

The Olive in California.

[Especially Reported for the PACIFIC RURAL PRESS.]

The olive is just now a most popular fruit in California. Long ago all available rooted trees were engaged from our nurseries, and the desire to plant olives amounts almost to a passion. We cannot better minister to the great popular demand for information on the subject than to present a full report of the olive discussion at the Santa Rosa convention, which was one of the most interesting of the week. It was led by Mr. Ellwood Cooper of Santa Barbara, President of the State Board of Horticulture, who is our best-known olive-grower.

Essay by Mr. Cooper.

Those wishing to embark in olive growing I refer to my essay read before the Fruit-Growers' Convention held at Sacramento, Nov. 1885. Published in the Biennial Report, pages 327 to 331 inclusive. [This report can be had free on application to B. M. Lelong, secretary State Board of Horticulture, at the office, 220 Sutter St., S. F.]

Concerning propagation, I recommended planting 20 feet distant each way. I still conform to this plan, but I have found it necessary after about 15 years' growth, to remove every other diagonal row. This will give the trees a distance of 28½ feet. The closer planting will pay to do this.

To what I said on diseases (on page 330) I would add that the only trouble we have had thus far is the black scale. The remedy I have adopted will be found on page 36 of the report. On the subject of olive culture generally, I refer to pages 13 and 417 to 424, inclusive, 517 to 534, inclusive. This latter article was written by F. Pohndorff, who has published a memoir on the subject with various illustrations. The book is on sale in San Francisco. Adolf Flamant has also published a pamphlet with various illustrations, to be had at Louis Gregoire & Co., 6 Post street, San Francisco (or can be furnished by Dewey & Co., publishers RURAL PRESS, at \$1 per copy.) These two pamphlets are mostly translations from European works. I make this observation with regard to varieties and names, that so far as my experience goes no two authors in the French, Spanish and Italian works agree as to names, so that without further knowledge than the mere translations no reliance can be placed in them.

The Mission olive, the one I have propagated, is a rapid grower, well adapted to our climate, well grown in almost any kind of soil if well drained.

The tree is easily shaped. The berries make good oil; the fact is, I defy the world to excel mine. The quantity of oil that I have made from one acre exceeds the statistics given in the various tables. The variety called Picholine, which is being grown in various parts of the State, I know nothing about. It is only after a test is made that its merits can be known fully.

I would recommend to all those who now begin the business, to get a few trees of as many varieties as possible, so as to determine in the near future what will be the most profitable to plant. The olive will thrive and do well in almost every part of California, and while there may be fruits that will yield better incomes, no tree offers so much and so certain as a permanent investment. Oil-making cannot be overdone. The demand for good olive oil at good prices must increase more rapidly than the production. But those who embark in the business must remember that no trees require greater care to insure profits, and, as to oil-making, a fine grade can only result from knowledge and extreme care.

In olive-growing we are independent of high-priced labor, the picking being done in the winter time after all other fruits are gathered. We are, comparatively speaking, independent of the freight question, as the value is great in small bulk. The fruit is not perishable.

I expected to add to these notes, as Doctor Agard of Auburn promised to give me the different bearing qualities of the Mission and the Picholine, as he has them growing of the same age in the same orchard at his place. I have not heard from him, and therefore cannot speak as to the quantity of berries on trees side by side of the same age, nor as to the time of ripening. Some claim that the Picholini ripens earlier. If that be the fact, and in other respects equal for all purposes, there would be an advantage of propagating the Picholini; but so far as I have been able to learn, where the two varieties are grown in the same neighborhood there has been no difference.

I have visited since being in Santa Rosa the hills of Captain Grosse of this place, where he has probably five or six thousand trees two years old from planting, and I must say that Captain Grosse deserves great credit. He has conferred a lasting boon on the people of Santa Rosa, clearing land that to my eyes was absolutely worthless and planting olive trees. These olive trees on the ridge of the hill are probably not more than from five to ten rows wide, following the shape of the hill, and in that respect there will be a great advantage in regard to insect pests, because they will have better circulation of air and more sunlight, and on that account there will be much less danger of insect pests. I have growing on my place olive trees in the black adobe, in deep bottom land, in sandy land made from the wash of the mountains, in stony hill-sides and adobe hill-

sides, and in table land, where the sub-soil is probably 20 feet deep, dark clay, and so far as I have known there is no difference in the bearing of these trees or in the oil made. At the same time I do not recommend planting any kind of trees where there is a deep clay sub-soil, for it is doubtful if all trees will do so well in such soil.

Yield of the Olive.

The only test that I ever made in regard to the quantities borne by an orchard (that is, taking all the trees), showed 122 pounds of olives per tree throughout the orchard—large trees and small trees seven years old from the cutting—122 pounds of olives from trees seven years from the cutting. The best results in making oil has been 10.55 pounds in one large bottle of oil. The poorest result was 12½ pounds. I could not say whether it was caused by the different years or by less care in drying. We dried these olives altogether by artificial heat, and possibly the best result was because I gave the drying my own special attention. But we have for the tree seven years old at least ten bottles of oil, and those bottles will sell readily anywhere and everywhere at a dollar a piece. I was compelled to put the price up to \$2, \$24 a case, to keep my customers from quarreling about it, and I am sorry to say they quarrel all the same. I ought to have put it at \$5 or \$10, so it would have been a question of money, but I did not wish to do that, and as soon as I shall have a large enough crop I shall put the price at \$12 a case—\$1 for a large bottle of oil—and that is profit enough for an olive orchard.

Oil-Making.

Mr. Gray: How much do you dry the fruit? Mr. Cooper: We judge more by the feeling than by any other mode of test. The olive in picking must be picked with care so as not to break the skin, and in drying at a heat over 120° F. It requires 24 hours, and, by putting the hand in among the olives, you see they all feel greasy, and in squeezing they are more or less spongy—a sufficient amount of water has evaporated to allow the liberation of the oil. They have practiced this method since the time of Genesis, that is when olive-making is first mentioned. In the earliest history of the race they never attempted to make oil without drying the berries—at least there is no record of it. I have never made the attempt, and I doubt whether olive oil can be extracted from the berries without first drying them to evaporate portions of the water. A good deal more heat is required in the early part of the season than later in the spring. We commence picking in December, as soon as the olives turn a purple color, some of them probably only a reddish color—one side partially green—but they are ripe enough for making oil. They require more drying then than in the months of March and April, when the water will have evaporated mostly from the tree when they are hanging from the limb. That, of course, has to be governed by an intelligent person managing the drying. It is supposed that the oil is of a lighter color made earlier than it is later in the season, but, as we make it all in the same tank, I do not apprehend that there is very much difference as to the color of the oil, neither the quality. In Europe they dry the berries almost altogether in the sunlight. In the coast counties here that is impossible, because we may have a series of foggy days during the process of drying, and then it would be impossible to carry on the work.

Pruning.

A Delegate: At what age do you commence pruning?

Mr. Cooper: We commence pruning in the second or third year. In planting a cutting it is better not to disturb any limbs or branches that grow, because cutting when the tree is young interferes with the roots, and you will understand that if you cut away the limbs, destroy the leaves, you are destroying the breathing apparatus of the tree, destroying the root. An untrimmed olive tree, when small and commencing to root, will grow four times as fast without pruning as if you prune it. The more top it has the faster it will grow. It feeds very largely from the leaves, from moisture. After the second year, though, you want to prune. Those that cultivate the limb up to 5½ or 6 feet must, of course, pinch off all the branches that are making wood rapidly, so as to force the strength into one main trunk, and where lateral limbs branch out, pinch them off at the end and stop the growth in that limb. But all small branches should be left alone as much as possible until the tree gets eight or ten feet high, and then commence cutting them off until you get up to 5½ or 6 feet. Those who want to prune low, can start out from four to five and six inches from the ground, and from four or five trees instead of one. I am not in favor of low pruning of the olive trees in the coast counties. We have no fear of sunlight burning the bark, and in ten years you can get twice as much tree with high pruning as you can with low pruning. It grows up to a bush more than a tree, and these shoots vie with each other to get up to the sunlight, while if you pinch them up to four or five feet you can form a tree much better.

Dr. Kimball: Does the tree sunburn?

Mr. Cooper: I never saw an olive tree sunburn. I have not seen it in the hot valleys where the thermometer is 110° in the shade during the summer.

Mr. Woolsey: Have you ever found anything besides the black scale on the olive?

Mr. Cooper: I never have. There are a

number of insects mentioned in the French books, but I have never seen them in California to my knowledge.

Mr. Woolsey: We have an olive tree in our garden, and a very beautiful one, and I found that it was bored thoroughly with the twig-boring beetle. I never found them so thick in the pear as I have in the olive.

Mr. Cooper: That was probably the oak-borer, and likely the surrounding oaks were burnt off and they had been driven down to the olive tree.

Mr. Tompkins: Do you thin out the head of the olive tree at all to let the sun in?

Mr. Cooper: It is not necessary in California. The olive tree is a very rapid grower, and in pruning you have to do exactly the opposite. The theory of lopping off the perpendicular branches, as advocated in the French books by all the authors, so as to allow the lower limbs to bend out and give sunlight to the interior of the tree, is not needed in California. These limbs would all overbear so that they would break off, and while the tree is rapidly growing, the outside branches, as soon as they would get full of fruit, would bend out and touch the ground if you didn't prop them up. There is no necessity of inside pruning in a small tree.

A Delegate: Does the tree overbear?

Mr. Cooper: The tree overbears in some years.

A Delegate: Is thinning practicable? Have you thinned at all?

Mr. Cooper: No, I never have. I have endeavored to cut them so as to save the fruit and make just as much oil as possible.

Mr. Gray: Can you give a description of your present crushing process?

Mr. Cooper: It is described in the bi-annual report. I have adopted for the last two years the same method that is used in Europe pretty generally, except that I have cast-iron rollers that travel around in the trough instead of stones, connected by a horse and a shaft inside, with cog wheels on to turn it around, and we put the dried olives in this trough, four or five sacks at a time, and these rollers pass around one after the other—there are two rollers in the same trough—until it is in a condition and looks as much like blackberry jam as anything else that I can describe. Then we take it from that trough in that state and put it into cloths, and we double them over and put slats of wood in between each cheese so as to make aqueducts for the oil to run out. We pile them up five or six, or eight or ten, one on top of the other, and put them into the press and run the oil into the tub. From those tubs it is run into the tanks and there it has to settle about four months. The oil, being lighter, rises to the top, and we draw it off from the top.

A Delegate: Do you crush the seed or do you guard against it?

Mr. Cooper: You cannot crush the pulp properly without crushing the seed. I had some seeds sent to a competent chemist, one who is connected with the largest establishment in Philadelphia, and who is also a friend of mine, to test. He found nothing in the seed that could do any possible injury to the oil. In the olives that I have, there is not one seed in 50 or 100 probably, that has any kernel; the kernel is supposed to be mostly Prussic acid, and much of that got into the oil would injure it.

Size of Cuttings, Etc.

A Delegate: What size would you recommend planting the cuttings?

Mr. Cooper: We plant them about 14 inches long, from 1 inch in diameter up to 2½ inches. We also make cuttings three-quarters to one inch. These cuttings we plant in the field where the tree is to grow permanently. We plant diagonally; that is, the top to the north to keep the sunlight, as much as possible, from cracking open the limb that is exposed. We put the cuttings about 10 inches deep at the foot.

A Delegate: Do you saw off the cuttings?

Mr. Cooper: We saw the cuttings off with a sharp saw so as not to injure them. Some have painted or waxed the top, which is a very good plan, though I never did. We take the cutting off as soon as we have picked the fruit.

A Delegate: At what age would you transplant from the nursery?

Mr. Cooper: Well, my transplanting of small trees has not been very successful, probably from want of care. The trees I plant out from growing in the nursery are as thick around as a chair leg—say an inch in diameter—and some of them are 10 feet high. The olive tree that I am going to move in the spring I trim off like a cane four feet high, leaving nothing but a stalk, and those that have a good root are sure to grow.

A Delegate: How far apart do you plant in the nursery?

Mr. Cooper: Just room enough—say six or eight inches apart, and the rows five or six feet apart—so that you can work them with a horse. In the nursery we work them every week or two. They require the same care as to grow any vegetable.

A Delegate: Do you irrigate?

Mr. Cooper: I never irrigated. I recommend, however, in planting cuttings out on high land, that they had better be watered twice during the season, and the water can be carried in a wagon. I would give them about 20 gallons. Generally, when I have watered cuttings I give about 10 gallons at a time to each cutting and water them twice. Captain Grosse says he has not watered his, but they are all rooted plants.

Mr. McDonald: Do you think Grosse's will do well without irrigation?

Mr. Cooper: I think they will. Those are growing amongst rock; the rocks are so thick that there is no chance for any weeds to grow in between. If the ground were tillable we might have mustard, tar-weed, and nightshade, and everything else to kill the olives out, but there amongst the rocks he has the advantage of all these weeds.

A Delegate: Is a cutting an inch in diameter more desirable than one a quarter of an inch?

Mr. Cooper: Yes sir, nurserymen will prefer an inch to any other size—an inch to an inch and a quarter to an inch and a half.

A Delegate: What percentage die of yours?

Mr. Cooper: I planted out an orchard last winter of over 20 acres, and I think there are not 20 that are not growing nicely—that is, cuttings set in right from the tree.

A Delegate: Did you water them before they started?

Mr. Cooper: We watered about the time the ground needed it, without paying any attention to the growth. Some of them had started and some of them had not. I had cuttings planted out in March that are four feet high.

A Delegate: You advise rooting in permanent rows rather than putting in nursery rows?

Mr. Cooper: No, sir; I do not advise it. It is more convenient for me to do it. I plant some in the field and some in the nursery; and where they failed to grow in the field I substituted trees the following year. It is a very good thing to plant in the field after you have the ground carefully prepared. Plant the cuttings out in the permanent place, and plant a number in the nursery, taking good care of them, to make trees to plant where the others fail, and then you have an orchard that is pretty nearly the same size.

A Delegate: How much preparation was made in this orchard here in Santa Rosa that you have spoken of?

Mr. Cooper: The preparation here was very great. It was all grown up with bushes and shrubs and trees, which were all dug up and dug out by the roots. No better preparation of the soil could be made than that, because it was all completely thrown up.

A Delegate: And plowed?

Mr. Cooper: No possibility of a horse getting in there, it was too rocky. It was dug over very thoroughly and most of the grass killed. In some places, where there were little plateaus and where there was very little rock, the fields were plowed. If this experiment proves a success it will demonstrate that there are thousands of acres here on the hills, now supposed to be worth nothing for any purpose, that can be used for olive culture.

Conclusion.

[We shall finish the interesting discussion in a future issue of this RURAL PRESS.]

AMERICAN FLOUR IN EUROPE.—American flour is now in sharp competition with European millers, and already has an established preference in some of the principal foreign markets, mainly due to the improved roller process used in its manufacture. The decrease in exports of wheat is thus compensated for in no small degree, considering the advantage arising from the shipment of manufactured material. Aside from the superior quality claimed by the American miller, he is more successful in the competition by reason of the flouring-mills being located generally near to the grain-producing regions, whereas the European manufacturer must, as a rule, transport his grain long distances, together with the 25 or 30 per cent of bran, which the American miller saves. On contemplating the situation the conclusion is reached that the United States may possibly have secured permanently the control of the European flour market, or at least until such time as may be required to establish mills equal to American in the great wheat-producing countries of India, Australia and South America, together with cheap transportation by land and sea.

RUSSIAN SUNFLOWERS.—The Visalia Times advises farmers who live at a distance from the timber belt, and have to haul their firewood, to cultivate a half-acre of Russian sunflowers. They grow to a height of eight or ten feet and a diameter of from two to four inches. The stalks, when dry, make excellent fuel for kitchen use, and the seeds are valuable as chicken feed.

PASTEURIZING THE AUSTRALIAN RABBITS.—It is said that Pasteur proposes to kill off the rabbits in New Zealand and New South Wales by turning loose among them a few of their own species inoculated with the microbes of chicken cholera, which, he claims, will breed so much faster than even the prolific rodents that the latter will soon be exterminated.

THERE is not hay and grain enough in the south end of Owens valley to supply the local demand.

HOLIDAY READING.

"Old Mines."

Christmas Eve Spent in a Lead Mine.

Written for the RURAL PRESS by FANNIE ISABEL SHER-
RICKS.]

"Old Mines" the town was called.

There had been mines there in the old French days when St. Genevieve and Potosi had been the foremost settlements in Missouri, and St. Louis only a trading-post, but now things had changed and the name was merely a name with only a few dismantled, weed grown mines to prove its early appropriateness.

Courtesy called the main road leading past the old-fashioned cottages a street, though only one store might be discovered wherein all the trading in the vicinity was done. The shelves showed a rather mixed assembly of dry-goods, chinaware, stationary, groceries, etc., such as is usually found in the country store, over which the benign clerk presided with becoming dignity and satisfaction to all his patrons.

The settlement could not be called either gay or populous by any means, but it was picturesque and pretty, and the residents were in no wise as quiet and unpretentious as the drowsy monotony seemed to indicate.

"Anyhow the house is delightful," cried Lutie, with her usual enthusiasm, growing quite extravagant in her praises of the long, rambling Southern home with its broad piazzas and sloping roofs.

"It's just beautiful!" echoed her Aunt Nora, who, by the way was only a year or two the senior of her pretty niece, dropping into the capacious easy chair with a sigh of content, "I'm so glad we came."

"Now, my dears," said Mrs. Block, a distant relation whom they had come to visit, in her gentle, motherly way, "take off your wraps, and when you're rested I'll take you to your room; and here comes Ed—just in time, my dear, to make the acquaintance of your cousins, at least we'll call them so by courtesy."

He stood in the entry twirling his hat in an embarrassed way for a moment, then he came forward, shaking each by the hand warmly, his fair face flushing a little under the curious gaze of two pretty girls.

He was a fine-looking young fellow, with a pair of frank blue eyes. Lutie decided immediately that she would like him, while Nora looked at him a little thoughtfully, not being given to "first impressions."

After a little chat the girls were conducted by Aunt Margaret to the spare chamber, a cozy place upstairs beneath the eaves, with low windows looking out over a pleasant stretch of country now covered with snow; they were hung with curtains that were the very whitest in the world, and looped back with dainty blue ribbons. The whole room had that indescribable air of inviting hospitality, and that sweet, fresh scent that can only be found in the spare chambers of country houses.

"The whole place is just sweet enough to eat!" declared Lutie, when they had changed their traveling suits for fresh woolen dresses, and made themselves as pretty as possible. There was not an article in the room that escaped the quick scrutiny of her brown eyes, and she admired all of the dainty mats and the prettily worked tidies with an artistic enthusiasm.

Aunt Margaret presided at the tea-table with a dignified grace that well became her gentle, placid face, crowned with the rich brown hair already tinged with silver.

After the first embarrassment was over Ed appeared to great advantage, assisting his mother dextrously in serving her guests, and keeping up a round of sallies with Lutie and Nora, much enjoyed by Dinah, who "clared to goodness" from her standpoint in the kitchen, that "them ere gals were jes' the peartest and sweetestest" that she had ever seen.

Tea over, they adjourned to the big parlor, where a blazing fire of huge logs was roaring

in the great old-fashioned fireplace. The girls were standing in the glow of the firelight, looking over Ed's cabinet, when a caller was announced.

Frank Curtis was as dark as Ed was fair. He had evidently seen more of the world, and did not lose his self-possession at any moment. He could not properly be called a society man, for he had never spent much time in fashionable life, but he was well educated, had traveled some and was possessed of a keen insight into human nature, all of which gave him a certain fascination in the eyes of innocent young ladies, rendered all the more dangerous by a latent inclination which he possessed toward flirtations. He and Ed were old chums, hav-

ing been raised together, but Frank's father possessing considerable money had sent him to college and given him several years' travel, all of which gave him a polish which he would not otherwise have received. He was a fine singer, too, which, of course, pleased the girls.

Before he left he and Ed had a long, private conference in the hall. When they came in Ed said:

"Well, we have decided to give you a real, old-fashioned frolic, Christmas eve—that is to-morrow night. The Jenkins are going away next week to the South to live. All of their carpets are up and most of the furniture packed, so the house will be just the thing for a lively dance."

"Oh, a country dance—how charming!" cried Lutie; "but will it be possible to get up a party at such short notice?"

"Yes, indeed; why, you don't know how people take hold of such a thing here. Give us an hour to-morrow morning to give them

notice, and there'll be a crowd there to-morrow night that will astonish you."

Sure enough, the next morning the boys took their horses and invited the young folks far and near, and the girls helped Mrs. Block and Dinah to make cake, so that by nightfall all was in readiness for the dance.

"You uns jes look sweet nuff to eat," said Dinah, when Lutie and Nora came down dressed in party array, with bright ribbons flowing and cheeks like roses.

Some one else must have thought so too, for he stood looking at Lutie with all his heart within his eyes. It was Ed who, with lap-robe and whip in hand stood in the doorway ready to escort the girls to the sleigh. It was Frank's

alls, on horseback and on foot, each one carrying his own lantern, with which the farmyard was now illuminated.

Inside the house all was gayety and confusion. The rooms were decorated with evergreens and hung with lanterns, candles and every conceivable style of lamp. The fiddlers were playing, and the girls and boys were making the most of the flying time, their feet keeping noisy pace with the jingle of "Money Musk" or the "Arkansaw Traveler."

The boys danced by numbers as is the fashion in such places, and when they were through they escorted the girls back to their seats on one side of the room, while they monopolized the other. The girls looked like a row of pinks as they sat in line, and I have no doubt many an awkward youth's heart thumped a little faster as he looked upon them.

Lottie and Nora were the belles of the ball, and they entered into the spirit of the occasion with great zest. Nora was a beautiful dancer, and she found Frank all that could be desired in a partner. Between the dances games were indulged in, and at midnight a big supper was laid in the great old-fashioned kitchen, where apples and nuts were roasted in a fire place almost big enough to take in a good-sized house.

The merriment ran high, but their enjoyment was soon to be marred.

At one o'clock a man came running into the farm-yard. He wanted to see Frank, whose mother had been taken suddenly ill. It was not anything serious perhaps, but she was desirous that Frank should be with her.

"I will take the sleigh," said Frank, "and send it back by the hired man as soon as he returns with the doctor." So it was agreed, and Frank was soon traveling down the road at a lively rate.

It was a dark night, the sky being overcast with clouds, only the glimmer of the snow lighting the way. Suddenly a large shadow loomed up in the road. The horses immediately reared and plunged.

"It's only a cow, you foolish creatures!" shouted Frank. But he could not calm them. They dashed to the side, almost overturning the sleigh. He leaped out, striving to head them off. But he was too late. The reins slipped from his hands, and the horses were off in a second, galloping down the road at a furious rate.

And he was—where?—he hardly knew for a second. He seemed to be slipping down and down and down, farther and farther, as if the very earth had given way beneath him. Suddenly he realized his position. He had fallen into a drift of snow that covered an old mine, and he was slowly going to the bottom. He struggled in vain to clutch at something, but he was covered with snow and blinded with darkness. It was only an instant, but it seemed to him a long time before he found himself on a solid foundation.

He lay there for a second quite thankful for the error which had saved his life. Without it he would probably have received a serious hurt. Fortunately he had matches with him, and after some difficulty succeeded in lighting one. He found on inspection that the mine was not very deep, but he might as well have been buried in a silver mine in the Rockies for all his chance of escape. His only hope was that his absence would be discovered—they would come to search for him.

But what if it had snowed again, as it had threatened to do; then his chance would be slim indeed, for all traces of his foot-tracks and fall would be obliterated. The place was honey-combed with mines; even if they felt sure he had been lost in one of them they might search for days without striking the right one.

At best it was an awkward predicament, aside from the danger, and he thought ruefully of his poor mother, the accident to him might endanger her life. If he were not found, her's would, indeed, be a sad Christmas.

Fortunately it was warmer in the mine than outside, so he was not in any immediate danger from exposure, and all he could do was to wait patiently for rescue.

And that kind providence which watches over all of us had not forgotten him.

At 3 o'clock Sam, Mrs. Curtis' hired man, came rushing into the farmhouse. He had met



HELPING MAKE THE CHRISTMAS PUDDING.

ing been raised together, but Frank's father possessing considerable money had sent him to college and given him several years' travel, all of which gave him a polish which he would not otherwise have received. He was a fine singer, too, which, of course, pleased the girls.

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team and he sat on the front seat muffled in furs and robes.

"By Jove," he said, as they went spinning down the road, "but these horses are frisky; they have not been out for a fortnight."

"Oh!" cried Nora who sat beside him, "aren't you afraid to drive them such a night?"

"No, indeed," he laughed gayly; "there isn't a bit of danger."

"Yes there is," said Ed, "and you must be careful. Have you forgotten the old lead mines are all along this road, and it would be very easy for these horses to step aside and run into one of those holes, especially now the snow has drifted over the openings."

But no such accident occurred, for Frank handled the reins superbly, and the horses, though lively, were well trained.

When they arrived at the farm house they found the whole country turned out en masse. They had come in sleighs, in wagons, in carry-

would be discovered—they would come to search for him.

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And that kind providence which watches over all of us had not forgotten him.

At 3 o'clock Sam, Mrs. Curtis' hired man, came rushing into the farmhouse. He had met

the horses dashing along the road on his return from the physician's. There was a broken sleigh behind them and no one had seen Frank.

All was consternation. The party was broken up in a hurry and the men turned out in parties with their lanterns to search for the missing man. All of the girls looked bewildered and sorry, but Nora grew very pale and said nothing. She wondered why a man whom she had known only two days should have become so much to her. As if love could ever explain itself. Cupid delights in sending his shafts at random.

It was Ed's idea that Frank had fallen into one of the mines, and consequently he led the way back over the road which Frank had traveled. He looked carefully all the way for footprints, but found none. At last, however, he came to a place where the sleigh seemed to have turned. Not far from this was the impress of a man's feet and a breaking away of the snowbanks. Ed approached cautiously, feeling his way at every step.

"Boys," he said, "there's a mine here, and I believe Frank has slipped into it."

They shouted Frank's name again and again, but no response came—only the whispering of the winds answered them. But at last Frank crept to the very edge of the opening and put his ear to the ground.

"Frank!" he shouted with all his might, and his cry was responded to by a faint "halloo!"

"It is Frank's voice," he said, and immediately preparations were made for his descent with ropes and lantern.

In a little while Frank stood among them. He was a little benumbed with the cold, but otherwise unharmed, and a general rejoicing followed.

"And my mother; how is she?" he asked, when he had fully recovered his senses.

No one had thought of her. Their sole anxiety had been for Frank. As soon as possible he was put into a sleigh and driven home. He found his mother under the physician's care. She was quite ill, and was not allowed to hear of Frank's escapade until she had fully recovered.

I need not say there was a joyful Christmas the next day after Frank's unlucky adventure, and that the turkey, mince pies, and sundry other good things were relished by the young people as they had never been relished before.

Those people who expected a wedding in this story may perhaps be disappointed, but I must say, to be truthful, that Ed and Lutie grew very fond of one another, and that Frank found great happiness in gazing into a pair of bright eyes that had haunted him even in a lead mine.

(Original.) Christmas.

BY S. C. B.

The air is cold, the wind is chill,
We'll have, though, Merry Christmas, still;
The bells are ringing—hear their sound—
But not for Christmas, the year round.
Though winter, yet our park is green,
A merrier winter we've never seen,
And in the family home, this year,
Are we quite sure that "All are here"?
Is there no "vacant chair" to-day?
Perhaps 'twill not be thus away.

Brightest flowers fill room and hall,
Sweet little faces come at call.
Why should not happy hearts tonight
Welcome in this festive night?
The tree is set, the candles lit,
And baby's clapping hands are fit
For Christmas emblem—heart so light
To greet her Santa Claus tonight;
For he would be remis in duty
To not bring something for our Beauty.

Near Grandpapa (whose wistful eyes
Thinks something on the tree he spies)
Sits Grandma dear, whose special care
Has placed the tree, bid Santa there;
And Father, with his careworn face
Lights up in smiles to Mother's grace,
Reflect, with features all aglow,
Their little ones; full well to know
We "all are here"—thank God, and pray
For those who have no Christmas day.

Preparing the Christmas Dinner.

Christmas begins very early with the children. The tardy December sun is often too slow a torch bearer, and the unaccustomed gleam from many windows on a Christmas morning is a cry that the little ones are awake and searching for the footprints of Santa Claus around the hearthstone. Beginning thus early with their gifts the fleeting interests of childhood seeks new fields before the morning is half spent, and the kitchen is resonant with little voices laden with countless queries concerning the coming Christmas dinner.

Our artist has seized a view of a home where this flight to the kitchen has just occurred, and all, even to the baby, are clamorous to have some share in the preparations for the feast. The request is cheerfully granted, and little four-years-old is now enjoying his share in kitchen composition. When the dinner comes upon the table the children will surely claim their share of honor for its excellence.

Many of our young friends will see themselves portrayed in the engraving which we present. May they enjoy the day from dawn to eve.

MADAME DEMOREST was among the New York ladies who applied the other day to register in order to vote.

The Gift-Making Season.

There is no mistaking the premonitory symptoms, Christmas is nigh at hand. There is a holiday aspect on everything, and business feels the enlivening influence. There has been a great change in late years in the holiday trade. Once the poultry dealers, the groceries, toy and confectionery vendors, had pretty nearly all the business. But while these luxuries and notions have not lessened in demand, the scope of giving has greatly increased. Everything now from a house and lot to an album, from a piano to a pin-cushion, comes within the gift range of this big-hearted festival.

It is believed that the habit of making gifts at this season of the year is a beneficent feeling born of the manger and the cross. It was certainly an early flower of Christmas faith. Then the poor were fed, the ragged clothed. Even messengers were sent out to scour the by-ways, lanes and hedges, and bring in the poor, lame, halt and blind, and give them the best of the land. It was not long, however, before the circle of Christmas benefactions was greatly enlarged, and men began to make complimentary gifts to their wives and children, relatives and friends. The gift came from the heart, and was put away as a fragrant place-keeper in the book of memory. The woman who embroidered the first pair of slippers for the dear pastor, or knit purses, mittens or comforters for her husband and big boys, had no thought of gaining anything beyond the pleasure of the deed. That was the golden age of giving, but it has nearly passed away. The age of barter and exchange has come in, and there is a talk now of assigning it to our text-books on domestic economy.

On the approach of Christmas, a levy is made on the pocket of every man and woman in the country, and though by a fiction of the imagination it is regarded as voluntary, it is really as inexorable as the assessments levied on candidates during a political campaign. The steady increase in the value of Christmas gifts is a fact full of alarming significance. A man with a big family is often compelled to skate near the ragged edge, and it is even whispered that a prudent young man will not marry a girl who has an excess of sisters, for fear he may be compelled to use up the best part of his salary purchasing gifts. But that is merely hearsay.

It is said that a few gentlemen in the nutmeg country a few years ago sought to reduce expenses by introducing an irredeemable paper currency in the shape of Christmas cards. It would have been a great saving if they could be substituted in place of bracelets, necklaces and diamond rings. But the economic scheme was a failure. There was no authority to enforce this sort of script in lieu of bonnets and jewelry. Indeed, it recoiled on the heads of the unhappy inventors with fourfold vengeance, for the printers put up the style and price of cards, and the poor fellows were compelled to purchase and give away these expensive cards, and at the same time continue the usual budget of holiday expenditure.

There is a rumor that a very learned professor in one of the New England colleges, a rusty old bachelor, received last Christmas about 20 little dishes for holding cigar ashes from as many lady friends, and toilet soap enough to cover the bureau, washstand and all the chairs in the room, and concluded to tackle this question of giving. After tugging at it for a long time, he struck on a scheme he thinks will give general satisfaction. The plan is for each one to give precisely what he or she wants, and as soon as convenient establish a sort of clearing-house, by means of which an exchange of gifts may be arranged. That is, let the head of the family give his wife a meerschaum pipe, his daughter a gentleman's overcoat, his sister a fine hunting-dog; in return his wife may present him with a diamond necklace; his daughter, a sealskin sacque; his sister, a new bonnet. Of course each one must appear to be delighted, and when the clearing-house is opened each one will receive back what he or she gave, and the result is that all are satisfied and everything is lovely.

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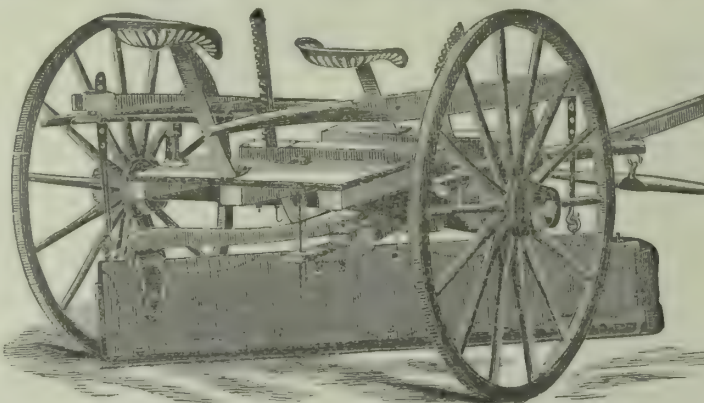
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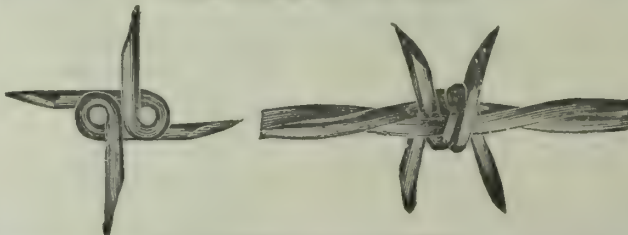
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(Continued from page 503.)

are in the front rank of great California industries. The California prune is not really in competition with the imported French prune, because it is a better fruit, of better flavor and of better keeping qualities. The far western trade discovered this fact some time since with the result that our prunes have not only largely supplanted the imported prunes in the great western markets, but for the past two years they have actually sold on the average at from one to three cents a pound above the French prune. The California prune is like a date, and, when cut, of a bright golden color, when cooked it is superior to anything grown elsewhere.

All first-class packers now grade their prunes with satisfaction to the trade. The growers this year realized from 2 to 2½ cents per pound for the fresh fruit, showing a splendid profit, and when packed prices have ruled from 9 to 14 cents according to sizes. From the large number of new orchards coming yearly into bearing, we can safely estimate the product in 1888 at 3,500,000 pounds, or say 15,000,000 pounds of the green fruit.

The Santa Clara valley is the home of the best California prunes.

California German Prunes.—While California can produce a nice German prune, the French prune is so much superior that the German is neglected. The result is that little or no progress has been made in the production of the German prune in this State. The tree here produces abundantly, but the price is so much lower that growers prefer to plant the French prune. Some little has been done in setting out new orchards in this fruit, but we cannot say that the outlook is very promising for a profitable market. The imported Turkish and Bulgarian prunes, dirty trash, which are imported here in casks from Europe, supply what trade there is on this coast for a cheap prune. We think, however, that the day is not far distant when this nasty mixture from Europe will cease to be quoted in this market.

Sun-Dried Apples.—The low prices that have prevailed for the last two or three years for our sun-dried apples have very seriously curtailed the product, as there was no money to the producers in putting them up. What drying has been done in the last year or two has been in the way of evaporated bleached apples, something for which we are profoundly thankful.

Sun-Dried Peaches.—We report a large increase in the product over 1886. The Eastern crop, however, was short this year, and California was subjected to a most extraordinary demand from all quarters, which principally cleaned up the whole crop at good prices to the producers. In addition to this the demand for our green peaches this year, for canning purposes, also was equally heavy, and growers found no difficulty in selling either to the canners or to the dryers, at prices which returned them handsome profits. The quality of the dried peaches this year, as a whole, has run good, although in some sections the product was damaged by untimely showers, which blackened the fruit during the drying process. There is no fruit produced in the world in the way of a peach like the California in size or in flavor, and when properly prepared for market it realizes the highest prices in all the markets of the Union.

Sun-Dried Pitted Plums.—Such low prices have been ruling on this fruit for two or three years that growers became very much dissatisfied and fed their fruit to the pigs, let it rot or sold it to the canners at whatever they could get for it. The result was a small out-turn of dried pitted plums. This, however, brought about increased prices, and what packers realized for such stock as was prepared, should show a nice margin to the producers. We go out of the year with a very light stock here, and it is quite likely that another year's supplies will be more ample. For trade, who like a tart fruit, there is nothing grown anywhere superior to the California pitted plums.

Sun-Dried Pears.—We report a small quantity dried this year, owing partially to a shortage of the crop of proper varieties and also a good demand for canning purposes; like apples, the demand for pears nowadays is largely running on evaporated bleached fruit, which have a fair steady jobbing demand and brings fair returns to the producer. We recommend that all growers of this fruit bleach it, and the common sun-dried unbleached fruit be done away with.

Dried Grapes.—There has been quite a large increase in the quantity of fruit this year. The California dried grape not only makes a good cheap cooking raisin, but it also makes an excellent table sauce when properly prepared. It is produced principally from the Mission and Zinfandel grape, and as its excellence is becoming better known, the trade for this fruit is constantly extending. Putting these grapes up dried, affords another outlet to all growers of grapes of these varieties who find a dull market in selling them for wine purposes. It also gives them an outlet and relieves them from any squeezing on the part of the wine-makers.

Sun-Dried Nectarines.—No finer fruit is grown in California than the nectarine. In fact it is one of the choicest produced in this State. It has, however, been greatly neglected by the trade generally. This principally has come, no doubt, from a lack of knowledge of the superiority of

this fruit. Wherever the nectarine has been used it is noticed that duplicate orders follow. In our opinion, the nectarine in flavor is superior to the apricot or peach, and we hope to see the time when they will rank equal in price with either of these fruits and be taken freely. There are many sections in California where the nectarine is produced most abundantly and of the most luscious fruit.

California Figs.—The product this year is very fair, but on account of low prices less attention than formerly has been paid to drying them. The California black fig, outside of its color, which is against it, is equal, in our opinion, to the imported fig for all purposes of consumption.

Their color, however, is against them. The White Smyrna fig is being grown in California in certain sections and is doing well, and we hope to see a large increase in this industry, as there is no question whatever that California can produce a white fig equal to anything that comes from abroad. We have seen some white figs produced in the central and southern portions of the State that were handsomer and finer than anything that we have ever seen from Smyrna.

Sun Dried Apricots.—While the output of this fruit for the past season has been in excess of last year, the demand has been so good from the East that the whole stock has been rapidly absorbed, and at present there is little or nothing left in this State for sale.

Evaporated Apples.—We report an increase in the product of this fruit over last year and generally of a better style of packing. This is very commendable. The sale for the California evaporated apples is principally confined to this coast and for shipment to Australia and the Pacific Islands. Our apples are not as tart as the Eastern apples, and, as a general rule, not as carefully put up, and for this reason, as yet, they have not made much progress and met with much favor in England, but as we are now beginning to put up apples from the foothills, and are yearly improving in our style of packing and carefulness in selecting, we have no doubt that the time is not far distant when California evaporated apples will be found side by side in the London and Liverpool markets with the apples from New York and Maine.

Evaporated Bleached Apricots.—As will be seen by our figures, there has been a very heavy increase in the production of this fruit over 1886. This was a good year for apricots, and while the demand from the canners was something extraordinary, it was equaled or exceeded by the demand from the driers in all sections of the State. The product as turned out, we are glad to state, also exceeded in quality, in appearance and in style of packing anything before produced in California. As large as this product was, the great bulk of it has already been sold and gone into consumption. The price of the green fruit this year ruled from 1½ cents up as high as 2 cents per pound, and for the dried product from 13½ to 17 cents. In the face of this being a very abundant year, next season we may look for a lighter crop.

Evaporated Peeled Peaches.—As will be noticed, the product this year is largely in excess of last season, but the bulk was sold for Eastern shipment, early in the season, and has largely gone into consumption. We are pleased to note that peeled peaches in California are being yearly indulged in on a more large scale, for the reason that we believe peeled peaches pay the producers better, and while the trade is not as large as for the unpeeled, the demand from all portions of the country is constantly on the increase. We would recommend for the coming year a more general putting up of this fruit in two and five-pound packages, as in that style the consumption will be increased in all portions of the country.

Evaporated Unpeeled Peaches.—A very heavy increase is noted over the product of last year of this fruit, and generally of better quality and more tastefully packed. The California evaporated unpeeled peach has really no competitor anywhere, because it is of better flavor and finer generally. Notwithstanding the heavy quantity put up this year, the stock now carried in California is extremely light, and not enough more than will be required for the running coast demand from now until the end of July.

Evaporated Pitted Plums.—What we have said of the sun-dried will apply to the evaporated. The low prices last year very seriously curtailed the putting up of this product this year. What has been prepared, however, has been of nice quality and has brought figures highly remunerative to the growers. We can hardly expect, however, any very heavy demand for evaporated plums, for the reason that the sun-dried pitted plum is of such excellent quality that at the difference in price the majority of the trade will take the fruit.

California Walnuts.—We estimate the product this year at 1,500,000 pounds, which shows a very gratifying increase over 1886. It is also a pleasure to note that the best California walnuts properly bleached, and due attention being paid to careful grading and curing, are now, in a large measure, supplanting the imported article. It was only a few years ago that a California walnut, even that was as good as the best imported as far as eating quality, was sold in the Eastern and Western markets at anywhere from three to six cents per pound under the imported. This, however, is now being changed, and discriminating dealers will take our best walnuts at prices equal to and in many

instances exceeding the imported goods, and there is no reason why they should not, as they are not only fresher than anything that comes from abroad, but are of better flavor, and the quality certainly is not inferior. California offers a fine field for the production of these nuts, and while there are a good many new orchards being planted, we do not think the attention is being devoted to this industry that is warranted, by the fact that we have the United States for a market. The best walnuts come from Southern California.

California Almonds.—The product this year is a light one owing to various causes, but the quality has never been better. The low prices prevailing in New York for the imported almonds, has not left much margin of profit for the California almonds, but it is with pleasure that we state that like our walnuts, we find a wide-spreading and increasing demand every year. The Terragona imported almond has been the principal nut in favor by the Eastern trade. This is a very large and thick-shelled nut, and is not to be compared with the soft-shell California almonds in any way. It being of larger size and there being nothing else to compete with it, it has taken the bulk of the trade, but there is no question that it has seen its best days, and that the soft-shell almonds of California are rapidly taking its place. Dealers are generally finding out, and consumers especially, that paying 14 or 15 cts. per pound for a shell is a pretty dear price. The shells of the California almonds are very light, and the dealer principally in buying these nuts, gets meat and not shells.

We will give next week the portions of the review pertaining to the honey production.

Southern Santa Cruz County.

EDITORS PRESS:—Since my last communication I have taken a general survey of the southern portion of Santa Cruz county, and can bear testimony to the oft-repeated fact of the excellence of its soil, climate, and productions. The neighborhood of Soquel boasts of many excellent farms, which, with two or three exceptions, range from 80 to a few hundred acres in size, and are generally well improved. While every variety of fruit known to California is produced here, fine apples are a specialty. Many of the apple orchards are just commencing to bear fruit. The ranch of H. P. Gregory, one mile south of town, is one that attracted my special attention. It consists of 300 acres of fine rolling land, upon which the proprietor has an orchard of 6000 fruit trees of various kinds, principally apples and prunes. He has also a very promising vineyard of 70 acres just beginning to bear, and will increase the same considerably next year, and erect a winery. Through the courtesy of Mr. J. D. Esty, superintendent, I was furnished a saddle-horse to ride over the place, and mounting some of the higher knolls, the sky being clear, I was afforded a magnificent view of Monterey bay and surrounding country. Mr. Gregory also believes in good stock, as his herds will show. One of the curious features of the ranch I observed was his Shetland horses, a stallion and several mares, imported in 1881 from Australia. Judging from present appearances and the plans for future operations on this ranch, I am led to the conclusion that it will eventually rank with the most important in the county.

A half mile further south is located the tannery of Moore & Co., at which was told a No. 1 article of shoe and harness leather is produced. The tannery employs twenty men, turns out six hundred sides per week, and is under the efficient management of Mr. James McDonald.

I passed the night at Aptos, which is considered attractive as a summer resort, being visited by hundreds every year during the "heated term." As a resting place it has a just claim over many other points whose fame has been heralded all over the continent. Beautiful streams of excellent water flow down from the Coast range, the spurs of which jut to the edge of the ocean. The landscape is clothed with scattering redwood and other species of evergreen timber, while the several mineral springs in the vicinity, among which is the Nichols, afford additional attractions to tourists and health seekers. The beach is equal to the best on Monterey bay for bathing purposes. This point is further noted as the country seat of Sir Claus Spreckles, the great sugar king. I paid his elegant homestead a visit and was placed under obligations to Messrs. E. Larson, foreman, and R. Cleary, in charge of the fine stock of the ranch. The admirer of good blooded horses will be well repaid for a visit to this place. Among a score or two of specially fine animals I was most attracted by a Gay Wilkes colt, for which, at three months of age, an offer of \$2,000 was refused. Also a Director filly I was shown, seemed to lack nothing in point of excellence.

Passing through a rolling section of country four miles further south, I was comfortably provided for by Mr. W. W. Wilson, the genial hotel-keeper of Corralitos. Mr. Wilson is also the dispenser of happiness to this community by handing out the daily mail. He is one of the most public-spirited men of the place, as shown by the offer he makes of a site *gratis* for a fruit-drying and canning establishment, for which the place is specially adapted. The hills and vales tributary have become famous for peaches, apricots, prunes and apples, and large

orchards may be seen in every direction, the finest of which I visited was that of the Bowman Bros, hard by. They have 50 acres of very thrifty trees just coming into bearing, and are constantly increasing their orchard. These gentlemen are also engaged in the nursery business, having now on hand 40,000 fine trees for the market. As an instance of the capricious nature of Californians, I cannot refrain from citing the fact that but one year ago Bowman Bros. were compelled to dig up and burn 75,000 French prune trees, not being able to find sale for them, while this year the nurseries can supply but a tithe of the number wanted, and some men are complaining at the lack of enterprise on the part of nurserymen for their failure to meet the demands of the market. Corralitos, meaning in Spanish little corral, is aptly named, being fenced in by hills on every hand. The village has a population of 300. Its principal enterprise is the Corralitos paper mill, which employs 50 men and furnishes a market for considerable wood, straw and lime obtained in the county.

Green Valley.

A portion of the Pajaro valley proper is one of the most beautiful and productive sections of the county. The first glimpse I obtained of it as I ascended the hill south of Corralitos forcibly reminded me of one of the most charming sections of this coast, the Walla Walla valley, W. T., to which Green valley has many points of similarity. W. M. McGrath's fine dairy farm is located here. The proprietor maintains 125 head of good dairy cows on the place, and makes cheese a specialty. This product of this year was 60,000 pounds, which was marketed at an average of 13 cents. The farm of 400 acres is divided into 25-acre fields, with living water in each. Adjoining is located Mr. C. H. Cornell's farm of 185 acres, which he is converting into an orchard year by year, 30 acres being already adorned with thrifty trees.

On Wednesday night I partook of the hospitalities of Mr. and Mrs. A. P. Roache at their homestead, a few miles north of Watsonville, and I shall long entertain a pleasant recollection of the occasion. Thursday I visited the home of A. Mendia, Green valley, a Spanish pioneer of early mining days. Like a large percent of the good people of the valley, he is a staunch friend of your journal. I next visited the great berry farm of Stewart, Buckley & Thurber, two miles north of Watsonville, of which Mr. I. Thurber is manager. One hundred and fifteen acres are planted to strawberries and 40 acres to raspberries. The soil is well adapted for this branch of husbandry, and yields of strawberries, 50 chests per acre yearly or 4500 pounds. The farm is for the most part level, though the site of the residence is on rising ground and commands a fine view of the country for many miles around. The water for irrigation is by means of a Colli's engine, raised 52 feet, and sent to every section of the farm by flumes. Owen and Morris B. Tuttle are ranked with the most enterprising hop growers of Pajaro valley, their farms being near Watsonville. They have two crops on hand yet awaiting a more remunerative market.

I was pleasantly entertained on the night of Sunday, the 18th inst., at the comfortable home of J. K. Myer five miles west of Watsonville. Mr. Myer, prosecutes the business of dairying, for which he has one of the best locations along the coast. His farm consists of 1000 acres of excellent tillable and pasture land, watered by numerous springs and sheltered by scattering groves of timber. This gentleman served an apprenticeship to the art of butter and cheese-making many years ago in the Buckeye State, but is still able to profit by the reasonable hints contained in your journal weekly.

Among other model farmers whose places I visited in the fruitful Pajaro valley, was Messrs. C. H. Porter and L. P. Helmer. The latter gentleman has lately perfected an improvement of the cultivator, by which orchards can be cultivated without danger of barking the trees. A cut of this valuable invention will shortly be forwarded for your columns. Mr. Helmer already finds the demand very large among his neighbors.

Watsonville, the principal town of Pajaro valley, is situated on the bank of the river of this name. It is a thriving, prosperous town of about 3000 people, which number is promised to be greatly augmented in the near future.

The establishment of Spreckles' beet sugar factory, now an assured fact, is looked upon as the great motor that shall infuse new life into the town and rapidly transform it into a rival of cities many times its present size. With the many advantages of the location, backed up by such a fine farming, stock and fruit country, and the establishment of so important a manufacturing enterprise as sugar-making, I think there is good reason upon which to base sanguine predictions as to the future growth and prosperity of the place.

F. B. L.

ORANGE TREES.—Orange planters will be interested at the announcement in our advertising columns of orange trees grown in the foothills by Fred. C. Miles, manager of the Aloha Nurseries at Penryn, Placer County.

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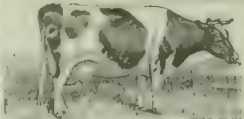
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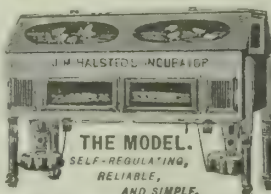
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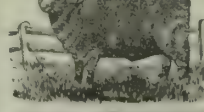
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Ammonia......1.87 "
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This Fertilizer is a Valuable Manure for vineyards, orchards, gardens, farms, and I recommend its use by the cultivators of the soil generally, in California. Yours truly,

DR. E. A. SCHNEIDER.

University of California, College of Agriculture.

BERKELEY, Nov. 20, 1886.

Dr. J. KOEBIG, San Francisco—Dear Sir: I take pleasure in adding my testimony to that of Dr. Schneider as to the high quality of the "Nitrogenous Superphosphate" Fertilizer, analyzed by him at your request. It is a high-grade article, and as such returns the user a better money value than a low-grade

H. M. NEWHALL & CO., Agents, 309

fertilizer. It is especially well adapted to use in California, on account of the predominance in it of Phosphoric Acid, which is generally in small supply in our soils. Yet it is desirable that "complete" fertilizers be used in our orchards and vineyards, and yours is of that character in furnishing Potash and Nitrogen as well. Very respectfully,

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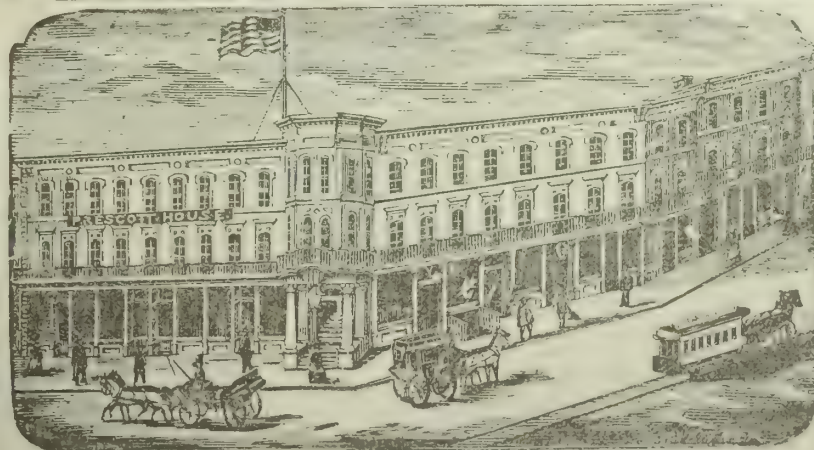
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S. F. MARKET REPORT

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Dec. 21, 1887.

The volume of trade, the past week, was confined chiefly to such articles as find free consumption during the holiday season, but even these have not shown up to this writing any appreciation in prices. Continued dry weather is creating a strong tone for hay and cereals of all descriptions. Good soaking rains are sadly needed in about all the agricultural districts. The Eastern markets for wheat, barley and corn have held strong throughout the week, which creates an impression that a higher range of values will obtain after the holidays. The European wheat markets have held strong, notwithstanding the heavy arrivals of foreign. To-day's cables are as follows:

LIVERPOOL, Dec. 21.—Wheat—Holders offer moderately; No. 2 winter, 6s 8d, and firm; do. spring, 6s 8d and firm. Flour—Holders offer freely at 9s 2d, and dull. Corn—Holders offer freely; spo., December, January and February, 4s 10d, and dull.

Foreign Review.

LONDON, Dec. 19.—Mark Lane Express, in its review of the grain trade during the past week says: English wheat is weaker and ruling prices lower. The sales of English wheat during the week were 64,644 quarters at 31s 2d against 63,866 quarters at 33s. 4d for the corresponding period of last year. Flour is dull. The foreign wheat trade is further depressed. India and Russia have declined its without buyers. At Liverpool there has been a fall of 2d per cent. Corn and oats are 3d cheaper. Linseed is 1s lower; 20 cargoes of wheat arrived; two were sold, five withdrawn and five remained. To-day the tone of the wheat trade was somewhat improved. English wheat (white) is firm, though nominally unchanged. Flour is 3d lower. Corn recovered 3d. Oats were 3d cheaper on the week. Beans and peas were unchanged.

Miscellaneous.

NEW YORK, Dec. 20: Lima beans are quiet. Old, \$2.25. New California white may be wanted, as they are more in demand here than foreign, which, on arriving, take their place on a scarce market, and would probably bring \$2.26.

Syrup-cured apricots and crated in 2½-lb boxes are in the market.

Wine, as before noted, enlarges the sales to the grocery trade. The price depends much upon the skill of vault-owners.

Honey, strained, 8@9c.

Peas have yet the Boston cases to compete with. Winter Nellis, shrunken, \$2.50; good, \$3.50@4; extra large, \$5.

Slimon is dull and last-quoted rates prevail. Mustard seed is nominal at 3¼@4¼c for yellow and 4¼@5c for brown.

Hides are dull, with sales of 23,500 lbs, mostly on private terms.

For hops, shippers make low bids. A round lot of low grade California was pressed for sale at 7c; new 6@10c; old State, 9@17c; common to best, new foreign, 10@20c.

Eastern Grain Markets.

CHICAGO, Dec. 21.—Wheat, firm; cash, 77c; Jan. 77½c; May, 84½c. Corn, stronger and higher; cash, 48½c; Jan. 48½c; May, 54½c. Oats, steady; Jan. 30½c; May, 33½c. Barley, nothing doing.

Wool.

NEW YORK, Dec. 20: Domestic wool is moving on at about former values, though some sellers have shaded high grades to invite business. Sales of 95,000 lbs X and XX, 31@32½c; 10,000 lbs one-quarter blood combing, 37c; 5000 lbs clothing, 37c; 10,000 lbs three-eighths blood unwashed, 39c; 10,000 lbs one-quarter blood, 27½c; 2000 lbs medium unwashed combing, 30c; 10,000 lbs super pulled, 35@36c; 50,000 lbs Territory, 19@22c; 10,000 lbs Oregon, 16c; 34,600 lbs domestic, 35,000 Persian, 80,000 Mexican and 95 bales East India were disposed of at private terms.

BOSTON, Dec. 20.—Wool is in improved demand. Prices favor the buyer. Texas, 31¼@32c; Michigan, 28½@29½c, and No. 1 wools 34c; Eastern Oregon, 16@19c. Pulled wool, supers, 20@25; extra 27c; other grades unchanged.

PHILADELPHIA, Dec. 20.—Wool is dull and prices nominal.

Local Markets.

BAGS—The market shows no material change. The absence of rains is against holders. Futures and also spot are weak at 7@7½c.

BARLEY—The sample market has ruled fairly steady throughout the week. The supply of heavy, plump grain is light. Brewers took more freely the past week, but fought against an advance. In options, trading has been fairly active, with only slight fluctuations. To-day's sale on Call, is reported as follows:

Morning Session: Buyer season—100 tons, 97½c; 100, 97½c; 400, 97c. Buyer 1887—100 tons 87½c @ ctt. Afternoon session: Buyer season—800 tons, 98c; 800, 97½c. Buyer 1887—100 tons, 88½c. No. 1 Brewing, buyer 1887—100 tons, \$1.01½ @ ctt.

CHEESE—Eastern is coming in more freely, and sells at 12c@14c. Choice Californian is in light stock; the bulk received is off-grade.

BUTTER—Pickled is about out of the market. So scarce is it that dealers have paid 29c for poor stuff and 22½c for stuff fit for axle grease. Fresh roll, while quotable at 45c for fancy, moves slowly, as dealers only buy in small lots. More Eastern is coming in, which kind is solid, packed down.

EGGS—The market shows more strength, but as liberal supplies are on the way from the West, it is claimed that it will only be a short time before lower prices will rule. The demand is free.

FLOUR—The market is fairly steady, although a good demand is reported.

WHEAT—Buyers have been fighting against the

higher quotations, but pressing necessities bring them in at full figures. Sales are still made for parcels of No. 1 white shipping, favorably situated at over \$1.40 per cental. In options, trading has only been fair, but the fluctuations were more attractive, which brought in a few more operators from the outside. To-day's sales on Call are reported as follows:

Morning Session: Buyer season—400 tons, \$1.48½; 700, \$1.48½. May—100 tons, \$1.46. Buyer 1887, season's storage paid—200 tons, \$1.38½ @ ctt. Afternoon session: Buyer season—200 tons, \$1.48½. May—200 tons, \$1.45½. Seller 1887, old contract—700 tons; \$1.35½ @ ctt.

COMMUNICATED.]

Market Information.

The following are the receipts of the principal items of California produce at San Francisco from the beginning of the harvest year to date, compared with the corresponding period in the previous harvest year:

	July 1 to Dec. 18, '86.	July 1 to Dec. 17, '87.
Flour, qr. sks.	2,373,236	1,739,473
Wheat, cts.	8,409,849	4,664,803
Barley, cts.	1,733,467	1,521,408
Oats, cts.	104,239	122,398
Potatoes, sks.	505,765	598,664
Corn, sks.	39,393	108,885
Rye, sks.	12,232	12,071
Buckwheat, sks.	4,448	742
Beans, sks.	300,489	321,070
Brans, sks.	239,326	238,099
Hay, tons.	58,113	65,492
Salt, tons.	12,948	9,140
Wool, bls.	44,874	37,852
Hides, No.	56,369	51,376
Raisins, 20-lb boxes.	105,009	71,194
Quicksilver, flasks.	7,374	14,264
Hops, bls.	12,101	13,807

The receipts of certain articles of produce from Oregon, Washington Territory and other distant points, for the same period, compare as follows:

	July 1 to Dec. 18, '86.	July 1 to Dec. 17, '87.
Flour, sks.	31,417	114,193
Wheat, cts.	192,322	430,359
Barley, cts.	1,693	75
Oats, cts.	182,934	97,520
Corn, cts.	48,992	12,590
Wool, bales.	9,056	7,104
Brans, sks.	26,418	32,040
Hops, bales.	655	228
Hides, No.	15,790	14,697
Potatoes, sks.	28,020	2,247

Cereals.

The United Kingdom's wheat supply (including flour) for the 14 weeks ending December 3, 1887, (including British and foreign), was 59,723,357 bushels, comprising 22,044,928 bushels English and 37,679,429 bushels foreign. The average weekly supply in 14 weeks has been 4,265,954 bushels, against an estimated weekly consumption of 4,000,000 bushels indicating that in 14 weeks 3,723,356 bushels have been added to the reserve that existed on the 1st of September last, and these were above the average normal stock of about 16,000,000 bushels in all the importing ports, flour and wheat included.

The average price of British wheat for the week ended December 3, 1887, was 31s. 3d. per 480 lbs., equal to 94 5-10c. per bushel, against 93c. the preceding week. The average price for the week ended October 1, 1887, was 28s. 5d. per 480 lbs., the lowest reached this season, and is now 2s. 10d. per 480 lbs. or 8 9-10c. per 60 lbs. advance. The rise in French and other continental markets in the same time has been about the same as in English markets.

Wheat exports from British India during the week ended December 3, 1887, were 220,000 bushels, comprising 100,000 bushels to the United Kingdom, and 120,000 to the continent of Europe, against 100,000 bushels the previous week, including 80,000 bushels to the United Kingdom and 20,000 bushels to the continent, and from January 1 to November 19 the exports of wheat from all British India ports have been 27,371,000 bushels, against 40,204,000 bushels, the corresponding period in 1886, being a decrease of 12,828,000 bushels.

The quantity of wheat remaining in this country on December 1, 1887, available for exportation, is about the same as it was a year ago. (For particulars see statement elsewhere in this issue.) About one-half of our surplus had, on December 1, 1887, been disposed of by export in the five months from July 1 to December 1. The probable approximate quantity for export from the Pacific coast on December 1 was about 10,800,000 centals.

The price of wheat after the turn of the year, provided there is no war in Europe, will depend very largely upon the crop prospects in the United States and in Russia, particularly in the month of April.

Oregon mail advices continue to report free exporting of wheat, with Eastern Oregon fetching from \$1.15@1.22½ and Western Oregon from \$1.17½@1.25. The stock now held in Portland is claimed to be about the same as at this date in 1886. Considerable of the Valley wheat is taken for California millers.

In the local market there is no particular change in wheat. For stiffening and topping off, good prices are paid, but outside of this, buyers haggle and bid down, only paying full asking prices when compelled, so as to save demurrage. The tonnage loading keep large, notwithstanding the quick dispatch given to ships on berth. The outlook is favorable to low freights to Europe, as the high price of coal is sending quite a fleet of vessels to this coast, loaded with coal. They will take wheat out as return cargo.

Corn is strong at a higher range of values. In speaking of the Western situation, Bradstreet says that with a shortage of 30,000,000 bu. of potatoes (20 per cent), 25,000,000 bu. of oats (4 per cent), 7,000,000 bu. of barley (12½ per cent), and 212,000,000 bu. of Indian corn (12 per cent), the effect on the price of corn (with short crops in Southeastern Europe) promises to favor holders.

Oats are strong and in demand causing no concessions to be made except for parcels on the wharf, so as to save expenses. The stock is light.

Barley is steady with a strong tone for the more choice grades. Although receipts have been free, yet the stock is decreasing under a large consumption.

Bright, large, plump barley is wanted by brewers, for which they pay good prices. The bulk of brewing is light weight and inferior to last year's.

Rye and buckwheat are firm at the advanced quotations.

Feedstuff.

Hay continues to hold under a good consumptive demand, and moderate supplies to draw from. The dry weather is an important factor in keeping values well up. Choice grades are very hard to get, that now called choice is only fair to good.

Brans and middlings are strong at an advance. Feed meal is improving, while ground barley remains steady.

Fruits.

Grapes continue to come to hand, but move slowly. Eastern apples have come to hand, with heavy shipments on the way. Oregon continues to send us liberal supplies. The market is strong for choice, under a good demand.

Pears are in good supply for the season, but the market is strong for the more choice.

California oranges make a better showing. The market is steady. Limes and lemons are unchanged. The stock of dried fruits is slowly increasing. The demand, as usual at this season of the year, is light. After next month a free inquiry is expected to set in and a much higher range of values rule. Acting under this belief large holders are storing.

Raisins are in good demand, but as usual large dealers are working off their own stock, holding consignments in reserve. To sell out a consignment parcel fully 10 per cent lower prices would have to be accepted than we quote. The stock of choice raisins is very light, almost nothing. The stock of other grades is less than ever before in this month. The Eastern market is very strong with much higher prices looked for by spring.

Live-Stock.

Butchers are running chiefly on Christmas meat, consequently off quality cattle are somewhat neglected although a steady tone prevails. Mutton sheep are in fair supply. Freer receipts of lambs are reported. Hogs continue to move off freely, particularly the more choice, hard, grain-fed. Acorn-fed are not coming in freely yet. Several sales are reported the past week of matched teams. One well-mated, good steppers, gentle and at the same time of good carriage, fetched nearly \$300. Another span was sold at \$1000. General utility horses fetch from \$200 to \$350 each, as do drivers, although sales of the latter are reported at over \$500. Work horses continue slow.

The following are the wholesale rates of slaughterers to butchers:

BEEF—Extra, 7½@7¾c; first grade, grass fed, 6½@7c; second grade, 6@6½c; third grade, 5½@5¾c.

MUTTON—Ewes, 5½@6c; wethers, 6@6½c. LAMB—Spring, 7@8c.

VEAL—Large, 6@7c; small, 6@8c.

PORK—Live hogs, 4½@4¾c for heavy and medium; hard dressed, 6½@7c per lb; acorn fed. 4@4½c; dressed, 5½@6½c; soft hogs, live, 3½@4c. On foot, one-third less for grain or stall fed, and one-half less for stock running out.

Raisins.

NEW YORK, Dec. 20: Loose raisins have been well taken for the season's wants and are now quiet and easier. High-grade London layers are firm; Two-Crown Malaga, \$1.30@1.50; Three-Crown, \$1.70@1.80; Three-Crown London, \$2.25@2.30; fancy, \$2.50. The receipts are liberal, but not oppressive as the Pacific packings now sell upon their merit, and standard sorts are selling strong.

Vegetables.

White potatoes hold strong at full prices, under light supplies of choice grades. Red varieties are in buyer's favor. At the East heavy importing of potatoes from Germany and Great Britain is reported.

Cabbages are strong at full figures. The supply is light while the demand is good.

Marrowfat squashes have a better tone.

In root vegetables, carrots are steady, while beets, parsnips and turnips are strong, with a good demand.

Miscellaneous.

Turkeys have not sold as well as expected. This is due to free receipts from the west. Choice, large well-conditioned hens, young roosters, ducks and geese have met with ready sales, but poor qualities had to be sold the best they could.

Hops are slow, with choice hard to get, owing to the bulk having been shipped to the East. It is claimed that better prices will rule, in the spring months.

Sales of wool the past week aggregate over 500,000, ranging at from 8c up to as high as 18c. There was very little that fetched the latter price. The stock here, as a rule, is not desirable.

Beans are strong at another advance. The stock here is light, while the demand is active, chiefly on Eastern orders.

Hides continue weak, but deerskins are strong and in demand.

Nuts are in light stock, and as the demand continues free, the market holds strong.

Honey continues to hold to full prices, but owing to so much adulterated being on the market, as high a range of values do not obtain as otherwise would.

The tonnage movement compares with last year at this date as follows:

	1887.	1886.
On the way.....	319,290	196,466
In port, disengaged.....	117,825	63,396
In port, engaged.....	22,856	63,706

Totals..... 458,971 323,568
To obtain the carrying capacity add 60 per cent to the registered tonnage.

San Francisco, Dec. 21, 1887.

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. Wines, Dec. 21, 1887.

Apples, bx com.	75 @ 110	Figs, loose	5 @ 8
do choice	1 35 @ 1 75	Nectarines	10 @ 14
Apricots	— @ —	do evaporated	16 @ 14
Bananas, bunch	2 50 @ 5 00	Peaches	10 @ 14
Blackberries, ch.	— @ —	do pared	25 @ 28
Blackberries, cr.	— @ —	do evaporated	25 @ 28
Cherries, white bx	— @ —	Pears, mixed	8 @ 9
do black bx	— @ —	do qtd	8 @ 9
do Royal Ann	— @ —	do evaporated	11 @ 12
Cherry plums	— @ —	Plums, etapo'd	13 @ 14
Crabapples	— @ —	do unpitted	3 @ 6

Cranberries.....	10 @ 12 00	Prunes.....	10 @ 13
Currants, ch.....	@ @	do French.....	11 @ 14
Gooseberries lb.....	@ @	Zante Currants.....	8 @
Figs, black bx.....	@ @	RAISINS.....	
do white bx.....	@ @	Dehesa Chis, fcy.....	3 50 @
Grapes, white.....	45 @ 75	Imperial Cabin.....	
do black.....	45 @ 90	et. fancy.....	2 25 @
do Rose Peru.....	@ @	Crown London.....	@ @
do Muscat.....	50 @ 70	do Layers, fcy.....	2 00 @
do Tokays.....	50 @	do Loose Muscatela, fancy.....	2 00 @
Isabel.....	@ @	do Loose Muscatela.....	1 75 @
Wine, Zinfandel.....	@ @	Cal. Valencia.....	1 80 @
do Mission.....	@ @	do Layers.....	1 80 @
Limes, Mex.....	12 @ 00	do Sultanina.....	1 75 @
do Cal. box.....	@ @	Dried, racks, lb.....	5 @ 6
Lemons, Cal. bx.....	@ @	do Fractional come.....	25, 50 au 175
do Sicily, box.....	5 00 @ 7 00	cents higher for halves, quar-	
do Australian.....	@ @	ters and eighths.	
Nectarines box.....	@ @		
Oranges, Com bx.....	2 00 @ 4 00		

Apples, allod, b	4 1/2 @ 5	Green Corn	— @ —
do evaporated	9 @ 10	do sweet cr.	— @ —
do quartered	12 @ 13	do large box	— @ —
Apricots	9 @ 10	Green Peas, lb.	— @ —
do evaporated	15 @ 16	Sweet Peas lb.	— @ —
Blackberries	13 @ 14	do choice	— @ —
Cherries	18 @ 25	Lima Beans	— @ —
Dates	— @ 1	Wushrooms, lb.	30 @ 40
Figs, pressed	6 @ 7	Rhinharb bx	— @ —

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. Wines, Dec. 21, 1887.

Beans and Peas		Paper shell	15 @ —
Bayo, chl.	2 05 @ 2 40	Brazil	— @ 1 24
Butter	2 50 @ 3 00	Peanuts	6 @ 9
Pea	3 00 @ 3 25	Peanuts	4 @ 6
Red	2 05 @ 2 40	Pilberts	10 @ —
Pink	2 25 @ 2 50	Hickory	— @ —

Large White	2 65 @ 3 00	Small White	3 00 @ 3 30
Lima	2 10 @ 2 30	Early Rose	90 @ 1 25
Old Peas, blye	2 00 @ 2 10	Cuffy Cove	70 @ 1 00
do green	1 50 @ 1 75	Petaluma	75 @ 1 00
do Niles	1 50 @ 1 75	Tomatoes	80 @ 1 00

South's per ton	50 @ 75	Humboldt	45 @ 60
North's per ton	50 @ 75	do Kidney	— @ —
CHICKEN		Chile	— @ —

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING DECEMBER 13, 1887.
 374,727.—SECTIONAL HORSESHOE—E. W. Bingham, Portland, Ogn.
 374,828.—PURIFYING WATER FOR BOILERS—Chas. Elliott, S. F.
 374,667.—CLAMP FOR STEREOTYPE PLATES—Wm. Filmer, S. F.
 374,679.—ARTIFICIAL FUEL—J. I. Irving, S. F.
 374,680.—ORANGE GRADER—J. W. Keeney, Riverside, Cal.
 374,682.—MILL-STOCK FEEDER—C. F. Kendall, Stockton, Cal.
 374,686.—PLOW STANDARD—M. N. Laufenberg, S. F.
 374,690.—CLOTH-CLEANER—W. C. Meyer, Sr., Valhjo, Cal.
 374,747.—ELECTRO-MEDICAL APPARATUS—J. S. Muir, Hansford, Cal.
 374,693.—OPERATING ELEVATOR TRAP-DOORS—A. G. Page, S. F.
 374,696.—BLACKING BRUSH AND BOX—Geo. W. Peck, San Luis Obispo, Cal.
 374,753.—CHURN—W. W. Perkins, Palouse, W. T.
 374,697.—FRUIT-DRIER—C. A. Pitkin, Sr., San Jose, Cal.
 374,698.—FRUIT-DRIER—C. A. Pitkin, Sr., San Jose, Cal.
 374,681.—MACHINE FOR MAKING TOE CALKS—J. C. Kelly, Austin, Nev.

NOTE.—Copies of U. S. and Foreign Patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates and in the shortest possible time.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

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 G. W. INGALLS—Arizona.
 WILLIAM POOL—Fresno Co.
 WM. WILKINSON—San Joaquin and Stanislaus Co.'s.
 A. F. JEWETT—Tulare Co.
 H. STANCKE—Arizona Ter.
 E. H. SCHAEFFLE—Nevada and Placer Co.'s.
 C. E. WILLIAMS—Yuba and Sutter Co.'s.
 EDMUND WRIGHT—Tehama and Colusa Co.'s.
 DR. STANLEY T. PEET, San Diego Co.

Plows.

The demand for agricultural implements has been unusually large this season. We are informed by Mr. Bull, President of the Bull & Grant Implement Co., that they have sold six carloads of the J. I. Case plows including the Little Giant, double, triple and quadruple gangs. Orders have been sent by telegraph and the trade can be supplied with this class of goods early in January.

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BUSINESS COLLEGE,
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 Send for Circular.

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PACIFIC COAST WEATHER FOR THE WEEK.

(Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.)

DATE.	Portland.				Red Bluff.				Sacramento.				S. Francisco.				Los Angeles.				San Diego.			
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.
Dec. 15-21.																								
Thursday.....	16	46	S	Cy.	.00	52	N	Cl.	.00	50	N	Cl.	.00	55	Nw	Fr.	.00	64	SE	Cy.	.00	64	E	Cl.
Friday.....	.00	48	SE	Cy.	.00	62	N	Cl.	.00	50	SE	Cl.	.00	54	SE	Cl.	.00	66	Nw	Cy.	.00	62	SW	Cl.
Saturday.....	.20	48	S	Cy.	.00	52	S	Cl.	.00	52	SE	Cl.	.00	54	N	Cl.	.00	70	W	Cl.	.00	62	Nw	Cl.
Sunday.....	.00	48	S	Cy.	.00	64	N	Cl.	.00	52	N	Cl.	.00	54	N	Cl.	.00	62	S	Cl.	.00	58	SW	Cl.
Monday.....	.00	44	S	Fr.	.00	62	N	Cl.	.00	54	N	Cl.	.00	61	SE	Cl.	.00	56	Nw	Cl.	.00	56	SE	Cy.
Tuesday.....	.00	34	N	Cy.	.00	60	N	Cl.	.00	58	N	Cl.	.00	64	NE	Cl.	.00	62	W	Cl.	.00	56	N	Cl.
Wednesday.....	.00	34	Nw	Fr.	.00	60	N	Fr.	.00	54	SE	Fr.	.00	61	NE	Cy.	.00	53	W	Cl.	.00	52	E	Cl.
Total.....	.36				.00				.00				.00				.00				.00			

EXPLANATION.—Cl. for clear; Cy., cloudy; Fr., fair; Fy., foggy; — indicates too small to measure. Temperature. Wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

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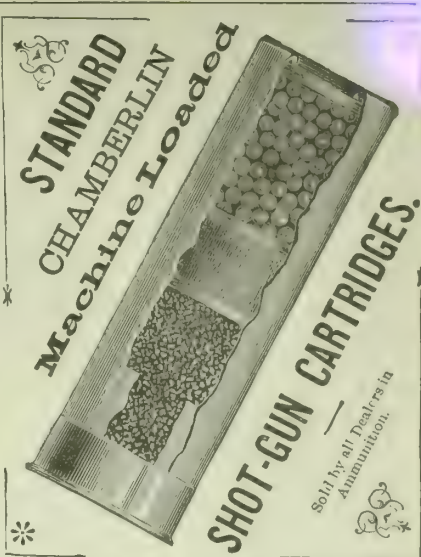
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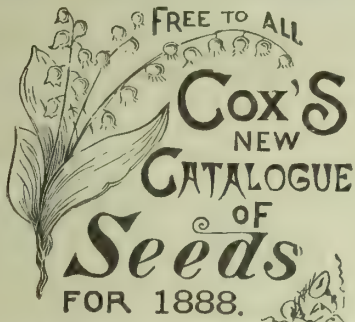
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NUTS, PRUNES AND GRAPES.

The Finest Collection of "Nut-Bearing" Trees to be found in the United States.

21 Varieties of Walnuts,

INCLUDING

CLUSTER WALNUT (Juglans Racemosa).

The newest, most prolific and valuable variety ever introduced into this country.

PREPARATIENS,

Or FERTILE WALNUT, introduced into California in 1871 by Felix Gillet.



"Second" Generation Preparatiens,

(California Grown).

"Second Generation" trees, grown from nuts borne on the original tree; 80 to 90 per cent guaranteed to be "pure," or having retained the characteristics of the original Preparatiens, chief among them the surprising fertility of the kinds.

Third Generation Preparatiens or common French walnut (Juglans Regia), grown from nuts borne on Second Generation trees, all California grown. Vigorous and fertile variety, but the nuts smaller than those of the second generation.

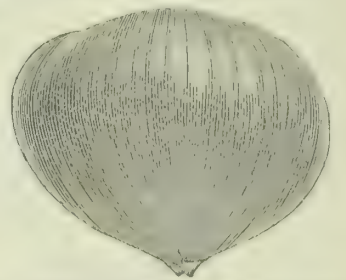
GRAFTED WALNUTS.

Franquette Parisienne, Mayette, Chaberte, Meylan, Vourey and "Weeping" Walnuts, the leading varieties of Europe, highly recommended for the size, beauty and quality of the nuts, fertility, and above all, "hardiness" of the kinds.

We offer this season imported trees of the seven above sorts, expressly grafted for us, regardless of cost. The difficulty in grafting the walnut is such, and grafted walnuts are originally so scarce, that we are compelled to decline orders for such trees in quantities over a dozen. Only a limited number of trees of each kind from four to six feet.

"MARRONS," or French Chestnuts.

(Solely propagated from grafting.)



MARRON COMBALE (California grown).

10 Varieties of the finest kinds of Marron-Chestnuts to be found anywhere; at the head of the list "Marron Comble," which we have been fruiting upon our place the last 13 years; very large and sweet nut, prolific; one of the very best for market.

7 Varieties of Filberts.
4 Varieties of Almonds.
4 Varieties of April Cherries, the earliest and most prolific in California.

245 Varieties of Grapes, from all parts of the world, including the earliest Table Varieties known, some of them 25 days earlier than Sweet Water.

61 Varieties of English Gooseberries, all shapes and colors, some large as walnuts; all "true to name."

CORK OAK, 2-year-old Trees, from Spain.

Prunes! Prunes!

Lot D'Ente, or D'Ente "true from the root," one of the best and finest types of the "French Prune" and the kind so extensively cultivated in the prune district of France. This type is not propagated from grafting, which would do away with its chief qualities of being more vigorous, more long-lived than grafted trees, and a "gum-resistant" stock.

Also, the finest grafted types from the home of the Prune D'Ente or D'Agon, on Myrobalan, St. Julien and Almond stock.

Saint Catherine (true from the root), one of the finest dessert Plums, and one of the best for preserving and drying.

Paymirel D'Ente, Blue and Red Perdigon, German and Italian Quetsche, Alsace Quetsche, Knight's Green Drying, etc.

Apricots, Peaches, Pears.

Quinces, Plums, Mulberries,

Figs, Fancy Fruits, Etc.

FRENCH, ENGLISH, GERMAN AND AMERICAN STRAWBERRIES.

Send for General Descriptive Catalogue, illustrated with forty-one cuts, representing Walnuts, Chestnuts, Filberts, Prunes, Medlar and Sorbus.

FELIX GILLET,

NEVADA CITY, CAL.

HAWLEY BROS. HARDWARE CO.

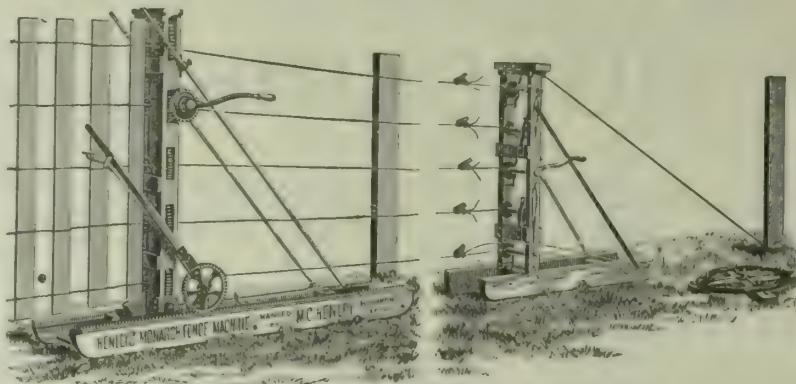
WHOLESALE DEALERS IN HARDWARE AND AGRICULTURAL IMPLEMENTS.

GENERAL AGENTS FOR

HENLEY MONARCH FENCE MACHINE.

IS THE BEST AND HAS NO EQUAL.

1. **BECAUSE** the wire is stretched the full length of the field before the weaving is commenced.
2. **BECAUSE** any sized wire can be used, and with this advantage: using a large size wire, the strongest fence can be made.
3. **BECAUSE** any size, length, or style of picket, or slat, or board, can be used, weaving all equally firm and solid.
4. **BECAUSE** the picket or slat can be woven in more firmly and solidly than in any other machine.
5. **BECAUSE** it will make a fence over rough and uneven ground, or up and down hill alike, making as good a fence as on even, level ground; and the machine being adjustable, the pickets are always woven plumb.
6. **BECAUSE** the Monarch machine stretches the wire tighter, thus making the strongest and best wire and picket fence.
7. **BECAUSE** any one can operate it, and there are no parts to get out of order or repair.
8. **BECAUSE** a boy can work it as well as a man, it being light and easily managed.
9. **BECAUSE** it is made of the very best materials, and with proper care, will last a lifetime.
10. **BECAUSE** the price is within the reach of every farmer.
11. **BECAUSE** it is the only machine that forces the slat or picket firmly against the wire, thus securing the slat in such a solid and permanent manner that it cannot be pulled out, and breakage is impossible.
12. **BECAUSE** the fence made by this machine will turn all kinds of stock, and is much stronger than any barb wire fence, and completely obviates all danger of injury to stock.



A FEW OF THE ADVANTAGES

OBTAINED BY THE USE OF

THE WIRE and PICKET FENCE:

It will turn all kinds of stock, sheep, hogs, and poultry, without injury to same. The strongest wind will not blow it down, if properly put up, and the farmer can go to bed at night and rest undisturbed, knowing well that his crops are safe and well protected.

The amount of ground saved by this style of fencing over the common rail fence, is alone a great object, and would soon save the price of the wire and picket fence.

This wire and picket fence is generally set from two to four inches from the ground, thus allowing the farmer to mow down the weeds and undergrowth, and keep his farm in first-class condition.

While it is possibly not quite as cheap as barbed wire, it has many advantages over it, as any one can readily see.

It is cheaper than board fencing, as any kind of lumber may be used for pickets, and, if it is properly put up, will last a lifetime with very little expense. By weaving past the posts in wire and picket fencing, and not fastening the pickets to posts, the wood parts of fence do not come in contact, thus preventing rotting, as is the case with board fencing, as they rapidly rot off at posts.

Send for Price.

IS THE BEST AND HAS NO EQUAL.

13. **BECAUSE** by weaving past the posts, and fastening the wire strands to the posts with staples, and not nailing the slats to posts, thus keeping the wood parts from coming in contact with each other, it will not hold moisture or rot. This is a very important matter, as all boards in board fencing soon rot off at post, and occasion continued expense for repairs. And finally,

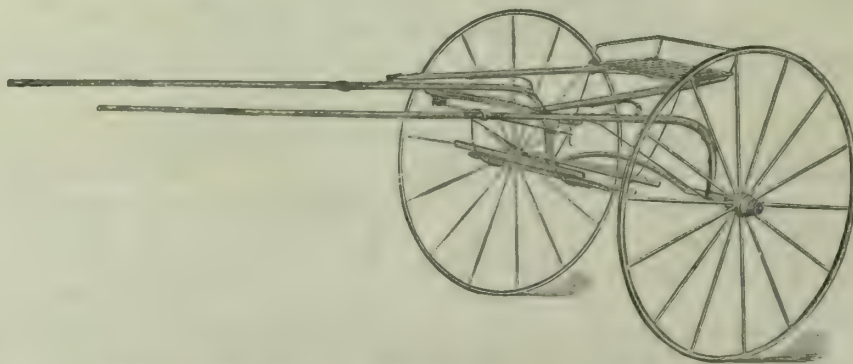
BECAUSE it makes the handsomest, best, strongest and most durable fence, and is the only first-class, practical Fence Machine in the world.

The foregoing are only a few of the points of superiority of the IMPROVED MONARCH FENCE MACHINE over all others, and a trial will convince any one of its merits, and that it has no equal. The HENLEY MONARCH FENCE MACHINE will make the best rabbit and poultry proof fence for nurserymen, gardeners and vine-growers, by weaving the slats close together; will also weave a handsome picket fence for lawns, gardens, and fronts of lots, with great rapidity and regularity. Will make the most substantial fence for farms and stock ranches. The MONARCH Machine is making a complete revolution in the methods of fencing. The fence made by this machine is destined to rapidly supersede all other styles and kinds of fence, both wire and board, and the cost of machine, and expense of fencing, puts it within the power of every farmer to inclose his land with the very best and most substantial kind of fencing, at a total cost far below that of any other kind.

HAWLEY BROTHERS HARDWARE COMPANY, San Francisco, Cal.

J. J. DEAL'S ROAD CARTS.

The
Most
Perfect
Road
Cart
Made.



Indorsed by the
Best Horsemen,
Stock Buyers,
Doctors and
Others.

LIGHT, DURABLE, EASY AND HANDSOME.
SIZES.

This new Cart represents the results of much careful study and close examination of the various speeding and exercising vehicles now in use. It does away with many defects which are found in others, combined with new and important features, making it the Easiest, Strongest and Best Cart on the market.

DURABILITY.

It is very simple in construction, strongly braced, double cross-bars, and the position of the springs in their relation with the seat-bars and cross-bars, lessens the strain on both the parts, which allows the same to be made lighter than on ordinary road carts, and at the same time securing more safety.

Each job is carefully constructed, by skilled workmen, from select second growth ash and hickory timber.

APPEARANCE.

It is undoubtedly the handsomest as well as the lightest road cart made. The seat hangs from 4 to 6 inches lower than on the ordinary cart, which fact is highly appreciated by all horsemen.

Carts are finished in Oil and Varnish, with Irons Blacked, or Painted Wine Color, and Fine-line Stripping.

Shafts are Tipped and Long Leathered. Shell Band or Wood Hub Wheels used.

These carts are built in three sizes, $\frac{3}{4}$, $\frac{1}{2}$ and 1-inch. The $\frac{3}{4}$ size is for light persons or track use. The $\frac{1}{2}$ for ordinary one man use, and the 1-inch are for two passengers, and have board seats, while the $\frac{3}{4}$ and $\frac{1}{2}$ have cane seats.

ADJUSTABLE.

The seat can be easily adjusted to suit the weight of the person.

THE FOOT REST

Can be removed by loosening two nuts and dropping hind end, unhooking same from cross-bar in front, making it a desirable sulky.

THE FLATTERING TESTIMONIALS

And large demand for the Cart are sufficient to defend the above statements. Prices and Terms upon application. Correspondence solicited.

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SAN FRANCISCO:
Junction Market, Pine and
Davis Streets.

BAKER & HAMILTON.

SACRAMENTO:
Nos. 9, 11, 13, and 15
J Street.

AND BY OUR AGENTS IN THE INTERIOR.

PACIFIC RURAL PRESS

TWENTY-PAGE EDITION.

Vol. XXXIV.—No. 27.

SAN FRANCISCO, SATURDAY, DECEMBER 31, 1887.

\$3 a Year, In Advance.
SINGLE COPIES, 10 CTS.

The New Year.

As we write it looks as though the happy urchin conventionally used to betoken the birth of the New Year would receive his baptism by sprinkling, which, whatever may be the claim of the method denominationally, is the very best start a young year can receive in California. This generous storm, which is tossing about the ships on the bay and driving the rain in sheets against the southern windows, is the grandest possible agency to elevate the hearts and hopes of our people, and the fullest surety of a year's productiveness and prosperity. This gift to the agriculturists is, in fact, all that seems necessary to round out the smile of satisfaction which clothes the face of California at this most auspicious period in her history.

The closing year has been a notable one for California. It is estimated that 85,000 people have arrived in the State over the different routes of travel since Sept. 1st. Of course, many of these are winter-fliers, who will bask in our winter sunshine and return eastward, but the proportion of actual settlers is constantly increasing, and will increase in geometrical ratio, for who can measure the influence of the words which our winter guests will speak of the beauties and opportunities in California? The whole State is feeling the effect of the new life, which is begotten of flourishing industries and of charmed visitors with gold-lined pockets. Every one is confident and progressive. Our products are being diversified quite as fast as is desirable, for too rapid changes in production are not desirable. In business affairs, in public works, in efforts for promotion of culture, intellectual and moral, and, in short, in all things which minister to enlightenment and material prosperity, one can see many

hopeful signs in our horizon, and find much assurance that California life is worth the living. We trust this assurance it may be the

lot of all to share, and we speak to all our desire for them in the graceful design which the artist has furnished us for our opening page.

all will co operate to make both of the meetings in this State noteworthy and successful, and we believe he will find his hope realized.



The Twin Meeting.

Arrangements for the grand bi-partite meeting of the American Horticultural Society at San Jose Jan. 24th, and at Riverside Feb. 7th, are progressing well. Prof. Hilgard shows us a letter which he received from Parker Earle, the distinguished president of the society, which speaks glowingly of the prospects of the excursion, the large number of leading Eastern fruit-growers who will take part and of the wisdom of the provision for holding two meetings, one in each grand division of the State, which will enable the excursionists to see a large part of the fruit area of California and to meet so many California fruit-growers. Mr. Earle urges all who can of our Southern horticulturists to attend the San Jose meeting and the Northern horticulturists to visit Riverside, believing that the better knowledge of each other and of the different parts of the State will tend to a friendlier feeling between the two great regions of the State.

Mr. Earle is right in his position. Those who are now exhibiting so much local zeal at both ends of the State are, in most cases, those who do not know all the facts. Of course we do not mean to say that local preferences are misplaced, but the mistaken condemnation in the south of the north, and vice versa, results in most cases from lack of knowledge. Each part should and always will have its advocates, but there will come a time, and it cannot come too soon, when a more generous feeling each for the other will prevail, and it will be secured through better acquaintance and truer appreciation of the adaptations and resources of the State as a whole.

President Earle hopes

THE DAIRY.

Oregon Dairymen in Council.

In one thing at least the Oregon dairymen lead their California brothers, and that is in maintaining an association which holds regular meetings. The third annual assemblage was held in Portland last week, and the *Oregonian* gives a report of it. We select therefrom points which are of general interest.

Address of President J. B. Knapp.

From this document we give the following paragraphs:

The past year has been one of only moderate prosperity for our dairy industry. During the spring months competition from California in the butter trade reduced prices of our products to a moderate figure. Closely following this the annual overflow of the Columbia river drove all dairies from the bottom-lands for full two months and very seriously curtailed the amount produced, while at the same time an unusual drouth prolonged to a recent period rendered the upland pastures barren of feed, hence a short product the last half year.

Owing to these causes prices commenced to advance in June, and reached 30 cents before the close of August, and have since steadily advanced to 40 cents and likely to go higher before the close of the year. Prices ruling for the past four months have afforded our dairymen a rare opportunity to reap a harvest of profit if prepared to take advantage of it. But I venture the assertion that there is not a single dairy in our jurisdiction that was thus prepared. California has also suffered with drouth, and butter there is higher than here, and we are now importing from Iowa and Wisconsin to supply our deficiencies. The lesson it teaches I have on former occasions urged before this body, and it will bear repeating—"He who wishes to make a success in dairying and carry with it handsome profits must prepare an abundance of cheap, succulent, cream-producing food and feed it to improved dairy stock."

The methods of doing this have been so often pointed out in dairy publications, it is unnecessary to repeat them here.

At our first quarterly meeting of the present year the propriety of making a dairy exhibit was discussed and committees appointed to investigate matters in relation to it, and if deemed advisable, with power to act to carry the project into execution. It has resulted in our holding an exhibition of dairy products in connection with the Fat-Stock show in this city during the third week in October last. The entries were not as numerous as we expected, but the quality was pronounced excellent by a committee selected from among our business men of the largest experience in handling dairy products.

During the year improvement has been made in the quality of dairy products, owing to the introduction of machinery and dairy appliances and a better understanding of the business. Several new creameries have been started and more are contemplated. The products of our best dairies are appreciated by consumers and sought after by the business community who handle such goods, and they now give preference to Oregon products rather than to those imported from other States and at relatively higher prices.

The difference between butter made from cream separated by the De Laval process and the ordinary dairy is beginning to be appreciated; all the butter made by the De Laval coming to this market is taken upon the day of arrival and has for the past three months been quoted and sold at 10 cents per roll above that of the best dairies. This shows a proper appreciation of good quality and affords encouragement to dairymen to invest in machinery and better fixtures for carrying on the business. The total expense of making this our first dairy exhibit amounted to \$290.30, of which \$220 was paid for premiums and the balance for contingent expenses. Money for premiums to the amount of \$210 was subscribed and contributed mostly among the merchants and business men of this city. And I wish here to state that your committee soliciting such subscription met generally a generous response and good wishes for success and prosperity of the dairy industry. I make this statement because occasionally I hear farmers and dairymen growl about unfair treatment from merchants they deal with.

I am often asked the question, "Why don't you dairymen make more butter? We haven't got enough to supply our trade and are obliged to send to other States; we prefer Oregon if we could get enough of it." There is no antagonism to the dairy, but on the contrary, a general wish from all classes for the success of this industry. There is then much to encourage those engaged in it to continue, and for others to engage in it. It is one of the largest and most important industries of our nation.

Bogus Butter.

Oregon has given us a good law for our protection against vile imitations, and the national law is a good one. But, if we show no interest in it, have we any assurance that they will long remain upon the statutes? Our present Governor, in his zeal for economy and retrenchment, recommended in his inaugural a repeal of the Oregon dairy law. But, thanks to his intelligence, he has seen his mistake, appointed a commissioner, and is doing what he can to uphold

the law. We already have warning that efforts will be made at the present session of Congress to repeal the national law, or so modify it as to render it inoperative. Intemperate greed for the almighty dollar will leave no method untried, no stone unturned. The manufacturers of imitation butter see millions in it if they can succeed in neutralizing the law that protects the dairy. It is within my recollection that whale and fish oils and the cheap animal fats were used for the common purposes of illumination. Gas, coal oil, and later electricity, perform this office, giving a better light and more of it at a largely reduced cost, and as a consequence these oils and fats must find other uses for a market. By the aid of modern chemical science most substances can be very closely imitated, and by its aid the cheap animal fats are so manipulated as to form a compound so closely resembling butter in appearance and taste as to deceive even dairymen. This compound can be made at a cost of a few cents, and if sold at the price of butter, there is a profit of 300 or 400 per cent; hence if it can be made to succeed, there is millions of ill-gotten gain in it at the expense of the entire population of consumers, and the destruction of the legitimate dairy. Let it be distinctly understood the dairy asks for no protective tariff. It is able to stand on its own bottom. All the protection it asks is protection from fraud and deceit, and the great mass of the people have a vital interest in the same direction.

There is one little amendment to the national law and to the State laws I would like to see made, similar to that incorporated into the law of England this year by the British Parliament, viz: that all compounds or substances made and sold in imitation of butter shall be known and sold by the name of "margarine," and I would add, *shall be colored or painted red*. In such case neither the name, the sound of the name, the orthography nor color shall bear any resemblance to genuine butter, and would give no chance for deception.

Marketing Dairy Goods.

At the formation of our association one of the first objects aimed at was to induce dairymen in marketing their butter to concentrate all at one place. The object sought was a better regulation of prices, better facilities for handling and storing while being marketed. Although we found merchants willing to receive and sell, none were willing to incur the expense of providing suitable storage. Finally before the close of the first year, Henry Everding, a commission merchant of this city, decided to vacate a small room in his store, renovate it and devote it exclusively to the reception of butter; also built a large safe for cold storage. This was a commencement in the right direction and we recommended dairymen to concentrate their products there on account of the better facilities provided. The result has been that their trade in this line has more than doubled twice over. They are receiving new customers every month and so far as my observation extends I have not known any to leave them, which is the best evidence that they give satisfaction. It is a reliable, safe house to deal with; they make as prompt sales as the state of the market and the interest of their customers will justify, and prompt returns as soon as sales are made, and we are assured that they will provide additional facilities fast enough to accommodate increasing business. The advantages to dairymen have been, prices have maintained more uniform rates; again, it is a sort of headquarters for dairymen when they come to the city; and still another advantage, dairymen visiting the city can any day see 20 to 50 boxes of butter coming in from all directions and can learn something by spending a few minutes examining the make of different dairies, comparing them with their own and comparing their opinion with that of an expert in the business. It furnishes the best object lesson they can have.

Mr. Knapp related an incident of an old gentleman to whom he was introduced several weeks ago. The man said that 20 years ago he used to make butter in Oregon and sell it at 50 cents a pound in Portland. Since then he had been away engaged in other business. Recently he returned to Oregon and again engaged in dairying. The man related that he had had a peculiar experience with his first shipment. It consisted of three boxes of prime quality—all exactly alike. One box he sold to the storekeeper at the nearest railroad station for 25 cents, the second he consigned to a retail grocer in Portland, and the third to a wholesale commission-house. He received prompt returns from the grocer, who paid him 35 cents, saying he would take all that could be furnished at the same price. After a little delay, he received returns from the commission-house as follows: "Your butter sold at 12½ cents." Mr. Knapp added:

Twelve and one-half, 25 and 35 cents, all of the same date, same make and same quality. A regular dairy ladder of three rounds, ten degrees apart. It will require a very long-legged man to make the stride and climb it, and should he descend it often it would break his business if not his neck. Remarks would be superfluous.

Other Proceedings.

The address also alluded feelingly to the death of the secretary of the association, P. C. Heilman, and suitable resolutions of respect were adopted.

Mr. J. B. Knapp declined a re-election as president, and the following officers were chosen: President, Thomas Paulsen; first vice-president,

W. W. Baker; second vice-president, J. B. Knapp; recording and financial secretary, Edward Casey; treasurer, Plympton Kelly.

Informal discussion took place upon matters tending to promote livelier interest in the society. There was a general sentiment in favor of lectures on dairying by the Dairy Commissioner as provided for by the Oregon statute, and next spring was considered a good time to begin the work.

Against Repeal of the "Oleo Law."

The following resolution was passed unanimously:

WHEREAS, There will be a determined effort to repeal or so amend the United States oleomargarine law as to make it of no value to the dairy interest of our country; therefore

Resolved, That we most respectfully request our United States Senators and our Representatives in Congress to use their best endeavors to retain the law as it is, or have it so amended only as to make it still more effective.

Resolved, That the secretary be authorized to send a copy of these resolutions to our United States Senators and Representatives in Congress.

Adjourned to first Tuesday in March.

SHEEP AND WOOL.

California Wool-Growers on the Tariff.

According to announcement by circular issued Dec. 12th, there was a mass meeting of California wool-growers in Sacramento on Dec. 19th. The *Record-Union*, in its report, says the hall was well filled with representative wool-growers throughout the Sacramento and San Joaquin valleys, extending as far north as Mendocino. Among the prominent sheep men present were noted: J. H. Glide, W. G. Brown, Captain Wilbur, T. M. Gimshaw, E. H. Ward, L. L. McCoy, George Champlin, Frank L. Orcutt, Louis Meiss, C. M. Traver, H. O. Purington, J. H. Beckford, William Mitchell, E. H. Tryon, Mrs. I. S. Monch, J. H. Kilpatrick, W. R. Gallup and others, representing in all over 1,500,000 sheep.

The meeting was called to order by R. T. Devlin, representing James Kaseberg of Placer county, an owner of upward of 20,000 sheep. In calling the meeting to order Mr. Devlin made a short address, in which he said:

The question at last has come to the front in this country, shall we or shall we not be a free-trade nation? It is a question that perhaps, so far as wool is concerned, affects California more than any other State in the Union. We desire to retain the slight protective tariff that gives life to our industry. A common-sense view of the question shows us that without a protective tariff many of our industries will languish and die. So long ago as the administrations of Madison and Monroe the necessities of a protective tariff were spoken of, and the wisdom of that policy is what has made us the richest, most important and influential nation on the globe. In those early days we produced the raw material, which had to be exported to foreign lands, and the manufactured goods imported. If war came along and we were shut off from our source of supplies it was readily seen how much we would suffer. Under a system of protective tariff we have prospered and grown in wealth until to-day the United States ranks first in everything that goes toward making up a prosperous country, a happy and contented people. Here every man is his neighbor's peer. Even the poorest enjoy what in the old country would be called luxuries, but which in our own are regarded only as the necessities of life. Why should we go back to a state of affairs that will make us poor? Why adopt a system of revenue disastrous to home industry and in the interest of the laboring classes of foreign powers? They use the old argument that the poorer classes would be able to buy their woollen fabrics cheaper, but lose sight of the fact that labor would be greatly reduced thereby. It is the old story of the Kentucky statesman who, when speaking upon free trade, said: "Mr. President, if we had free trade, the material used in your suit of clothes could be bought for one dollar a yard less than you pay for it. What did it cost you?" The argument of the free trader was knocked completely out when the honest Kentuckian replied: "All wool, and only 38 cents a yard!"

Some years ago the protective tariff on steel rails, it was thought, would work a hardship on our country. Did it? No, sir. The European manufacturer ground down his labor, made the minimum of cost so low that they even then with the protective tariff could compete with our American manufacturers. Take off tariff, and immediately you reduce all American labor from 50 to 75 per cent; in fact, American labor will be thrown out of the market. No country can be happy and prosperous that is not a manufacturing community. We raise more food products than our country can consume. Turn the manufacturing people into agricultural pursuits, and see how soon it will be that labor will go down to a price that the farm hand could not buy woollen goods, no matter how cheap they were sold. Statistics show that we export more than we import. The balance of trade is on our side. There is a constant pour of gold from Europe to America. Take off the tariff as proposed, and the existing state of affairs would be immediately changed, and from the first nation of the world we would become the last, and from the richest and most

prosperous people we would become the poorest and most unhappy.

California is comparatively a new State, and the center of attraction to-day, not only of the United States, but throughout the world. Our principal products, barring our yield of precious metals, are wool, wine and raisins. Take off our protective tariff and you at once turn our fertile fields and productive vales into veritable Saharas. You take from us that which has made us; you take from us what is ours and what the good of the country demands we should have; you at once arrest immigration and turn the tide of prosperity elsewhere. Capital will seek elsewhere for investment than in the wool, wine and raisin products of California.

It is our duty, the duty of our State and nation, to see to it that our members in Congress and those in the executive offices of the nation do not discriminate against our own people and in the interest of those of the impoverished nations of Europe. Take off this tariff and you drive the wool men out of business. They cannot compete with the wool-grower of Australia, who has the advantage of pauper labor and millions of acres of unoccupied land. It means the throwing out of employment of thousands of American laborers, men and women; it means the stopping forever of the wheels of manufacturing that are the sole support of many thriving manufacturing centers; it means desolation and want in our own country. The American manufacturer must go out of business; his mills must decay and tumble to ruins; the mill-hands must seek other overcrowded industries; it means starvation and want.

The whole matter in a nutshell means a reduction in wages. If a reduction in one line, then a reduction in all, for competition makes the price. We believe that the future prosperity of this country depends on those who earn their daily bread by the sweat of their brows. This protective tariff not only protects the tradesman, but it protects the entire prosperity of the country. We would be no better off to-day than the countries of Europe were it not for our protective tariff. Were the duty taken off of manufactured goods to day we would have to compete with the serf labor of Asia. We are now confronted with an issue such as we have not had to meet since the organization of the Republic. It is a question of great importance, one that must be met by thorough organization.

The next thing in order was the election of officers. Hon. J. H. Kirkpatrick of Stanislaus was elected chairman, and L. L. McCoy of Tehama county, secretary.

A Committee on Resolutions was appointed as follows: E. H. Ward and Geo. Champlin of Tehama county, R. T. Devlin, F. L. Orcutt and E. H. Tryon, Sacramento county, and J. H. Kirkpatrick of Stanislaus.

A recess was taken until 1.30 p. m.

On reassembling the committee made the following report, which was unanimously adopted:

Resolved, By the wool-growers of the State of California:

1. The woolindustry of California and of the United States is one that has given employment to a large number of people, has enabled the American manufacturer to manufacture goods from American products, and is one so extensive that to cripple it would injuriously affect the industrial interests of the country.

2. That a reduction of the duty on imported wool would practically abolish wool-growing in California, as it is unprofitable for the wool-producer to compete, by paying the present standard of wages, with the cheap labor, and against cheaper ranges in other countries.

3. That with the duty of wool decreased, the small farmer who heretofore has derived a profitable revenue from wool-raising would be compelled to abandon this pursuit, as the reduction of tariff would fall most heavily on him.

4. That over 1,000,000 people, as shown by the last census, are engaged in raising wool, and when the large number of people who are dependent on these and are engaged in manufacturing woollen products are considered, the vast amount of capital invested and the large proportion of our people whose prosperity and in many cases whose existence depends upon the continued existence of this industry, which can be done only by the retention of the present duty, can be seen, to cripple this industry is to cripple the country.

5. The amount of duty is so inconsiderable, amounting to only 10 cents per capita, that no one would be benefited by its reduction.

6. That Australia now prohibits and for four years last past prohibited the importation of American merino sheep, and that it would be the height of folly to throw our markets open to Australia when she closes hers to us.

7. Therefore, the wool-growers of California earnestly appeal to their Representatives and to Congress not to bring widespread injury by reducing the tariff on wool, and earnestly appeal to their sense of duty to retain the present duty, felt by none, but without which the industry could not exist.

8. We heartily concur with the views expressed by the National Wool-Growers' Association and extend to them our hearty co-operation in their endeavors to protect the wool industry.

EFFECT OF THE TARIFF ON AUSTRALIAN WOOLS.—Washington, December 23d. The *Evening Critic* says: Consul George Griffin reports from Sydney, Australia, that the direct wool export to the United States for this year has been very small, amounting to only 14,000 bales from Melbourne and 169 bales from Sydney. The American trade with the Australian colonies is insignificant as compared with that enjoyed by Great Britain. This is believed to be due to the protective tariff of the United States, which excludes wool, the chief Australian product.

HORTICULTURE.

The Olive in California.

(Especially Reported for the PACIFIC RURAL PRESS.)

(Concluded from our last.)

The Black Scale.

Let me say a little more in regard to the insect pests or the black scale. It is necessary to commence when the trees are small. They should be gone over in the month of April, certainly not later than the 10th of May, and every little tree should be examined; and wherever is found one of these little black scale it should be picked off by hand, and in that way prevent their propagating on the tree. There is no way you can keep the scale in check so easily, so cheaply and so surely, as by picking them off by hand when they are small; and then if some trees happen to get a good many on them, I would thoroughly wash that tree, using a hand syringe, with whale-oil soap or a decoction of tobacco or caustic soda, one pound of caustic soda to four gallons of water. It would not pay in such a small way to make a kerosene emulsion so as to be sure not to let the insects start in the orchard. I will read you a report I made to the State Board of Horticulture several years ago on the subject of the insect to show you the danger before you:

"The olive is a rapid grower and bears abundant crops. It would seem to be the tree of all others that should claim the attention of the people, and its planting should be encouraged. There is yet, however, much to learn to enable the grower to keep his trees from the black scale. No other tree seems to yield so readily to the attack. The increase is so rapid and the insect is so persistent that it is yet a question whether in large areas closely planted it can be kept in check at a cost that the fruit will warrant."

I have no modification to make of that caution. I have spent a dollar to a dollar and a half a tree each year in fighting the black scale, and can only barely keep it in subjection at that. This black scale seems to have been created for the olive to make us careful, energetic and persistent—to keep us at work. While with the kerosene emulsion one washing each year will keep an orange tree, a lemon tree, or a lime tree free from the black scale or the soft orange scale, the olive tree requires two, three or four washes to have the same results. My orange trees are just as clear and clean apparently, that is to the naked eye, as though grown at Riverside, where they have no black scale at all. Of course there are insects there on the inside, but they are easily kept down by washing with the kerosene emulsion once a year. On the olive tree I confess I do not yet know the proper time of year to do this washing. For two or three years we had so much rain in the winter time that I could not get on the ground. Our wagons were so narrow in the tire and the ground so soft that there was no possibility of getting a washing apparatus over the field; but now I have wagons made with the tires six and eight inches wide so as to be independent of the soft state of the ground; and this year I am going to practice in the month of December, and in February washing with the kerosene emulsion to see whether it will not be more effective than it has been washing later in April and in August. The insects commence hatching in June. If they would all hatch out in June or in July, it would be an easy matter; but I have known them to hatch as late as the month of February. While simple washings will kill the little ones after they are just hatched, it will not affect those that are half grown; and if you defer the washing until after they are all hatched the first hatching is more than half-grown, has already formed its shell, and affixed to its place. That is the great difficulty with the black scale. It has but one brood a year, but that brood takes four, or five, or six months to appear upon the scene.

A Delegate: Does this particular black scale exist upon any other trees?

Mr. Cooper: It commits great depredation on the walnut in the coast counties, and I have grave doubts as to whether the apricot growers upon our coast will make a success unless they wash the tree; but wherever there is an olive tree, there you will find it.

A Delegate: How do you apply the spray?

Mr. Cooper: We use the San Jose nozzle mostly, because it is most convenient; but we discard the little tin with the opening, and substitute india rubber, so that if the sediment, not properly drained, gets in the material with which you are washing, it causes the rubber to expand a little and let it out. That is the best spraying apparatus that I have yet seen—a San Jose nozzle with a rubber diaphragm, which takes the place of the little brass plate on top.

A Delegate: What are the cuttings worth?

Mr. Cooper: I have been selling them for five cents a piece, one inch in diameter and fourteen inches long. The smaller I sell two for one, that is 2½ cents. That is the price they generally sell for us in Southern California, packed and put up in the proper manner and put on the wharf for shipping. Thinning out gave me a large number of cuttings last year. I thinned out one whole orchard that was 15 years old. I have another 15 years old that I shall partially thin out this winter.

A Delegate: You disinfect the cuttings?

Mr. Cooper: I disinfect everything. There is no trouble about the cuttings.

An Outfit for Picking.

Mr. Dwinelle: You have a peculiar apparatus for picking?

Mr. Cooper: Yes. I use a common ranch wagon with a platform on it that reaches up to the limb, and I drive on one side of the tree as close as the platform will permit, running under the tree so that the pickers can stand and commence to pick the lower limbs, while others can stand higher and pick higher. Then we have ladders fastened with iron bolts that lay up against the tree. We have the apparatus fastened to a canvas cloth that buckles around the body and goes around the neck with clasps, making something like a scoop, so that the pickers can pull the berries off with both hands. We do not care about having some leaves in with the olives, because we pass them through a very powerful fanning mill—the largest fanning-mill we can get for cleaning grain—to blow the leaves out, and doing that will take all the dirt out, and the olive comes out of the mill perfectly clean, ready for the dry-house. The pickers come in at night with the days' picking, and the first thing in the morning we have that cleaned and put in the drying-house. With a fair crop, averaging the whole season, a picker will average 300 pounds per day, so we calculate that as a fair day's work. I do not hire Chinamen by the job; I have them by the day, and my pickers all make a pretty good average. I tell them if they can't pick that many they will be discharged. They know we know how many a man can pick; an able-bodied man can pick 300 pounds a day. We pick them clean from the tree, beginning with the ripest tree and taking the others later. We take everything off, pick all the olives that are on the tree—green, red, and purple; if there are any green ones on it we finish them up.

A Delegate: At what stage of ripeness should they be picked for pickling?

Mr. Cooper: There are two theories. Some say before they turn red; others when they are entirely purple. For the pickling it is better for the ripe olive that they turn a purple color, but they have to be packed and handled with extreme care. We pick them in water—that is, pick them and drop them in water so they won't be bruised. We take into the field a tub with water in it and the pickers empty into that, so that there cannot be any bruising. Even in pickling them we handle them in the same way—that is, every day we handle them we handle them in water—and we aim, when we are changing the water, to get the olives that are in the bottom one day on top the next, changing the water every day, and in that way you will not find one that is not perfect.

Pickling the Olive.

Mr. Gray: How much salt do you put in?

Mr. Cooper: We buy the best Liverpool salt and boil. The first salting, after changing the water every day for 30 or 40 days, depending on the ripeness of the olive, we make a mild brine about half as strong as would bear an egg and leave it in that brine two or three days. Afterwards take the olives out of that brine and wash them in cold water. Then we make a brine that will just about bear an egg, always boiling the brine, and keep them in that for an indefinite period. I have kept them three years, and every olive that comes on the table is just as perfect, just as full, as when picked from the tree.

A Delegate: The first washing is in clear water?

Mr. Cooper: Yes sir. We do not wash them, we soak them. We keep them in water 30 or 40 days, changing the water every day.

A Delegate: You do not use lye?

Mr. Cooper: No sir. I never did. I never tried that method, though some do.

Miscellaneous.

A Delegate: How far apart do you plant the trees?

Mr. Cooper: Twenty feet each way.

A Delegate: Which do you consider the most profitable, pickling or making oil?

Mr. Cooper: I am prepared for making oil, and have only pickled a few. I should think there was more profit in pickling on a small orchard, but where you have 6000 or 7000 trees in bearing, you have enough to do without trying to pickle.

A Delegate: Is the refuse, after you have taken the oil out, of any value for any purpose?

Mr. Cooper: I have never made any use of it excepting to feed it to pigs. It makes excellent pig food. They use it in Europe to make what they call a third quality of oil. They pour it in a large vat and pour boiling water over it; it ferments, and the oil that is left is then liberated, comes to the top, and make a very good oil for burning.

A Delegate: Do you think there is more profit in olives than any other fruit?

Mr. Cooper: I couldn't answer that question. All I say to the audience is that I am planting olives, and not planting any other kind of fruit trees.

Mr. Butler: I have a place near Dr. Agard's of Auburn, and I have some 200 of the finest six-year-old trees. The conditions may be somewhat similar to Dr. Agard's. Mr. Cooper speaks of a comparison between the Picholini and the Mission. So far as I am concerned, I would give the preference decidedly to the Mission. They commence bearing about the same age, and while there are not many more on the Mission, the Picholini are so much

smaller, it gives a decided advantage to the Mission. The Picholini may be slightly earlier, but not much. We think the Mission is decidedly better.

M. Klee: From seeing the Picholini in different parts of the State, I was impressed that it ripened five or six weeks earlier than the Mission. I think that I observed it considerably earlier in Placer county, but, of course, Mr. Butler speaks from his own experience. Mr. L. A. Gould of Auburn sent me word that they ripen five weeks earlier than the Mission, ripe enough to make oil five weeks earlier than the Mission. While I am speaking about the Picholini I would like to call the attention of everybody to the fact that it is a very small olive. The impression has gone abroad that it is a very large olive, and a great many people, Mr. Butler, perhaps, among them, were misled into buying it, thinking it was a large pickling olive. It is not so; nor should the true Picholini be a larger olive. In Pomona I have seen the Picholini, and Mr. White of that place thinks quite favorably of it. He claims that while much smaller it bears fully as much as the Mission, and that owing to the more even ripening it is more easy to gather. It comes off the stem quite readily, and a man can very quickly strip the limbs of the olive. That is his experience there.

Mr. Flack: I have been trying to raise the Mission olives from cuttings in the nursery and I have failed to find any method by which I can get more than 10 to 20 per cent to grow. Those that have grown have got from 5 to 5½ feet in height. My cuttings were from a half to an inch and a quarter in diameter, and they were placed on the finest nursery ground that you can find in Sonoma county. They were put out in December, February, and March, and as they have been sawed for some time I took the knife and made a fresh cut, and they were on soil which would retain the moisture. I would like to know why I had not better success.

Mr. Cooper: What was the nature of the soil?

Mr. Flack: It is what you would call a willow bottom with sandy deposit. It was in a perfect state of cultivation, and pulverized.

Mr. Cooper: It is necessary when you plant olive cuttings that the ground should be thoroughly cultivated; it should not be wet; it should be warm. It is useless to plant out olive cuttings in cold ground.

Mr. Flack: This would be what you would call real good mellow ground. I cultivated it about two weeks to try to get it perfectly loose.

Mr. Cooper: I am asked about what time would be most favorable for the propagation of cuttings. I have recommended from the 20th of February, depending upon the season. I have found in watching the season the last few years that when we had considerable rain in the months of December and January that we were likely to have an earlier spring—that is, less rain in the spring—and in such a season I should plant earlier; but as we had two of three years ago, and I think two or three winters in succession, no rain till late in January, then the spring and summer rains lasted much later in the season, and necessarily would delay us planting. Under such circumstances it will not do to plant in March, or they will all rot.

THE VETERINARIAN.

Horse Disease in San Benito County.

H. Baker, M. R. C. V. S., of Hollister, has written the following account for the *Free Lance* of a horse disease which has recently shown itself in that vicinity:

There having been several cases of death among the horses in this vicinity in the last week or two, the symptoms of which during life were much the same, and as considerable doubt appears to exist in the minds of stockmen as to the nature of the malady by which they were affected, I have concluded to contribute a few lines upon this subject.

Among the horses thus taken off may be cited the celebrated Norman stallion "Milo," the property of the well-known horseman, E. J. Turner; also two valuable animals, the property of Mr. McCobb, and two belonging to Mr. McDonald—both of the latter gentlemen living in the vicinity of San Felipe.

Most unfortunately circumstances have prevented me from holding a post-mortem examination on any one of these animals, and, indeed, the only case really professionally attended by me is the one last cited, namely, that belonging to Mr. McDonald, and then I was not called in until about six hours before death, hence much that might have been made indubitable by an ocular demonstration was of necessity withheld from the owners. Having, however, seen hundreds of similar cases through life, and held post-mortem examinations on the same, I am by no means at a loss to lay a pretty accurate description of this disease before the public.

Having made these preliminary observations, it will now be necessary for me to speak of some of the diseases of the pleura and lungs, since I am fully convinced that not only in the cases cited, but in many that have of late proved equally fatal, these are the organs principally implicated, hence the following definitions:

The disease called lung fever (properly speak-

ing, pneumonia) is nothing more nor less than the inflammation of the substance of the lungs proper, and is classified as being acute, sub-acute, or chronic, according to the intensity of the symptoms and length of duration of the disease.

Let us take, for example, the symptoms of the acute, that is, the most aggravated form of the disease. This is generally ushered in by a day or two of apparent indisposition, but after the case once confirms itself the breathing will become very quick and short, the pulse exceedingly quick, the nostrils widely dilated, and of a fiery red color on their interior surfaces. The legs and ears grow deadly cold, the animal persistently stands until death carries him off, which may occur in from one to three days. In the subacute and chronic forms of the disease, the symptoms are much the same, only the breathing is not nearly as quick, nor indeed are any of the other symptoms so violent. In these latter forms of the disease the animal may live three weeks or even longer, and may, if subject to timely and proper treatment, recover altogether. In all three cases of these forms of pneumonia, the lungs will be found more or less broken down in structure, and in cases that have lived long, they will often be found almost totally decomposed. In such instances there is also a very offensive odor given off from the nostrils during life.

Let me now call your attention to the disease called pleurisy. That is an inflammation of the smooth, polished membrane that lines the internal surfaces of the ribs, and is from thence reflected upon the external surfaces of the lungs, heart, etc. This is a disease the symptoms of which I shall not describe, since none but the experienced veterinarian would be enabled to recognize them, and I merely mention it, because in all cases when this disease proves fatal, the chest will be found nearly filled with water, constituting a state termed hydrothorax. This disease (pleurisy) usually terminates fatally in about three weeks' time.

Lastly, allow me to call attention to a diseased condition called congestive pneumonia, or congestion of the lungs, for since the former part of this article was written, having been driven out by Mr. Robert Orr to hold a post-mortem examination upon a third victim of disease on Mr. McDonald's ranch, I am convinced that several of these cases have died from congestion of the lungs accompanied with ascites or dropsy of the abdomen. I have merely given the symptoms of inflammation of the lungs, in order that the public may be enabled to form some distinction between that disease and the one following, viz.:

Congestion of the Lungs.

The breathing is from the start quick and labored, the nostrils are widely expanded. As the disease grows worse, the respiration indeed becomes so labored that the animal appears to be suffering a sense of suffocation. The inner lining membrane of the nostrils will be found to present neither the pink hue of health nor yet the fiery red of lung fever, but to be of a dark leaden blue color, and in some cases almost black. The legs and ears become deadly cold, the animal stands with his fore-legs wide apart, the pulse is quick, small and oppressed, the breathing is now effected through the mouth as well as the nostrils, the animal persistently stands, exhibits a most anxious expression of countenance, rapidly sinks under his afflictions, and may die in from four to five hours. Such constitutes a description of a very aggravated case of congestive pneumonia, far more severe indeed than is generally met with, most cases lasting from one to four days, and presenting these symptoms in a much milder form. In a post-mortem examination of an animal that has died from this disease, the most marked appearances will be a very dark appearance of the lung or lungs affected, varying from a dark purple hue to a color almost black.

I have previously alluded to the disease termed ascites, or dropsy of the abdomen (belly), and in the post-mortem which I held last week on one of Mr. McDonald's horses, there must have been at least ten gallons of fluid escape from the abdominal cavity, and Mr. McCobb informs me that such was also the case in one of his animals, while the lungs in this case appeared to be but little implicated. Lastly, let me observe the dropsy of the abdomen where there is a large quantity of fluid present, may of itself, by its presence upon the diaphragm, and from thence upon the lungs, produce congestion of these latter organs. It now alone remains for me, sir, to express my opinion upon the cause of death in some of these cases, which is that two out of the three animals lost by Mr. McDonald died from congestion of the lungs, attendant with and possibly induced by the pressure on the diaphragm of a large quantity of fluid contained in the abdominal cavity, whereas in one case out of the two lost by Mr. McCobb, I believe the cause of death to have been dropsy of the abdomen alone. The other animal lost by these gentlemen I have not seen, but am much inclined to think the causes of death were similar.

Some people who have only given the subject half a thought have mentioned phosphorus or strychnine as possible causes of death, from the fact that these agents are contained in squirrel poison. Strychnine, however, occasions violent muscular spasms, while phosphorus induces partial paralysis, attended by a drooping and prostrate condition; none of which symptoms are visible, hence the fallacy of such an impression.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

New Year's Thoughts.

[Written for the RURAL PRESS by Mrs. J. M. K.]

As the old year draws to a close, I am reminded of a suggestion made, I think, by Mrs. Nichols, that the occasional writers for the RURAL give an account of themselves the past year. Surely, it would be interesting and profitable. If I were asked, in old-fashioned Methodist-class style, "How is it with your soul today?" though reared in a sterner creed, whose spiritual gauge was more duty well done than ecstatic feeling, I by no means ignore the latter, and could answer truly, "I've reached the land of corn and wine, and all its riches freely mine."

Instead of sympathizing in the feelings of one who said, "I have a perfect horror of old age," I find so far the years have brought compensations for what is lost of youth. I am happy to see so many expressing the same sentiment. I looked for an hour over some old files of the RURAL, to find again some sweet lines by Mallie Stafford. Not coming across them, the sentiment is still remembered, that our whitening hair was but a glory, shining down upon us from heights above.

The one shadow on my life is that my strength will allow me to do so little of all the work I see for hand and brain around me, though the spirit never was more willing.

Friends, let us know what you are doing; if you are thinking any bright and helpful thoughts, or even enjoy and appreciate those written by others. Send along the good word if you know of progress in any direction upward; or a note of warning where that seems necessary.

For my part, I can but say too fast when I hear predictions of a millennium at the door.

Intemperance, injustice, corruption, indifference where we might expect help convince me that not only the enlightenment of the world but the reforming of our own country is a task we will pass on to our great-grandchildren.

We are working in the temperance cause here the best way we know, and surely it is one of the most urgent reforms of the day. Lord Onslow's statement in the House of Lords should arouse the indignant zeal of every lover of humanity. He says the attempt to establish an international compact prohibiting the sale of strong drink to the South Sea Islanders had broken down owing to the refusal of the U. S. Government to enter into the agreement.

Humiliating that the responsibility for this crying evil is brought to our doors. Oh, the strength of the enemy intrenched behind Government ramparts.

But not for long. Recruits are rapidly pouring in. Among the hopeful signs of the times we notice an increasing space devoted to temperance literature in our newspapers. Even the RURAL and Patron are taking higher temperance ground, we fancy, not to complain of past shortcomings. Hurry up, brothers, as fast as you can; bring on the main part of your forces. Don't wait for all the halt or the blind, or the battle may be lost. We must leave these behind in hospitals, hoping they will feel better when the battle is won.

West San Joaquin Grange still lives, shining with a faint and steady light, that gives promise of continuance. A live public lecture might possibly revive Grange interest and add to our numbers.

The late rains have been abundant for present needs, and all seem full of hope and courage.

While we write the RURAL comes to hand, and glancing through its pages we are pained to note the death of another contributor.

One by one they pass on before us. Who will fill their vacant places?

Tracy.

Grange Elections.

ENTERPRISE.—E. J. Lynch, M.; A. M. Gunter, O.; J. J. Hanlon, L.; U. S. Wilson, Sr.; E. Toomey, A. S.; Mrs. Z. L. Coy, T.; Mrs. J. Shultz, C.; Miss E. Plummer, Sec.; W. A. Birch, G. K.; Miss M. Plummer, Ceres; Miss D. Krull, P.; Miss E. Tibbitts, F.; Miss L. Hanlon, Orgt.; Miss C. Wilson, L. A. S.

BUENA VISTA.—Capt. E. H. Wheatley, M.; Mrs. A. E. Renfro, O.; Mrs. L. M. Wheatley, L.; Wm. Hutchins, S.; Mr. A. C. Davis, A. S.; Mrs. E. Page, C.; Mr. E. H. Wheatley, Jr., T.; J. T. Morgan, Sec.; Mr. A. O. Morgan, G. K.; Miss E. Page, P.; Miss Dollie Rowlee, F.; Miss Mary Morgan, Ceres; Miss N. M. Rowlee, L. A. S.

POTTER VALLEY.—W. A. Grover, M.; Wm. Eidie, O.; J. J. Dashiell, L.; Chas. Carner, S.; Ira T. Spencer, A. S.; H. P. McGee, C.; F. M. Hughes, P.; W. V. Kilborne, Sec.; S. H. McCreary, G. K.; Miss May Eidie, P.; Miss Cynthia Dashiell, F.; Miss Emma A. Spencer, Ceres; Miss Addie Dashiell, L. A. S.; H. P. McGee, Trustee.

NOTE: The Secretaries of Granges are requested to forward reports of all election and other matters of interest relating to their Grange and the Order.

WHY is it, queries a Santa Ana correspondent, that there are no Granges in Southern California? We repeat his query: Why is this?

Debris from the Cherokee.

The following article, about the Cherokee injunction, appears in a recent issue of the *Sutter Farmer*:

We have watched the operations of the Cherokee hydraulic mines with a good deal of interest. First, because it was, from all accounts, a very rich mine; second, because it appeared to be owned and operated by honorable men; and, third, because the managers left nothing undone whereby injury to other property might be prevented.

That the reader may understand the situation clearly, we will refer briefly to the early history of the Cherokee operations, which, however, scarcely dates back more than 10 or 12 years.

As we understand it, Cherokee has no watershed and receives no water except what falls into the mine and is carried to it in ditches; hence no flood could occur as on the Yuba to overwhelm the country below. The nearest and most convenient outlet for the debris was Dry Creek, a small stream that was dry nine months of the year, and at no time ran sufficient water to find an outlet into any of the larger streams in the valley. Still, for a considerable distance from the foothills, in its course toward French Crossing, on Butte Creek, it ran through a well-defined channel between prominent and hard banks and then spread out over what are called "goose lands," or great adobe flats, covering them with water in winter, and, as they dried out in summer, they would crack open in great chunks, endangering the feet of animals passing over it.

This, then, was the conduit and dump for the debris from the Cherokee mines, and to show how effectual it was, we will relate a circumstance that happened to some hard-working young men, residing at the time in this vicinity. They secured a half-section of land at a low figure in the vicinity of the creek spoken of. They plowed it in the spring to lay over in fallow. When the first rains came it was sown to wheat, and soon made its appearance above the ground and made glad the hearts of our friends, for, to all appearances, a small fortune was in store for them. They continued to reside here until such time as they could make the needed improvements. So when spring came with its gentle showers and warm sunshine, bringing forth the harvest at a rapid rate, our friends took a drive to Butte county to view their prospect, when to their utter surprise and consternation, their 320 acres of land on which they had spent so much labor, and on which they had built their hopes, together with the crop, was wholly submerged with slickens from the Cherokee. The conduit was full and the slush spread over the plains.

The miners were probably little less surprised than were the farmers, and they at once paid for damages where claimed or purchased the lands outright to avoid litigation. But the slickens, like the batter, spread farther and wider, engulfing in ruin all it touched. The company could not buy the whole country, and so they decided to construct two huge levees from the mine to the Butte adobe flats and the Sutter tule basins, a distance of 25 miles, more or less, and between these it was expected to carry the Cherokee debris to a permanent basin where it would harm no one. It must be seen that this involved a very heavy expenditure of money and labor; and, having no rivers or floods to contend with, ought to have been in the power of man to control if such things are possible.

But the basin men did not relish the idea of furnishing a dump for other people. A suit was begun; an injunction followed, and then a lease of the dumps at so much an acre per year. For awhile this silenced litigation and secured peace to the mine, but the expense in time bankrupted the company and the mine fell into the hands of its creditors and laborers, who have for a year or more sought to get their pay back by working the mine. While this was in a measure successful, it could not add anything to the height of the levees or the security of the valley farms. Therefore the canal filled, and the destructive batter once more invaded private rights, and even an Oroville Court could not do less than enjoin the nuisance.

The experience of the Cherokee is a complete and overwhelming answer to every restraining theorist. With entire control of the water and restraining works, the Cherokee failed utterly to control its debris; how much less can our mountain miners hold their mud in the torrential streams? It is clearly impossible. And when the valley people consent to the experiment they will open their doors to the flowing mud. We can but regret the ill-luck of the Cherokee people, but their experience sustains our oft-repeated assertion, "That the power to restrain is not and never can be equal to the power to dissolve the mountain."

A STATE GRANGE WEDDING.—We learn from the *Patron* that W. Walter Greer, A. S. of the State Grange, and Miss Frankie Stevens, L. A. S., were married at Sacramento on the 20th inst. Both Brother and Sister Greer are also officers in Sacramento Grange. Best wishes!

BENNETT VALLEY GRANGE, with a few invited guests, held a Christmas festival last Saturday, with music, an address by Edwin Peterson, distribution of gifts, supper and social dance.

MERCED GRANGE has had an initiation at every meeting since State Grange.

Restricting Immigration.

U. S. Senator Cullom of Illinois, in a Fourth-of-July oration, said: This has been called the land of the free and the home of the oppressed. So it has been, so it is now; but it is not and should not be allowed to be the dumping-ground for all the paupers and criminals of other lands. The time has come when the bars of our country should be put up and fastened against such importation. It should have been done before now. We invite all to come with honest purpose to be law-abiding citizens, who can care for themselves and will labor for the upbuilding of good government. But we have no place for fugitives from justice, for dynamiters, or lawless characters of any class.

Senator Palmer of Michigan proposes the enactment of laws which shall enable well-disposed and worthy persons who desire to become resident citizens of the United States to obtain certificates of character and fitness therefor from the Consul of the district in which they reside, without hardship or unreasonable delay, which certificates shall contain, in addition to other specifications required by this Act or which may be prescribed by the Secretary of State, the full name of the individual receiving the same, the place of birth, age, occupation, last legal residence, physical marks or peculiarities, and all facts necessary for identification of such individuals; and providing that no certificate shall be granted to any convict, except those convicted of political offenses, nor to any lunatic, idiot, or person unable to take care of himself or herself without becoming a public charge, nor to any anarchist, nihilist, or any person hostile to the principles of the Constitution or form of government of the United States, nor to any believer or professed believer in the Mormon religion who fails to satisfy the Consul upon examination that he or she intends to and will conform to and obey the laws of the United States.

Whereupon the San Jose *Times* observes: Palmer's bill makes an exception in favor of persons convicted of political offenses. It is just the exception which ought not to be made, if there is any possibility of Red Flags getting in by virtue of a complaisant construction by some demagogic administration. A demagogue in a republic is about as dangerous as an out-and-out anarchist, and a great deal meaner.

The State Grange and Congress.

The Secretary of the State Grange, having sent each Senator and Member of Congress from California official copies of the several resolutions concerning national legislation which were adopted at the late session of the State Grange, together with a personal letter bespeaking their favorable attention to the recommendations embodied therein, has received acknowledgments and promises of consideration from Senator Stanford and Representatives Felton and Morrow. The last-named gentleman also says:

I have been for some time impressed with the view that the Geological Survey should furnish some information as indicated in the resolutions adopted by the State Grange, and last summer I had a conference with Professor Hilgard of the State University upon the subject.

After going over the matter very fully, it was determined to recommend the incorporation of the amendment into the "Sundry Civil Appropriation bill," providing for the employment of a chief agricultural expert, and such assistance as might be necessary to secure a classification of public lands, with reference to the agricultural development of the country.

These proposed amendments of the law have been prepared, and I shall offer them at the proper time. An appropriation for the agricultural experimental stations was unintentionally omitted from the bill providing for their establishment. I think there is no doubt but the necessary appropriations will be made at the coming session of Congress. In any event, I shall do what I can to secure proper legislation in that direction.

The patent laws undoubtedly require amendment, and I have been giving that subject some attention for the purpose of securing such legislation as will protect innocent purchasers and users of patented articles and implements.

I do not think that the Interstate Commerce law will be repealed. The indication is that there will be an effort to amend the statute for the purpose of making it more effective than at present.

All these matters will have my careful attention, and I beg leave to say that the recommendations of so important a body of men as compose the State Grange of California will receive the fullest consideration.

POSTAL TELEGRAPHY.—Washington dispatches state that Senator Sawyer, chairman of the Postoffice Committee, means to bring the subject of a postal telegraph before that committee very soon after the holiday recess. Mr. Powderly has sent the committee word that he would like an early hearing before them on behalf of the Knights of Labor in favor of the Cullom postal-telegraph bill, and he will be invited to appear soon after the reassembling of Congress.

BROTHER AND SISTER FLINT, our W. S. L. and his good wife, have been visiting Los Angeles. Santa Monica, Pasadena and other points of interest; and he writes with unenvied wonder of Southern California's marvelous development.

QUERIES AND REPLIES.

Ensilage.

EDITORS PRESS:—Can you inform me if there are any silos in use in this State? Do you know if alfalfa has been successfully cured in them? It is known that fresh alfalfa will give an unpleasant flavor to milk. Would alfalfa ensilage give the same flavor, or would the heating process through which it passes change it so as not to produce it? Shall look for a reply through the PRESS.—DAIRYMAN, Los Angeles.

Mr. I. R. Jewell of Petaluma has probably had more experience with silos than any other Californian. We published a letter from him on the subject in the RURAL of June 19, 1886, to which our correspondent is referred. Mr. Jewell has used alfalfa and other forage plants, but prefers corn if a man has good moist corn ground. As for the effect of ensilaging on flavor properties of alfalfa we are not informed. Will some reader answer the question?

Retention of the Placenta.

EDITORS PRESS:—My neighbors and myself are having considerable trouble with milch cows not cleaning themselves after calving. The cows are put in the stable every night and fed on hay and bran, and turned in the pasture in the day time. Northerly winds seem to aggravate the case. Can you or any of your readers tell what is the cure in such cases, and if there is any preventive?—JOHN H. EDEN, Nevada City.

What would our dairy readers advise?

Fastening Cows in Barns.

EDITORS PRESS:—Will some reader be so kind as to describe in your paper a good method of fastening cows in barns, other than with stanchions?—SUBSCRIBER, Petrolia, Cal.

Fruits for Tule Islands.

EDITORS PRESS:—I would like some reader of the PRESS experienced in the culture of trees, fruits and nuts to tell me if I had better plant prunes and walnuts; that is, whether I have the right kind of soil. I am located on the west end of Rough and Ready island. Is there any reader who has had experience in such land?—F. AND W., Stockton.

SCHOOL ENTOMOLOGY.—The new edition of Matthew Cooke's elementary work on entomology has just been issued by the publishers, H. S. Crocker & Co. of Sacramento. Its title has been changed to "School Entomology," to more nearly accord with the use to which the volume is now being placed as a textbook in our public schools, in accordance with the new law requiring such instruction. The book has thus far been adopted by the Boards of Education in nine counties, to wit: San Diego, Kern, Tulumne, Alameda, San Mateo, Solano, Sacramento, Sutter, and Plumas. Other counties have the work under consideration for action at their coming meetings. This book is the only elementary one we know of which is available for use by schools, and it will serve a very good purpose. Besides this, school libraries should be provided with several more advanced works. Cooke's "Insects Injurious to Garden, Orchard, etc.," gives the fullest information of pests likely to be encountered in this State. Packard's "Guide to the Study of Insects" is the best general work. These and many other advanced works as can be had should be procured for the use of teachers.

THE WHEAT DEAL.—The *Bulletin* says: All the creditors of William Dresbach and John Rosenfeld, the victims of the wheat deal of last summer, have signed the agreement reached on Friday last by which all are to accept \$150 on contracts margined down to \$1.70, and \$200 on those margined down to \$1.93. Chas. B. Stone, assignee of the defunct brokers, states that the Nevada bank, which is the heaviest creditor, signed the agreement on condition that the 13-16 of the ship Carrollton, and the 1 of the ship Willie Rosenfeld, belonging to the bankrupts, be transferred to it, and that it receive the \$25,000 balance due of a sum of \$100,000, which had been agreed on as an amount to be paid the bank. The ratification of this agreement practically closes the last chapter in the great wheat corner by which Dresbach, Rosenfeld and the Nevada bank between them lost \$6,000,000.

SAN JOSE AND THE AMERICAN HORTICULTURISTS.—At San Jose, on Friday, 23d inst., committees from the common council, board of trade, Grange, viticultural and horticultural societies, met in joint committee to arrange for the appropriate reception of delegates to the American Horticultural Association which is to meet there Jan. 24th. A number of subcommittees were appointed. Cyrus Jones, president of the local horticultural society, said all counties represented in the State Board of Trade had been invited to send exhibits and participate in a Central and Northern California citrus fair, to be opened here on the arrival of the Eastern horticulturists, and favorable responses enough had been received to insure the grandest affair of the kind ever held in California.

THE Pacific Land and Cattle Co. incorporated Dec. 17th, with R. M. Mover, J. H. Pennington, I. N. Day, T. C. Clifford and Henry Eckhoff as Directors; capital stock, \$2,000,000; \$101,000 subscribed.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

A NICE LITTLE ORCHARD.—Haywards Journal: C. S. King of San Lorenzo has ten acres planted to plums, cherries, prunes and one row of pears that has for three years past netted him \$200 an acre, or just \$2000 net each year. Clint paid for the place in three years, besides making a living on it. The highest this place netted was the year before Mr. King purchased it, when it reached just \$2700.

CHRISTMAS-TREES AND CUT FLOWERS.—Enquirer, Dec. 21: At the holiday season quite a business is done by some of the residents of the redwoods in supplying Christmas-trees. About 15 miles back of Oakland in the Moraga valley is a growth of redwoods from which most of the Christmas trees are brought. These are cut in proper size and hauled in large wagon-loads to the city, where they are stood along the sidewalk for sale. They are usually bought by the load by retailers. A load of redwoods brings from \$15 to \$20, according to the size and quality of the trees at first hands. They are retailed at from 25 cents for the smallest to \$3 for family trees, and \$5 and upward for the largest used by societies and churches. . . . P. J. Keller, the Piedmont nurseryman, has a standing order for two shipments weekly of cut flowers to Salt Lake florists. This week he received an additional order for \$10 worth.

Butte.

MULES FOR AUSTRALIA.—Chico Enterprise, Dec. 23: A Mr. Grady, representing an Australian railroad company, who came to Chico recently to see the stock ranch and animals of D. M. Reavis, says that the horses and mules on that farm are the finest in the State and cannot be beaten this side of Kentucky. He bought of Mr. Reavis 50 head of fine young mules, paying in the neighborhood of \$12,000 for them. In the spring they will be shipped to Australia to work on the new railroad now building there. The distance they are to be taken is about 9000 miles. This is a decided compliment to the Reavis rancho and the fine breed of animals produced by Mr. Reavis.

Fresno.

COUNTY PRODUCTS.—Expositor: "Cactus Ed" and Jim Waterman have excellent samples of some of the products of this county that are well worth the time to step over and see. They consist of figs, oranges, sweet potatoes and turnips. The first are of the White Smyrna variety. They are very large and show off splendidly. They were raised by M. Denicke. The oranges were raised on the Akers ranch, near Centerville, and are large and fine. The sweet potatoes can hardly be beaten. One weighs 35 pounds, while among the turnips a good showing is also made, one weighing 15 pounds.

RAMIE.—Frank Locan put out some 20,000 plants on his farm east of town this season. The capacity of the soil to grow the plant proved very satisfactory, and next season he will largely increase his acreage.

Los Angeles.

UNWONTED AND UNWELCOME.—Times-Courier, Dec. 17: The wind-storm which was felt in Pomona Tuesday night seems to have swept over the entire Pomona and San Gabriel valley, and reports of its disastrous effects have been received from Colton to Pasadena. Its general course seems to have been from north to south, though it resembled a cyclone in nature and blew from all directions alternately. The reports of the damage state that most of the buildings were wrecked near the hour of 10 p. m. The most mischief was done along the foothills, Pomona and the country a few miles further south feeling but a small portion of its original force. Ontario suffered more than any other place. The wind seemed to sweep out of the canyon to the north and descend directly upon the town. About 20 buildings were damaged in some way and a number were completely wrecked.

Monterey.

SAN LUCAS MATTERS.—Cor. Salinas Index, Dec. 19: So far we have had 1.70 inches of rain, and have no cause to complain so long as we fare as well as other sections of the county. Most of the more experienced farmers have entire confidence in the prospect ahead of them. It is gratifying to hear their hopeful tones. . . . M. Rizhetti & Co., from Cayucos, have rented 3000 acres from A. Trescony for dairy purposes. The tract has been divided into three parts, on each of which a substantial dwelling-house, dairy, barn and all necessary corrals, etc., have been erected.

San Bernardino.

THE LATE WINDSTORM.—Chino Cor. Bulletin, Dec. 23: It was truly fearful in many places and fierce in nearly all. Much damage was done and a few lives lost, but I have conversed with cool-headed men from all prominent parts since the storm, and am informed that unprecedented as it undoubtedly was, the damage is much less than at first believed. In the rush of construction, many buildings were put up hastily with timbers of almost any kind, and often by poor and careless mechanics. Hundreds were shells set upon stilts. The wonder is that more were not upset. The large hotels that went down, it is now admitted, were unfinished or of flimsy construction. These are the substance of the reports, and I believe them.

In this town a windmill and a tank went down and part of a shed roof was carried away. As to trees, they have been somewhat injured. More or less of the oranges and lemons were whipped off. The reports from about San Bernardino are that from five to eight per cent and at Riverside from 8 to 12 per cent of the crop was blown off, but these windfalls were mostly ripe enough to market, and hence the actual loss in fruit will be light. The trees in a very few places were stripped of their leaves. A small percentage was broken more or less, but very few were wholly destroyed.

Santa Barbara.

OLIVE ORCHARDS IN PROSPECT.—Lompoc Record, Dec. 17: The Santa Ynez Land and Improvement Company, owning the College and Jonata ranches, comprising 30 odd thousand acres, have sold over \$200,000 worth of lands within the last 30 days and the demand is increasing daily. The fine olive orchards and vineyards, now so promising, leave no further doubts about the value of those lands for these profitable industries. There are 100,000 olive trees already out and the area to olives will more than be doubled the coming winter.

Santa Cruz.

CROP SALES.—Pajaronian, Dec. 22: Local buyers inform us that the bean crop is almost entirely sold, the potato crop is pretty well closed out, and the apple crop is almost entirely in the hands of the big shippers. The grain crop remains. But for the fruit and summer crop production of Pajaro valley the past season there would have been a repetition of the old cry, "hard times." The grain harvest was one of the best for several years, but it is unsold. The introduction of the sugar-beet industry adds one more product to Pajaro valley's long list, and further assures our farmers of relief from coin scarcity.

Shasta.

OBSERVED IN AN ORCHARD.—Redding Free Press: A visit to J. McCormick's orchard last Thursday was refreshing—persimmons, ripe and juicy, oranges, Washington Navel and Mediterranean Sweets, the former being the only ones of that variety grown in this section; California walnut trees, all bearing, and roses in full bloom. We were accompanied by Mr. J. W. Day of Minneapolis, who is making a tour of the State. He has been traveling principally in the southern counties, and from what he heard there of the northern part of the State is astonished at what he now beholds.

DRIED PRUNES.—Sherman Keneker of Clover Creek sent us a bag of very fine dried prunes, put up especially to show what can be done in that section of the county. The prunes are of good size and seem sweeter than those imported from other sections of the State.

Sonoma.

LATE PLUMS.—Sonoma Index-Tribune, Dec. 24: S. H. Shaw made a shipment of plums of the Coe variety to S. F. last Thursday morning. Many tables in this valley will be supplied on Christmas day with grapes, plums, raspberries, oranges, lemons and other fruits. These are grown in the open air and for flavor and size will challenge comparison with the most favored counties of California.

Sutter.

ORANGES AND FLOWERS.—Cor. Sutter Farmer: Francis Gibson, who resides one and a half miles below the junction of the Feather with the Sacramento river, in Sutter county, raises on his place the finest of Mediterranean Sweet oranges. He had boxed up some, and also prepared a miniature flower-bed, set out with flowers of great rarity and beauty, raised by Mrs. Gibson, intending to exhibit them at the Oroville Fair, but to their disappointment they were informed that the fair was only for Butte county products. Mr. Gibson is cultivating the best of semi-tropical fruits, and Mrs. Gibson the choicest and rarest of flowers. I hardly think a prettier flower-garden is to be seen in Sutter county. They have cultivated the useful to that extent that they now can cultivate the beautiful.

Trinity.

SHEEP LICENSE.—Humboldt Standard, Dec. 15: At the last meeting of the Board of Supervisors of Trinity county an ordinance was passed for sheep-owners to pay a license in accordance with the number of sheep owned. Bands of 5000 sheep must hereafter pay a license of \$250 per annum; 4000 must pay \$200; 3000, \$150; 2000, \$100; 1500, \$50; and 500 must pay \$25. Owners of more than 5000 sheep will be required to pay \$50 for each additional 1000. It is intimated that the supervisors of Shasta county will enact a similar ordinance. Trinity is a large county, and although a goodly portion of it is covered with the finest sugarpine timber, excellent pasturage is afforded. But there are bald hills and ranges, well supplied with water, which induce residents of other (principally valley) counties to drive their flocks there to feed during the summer season. It is possible that this fact may have induced the passage of the license ordinance above referred to. Most of the land in that county is still unsurveyed and unclaimed, owing to its isolated location and long remove from any market for its fruit, vegetables and other products.

Tulare.

THE BERRY STEAM FLOW is in operation every day on the plains southeast of Visalia, and works to perfection, turning 20 furrows at a time. The only fuel used is the straw that was left on the field from last season's harvest. Several thousand acres will be plowed with this

machine the coming season, and the same engine will supply the motive-power for harvesting.

MORE SHORTHORNS.—Visalia Delta: W. H. Blain purchased in Sacramento last week ten Shorthorn heifers imported from Cook county, Illinois. They are splendid-looking animals and will be a valuable addition to Mr. Blain's herd.

ACTUAL RETURNS.—Hanford Sentinel, Dec. 22: The following is a statement of the actual sales of fruit and cereals from the 40-acre ranch of H. C. Sutton, one mile east of Lemoore:

Early plums and apricots	48 00
Dried apricots	843 00
Dried peaches and pears	653 00
Green grapes	55 00
Green apricots	25 00
Raisins, 950 boxes, sold in S. F.	1330 00
sold at home	28 00
Fruit raised on 16 acres	\$2892 00
Hay sold	243 50
unsold, 30 tons at \$5.00	150 00
Corn sold	150 00
	\$3475 50

The following is a statement of the proceeds of O. C. Brown's ranch $1\frac{1}{2}$ miles east of Lemoore. The land farmed consisted of about 30 acres, but the products as given below came off of about 20 acres, about 10 acres of the ranch not being in good bearing:

Early peaches and apricots	\$ 75 00
Ripe peaches, 10 tons, \$20 per ton	200 00
Ripe peaches, 5 tons, \$40 per ton	200 00
Dried peaches	240 00
Dried apricots	640 00
Raisins, 510 boxes	714 00
Grapes sold	62 00
Apples, green and dried	157 00
Pears	126 00
Blackberries, 1 acre	337 00
Dried fruit of various kinds	47 00
Grape roots, 1 acre	800 00
Watermelons	177 00
Grain hay, 10 tons	100 00
Total	\$4575 00

The above statements can be relied upon as correct.

Ventura.

EDITORS PRESS:—Work has commenced here in earnest. In every direction can be seen cultivators at work, or clearing the few remaining fields of corn-stalks, preparatory to an early cultivation. Corn-shelling has begun, and the yield is turning out much heavier than was expected. A cool east wind blew quite hard last night and to-day, but to-night its wild invasion into our otherwise quiet neighborhood has ceased, and it seems like a calm after a storm.

San Buenaventura, Dec. 21st.

POTATO PROFITS.—J. B. Alvord, in Ventura Democrat: From seven acres the present season, I have taken about 840 centals of potatoes, or an average of say 120 centals per acre. The cost of producing and marketing exclusive of taxes and interest on value of the land was about 32 cents per cental; the average price for carload lots has been about 75 cents per cental, leaving a profit of 43 cents or something over \$50 per acre. In former seasons, some of my neighbors have done equally well and better. Of course the market heretofore has been very limited, but since the advent of the railroad there seems a ready market for all our surplus product. The above results were secured without irrigation, and there is a great deal of land in the county equally well adapted to the same purpose. On dry upland and heavy soils, especially in localities remote from the coast and its summer fogs, only early potatoes can be raised to advantage. But in those parts of the county combining suitable soil and climate I think a profit of \$50 per acre is rather below than above the average.

Yolo.

MERRITT ISLAND RECLAIMED.—Record-Union: Merritt island, 20 miles below Sacramento, on the river, in Yolo county, containing about 5000 acres of the best land in the State, has just been reclaimed as swamp land by numerous parties at a cost of \$25 per acre. Fruits, vegetables, alfalfa hay, and dairy products are raised on the island. A large warehouse and a steamboat landing are soon to be erected on the lower end of the island, and the farmers have awakened to new energies, and are improving and beautifying their homes.

A FINE JACK.—Woodland Democrat: Dr. H. P. Merritt had another of his fine jacks in Woodland to-day for the purpose of having him shod. He is not so large as some of the kind, but is very strongly built; and we have never seen a jack that had better legs or bigger ears, which are two of the best points in such animals. Dr. Merritt has eight full-grown jacks and about as many young ones.

ARIZONA.

LEADING THE WATERS ONWARD.—Phoenix Herald: The Highland Canal Company has filed articles of incorporation, with a capital stock of \$100,000. The gentlemen incorporating are Austin Carrington, T. J. Butler and J. F. Meador. The location of this canal is one mile south of the head of the Arizona canal and three miles north of Mesa. Gradually the boundaries of the rich Mesa country are encroaching on the desert, and no doubt, at some future time all the vast plain between the Salt and Gila rivers will be covered by canals. In evidence we cite the remains of the old Montezuma ditch, along the course of which the modern Mesa ditch threads its way into the plain. Beyond the present length of the Mesa canal, some 10 or 12 miles from any visible water supply, there are remains of the habita-

tions of the pre-historic races that tilled this magnificent valley.

SWEET POTATOES.—Schultz & Franklin have on exhibition in their real estate office a sweet potato that weighs 20 pounds, actual weight. It was raised at Mesa City, and is the heavy-weight champion of the Salt River valley. Mr. Ingalls has a number of sweet potatoes that weigh 14 or 15 pounds.

OREGON.

EDITORS PRESS:—Thousands of fruit trees will be set out this fall and next spring in Southern Oregon. Plowing is the order of the day in Wasco county. The farmers of Douglas county will be able to plow almost anywhere in the valleys now, and are busy seeding. Stock is in a fair condition to withstand the rigors of winter. Large immigration is expected from the East. . . . Not less than \$10,000 will pay the damages of the tule fire at La Grande. One man lost \$10,000 worth of hay. . . . Stock in the region of The Dalles is in poor condition to withstand the cold winds and snows of the winter, and little grass on the hills. Snow on the Siskiyou is two feet deep. Coyotes are numerous in the foothills of Polk county. Snow has fallen to a greater depth than ever before at this time of the year in the Pine and Eagle Creek mountains. Sixty miles south of Coeur d'Alene, on St. Joseph's river, snow was six inches deep and ice three inches thick the 3d inst. (Snow fell to the depth of 33 inches in this country last winter.) . . . Some damage was done dwellings and out-buildings in and around Portland during the wind and rainstorm of last week. . . . Grading in the mountains above Mehama has stopped. As a consequence the county is infested with tramps. Farmers should extend them neither pity nor charity, for these fellows almost to a man spend their money at saloons, then go out among farmers and beg for bread. —H., Turner, Ogn., Dec. 21st.

WASHINGTON TERRITORY.

ARBOR DAY RECOMMENDED.—Walla Walla Union: Gov. Semple asks the Legislature to appoint an "Arbor Day," most of the States and Territories having established them with good results. He says: "On this day, which is announced by executive proclamation, as is Thanksgiving day, the people are expected and encouraged to plant trees, shrubs and vines. Lessons are taught the children in the public schools as to the effect of forest denudation upon atmospheric phenomena; pictures are drawn of countries where at this time there is nothing but sterility, but where ruins exist that denote that at no very distant period the country was rich, fertile and prosperous. Each child is taught by the schoolmaster, and the fact is brought home to the attention of the people on Arbor Day, that whosoever plants a tree or shrub, or consigns a seed to the earth, is doing a mite to avert such a fate from his own country. Thus, in addition to the mere utilitarian idea, there occurs a cultivation of the gentler sentiments, which we as a people have been accused of neglecting, if not ignoring, in our eager pursuit of wealth."

SUSPENDED.—As we go to press, on Wednesday afternoon, the suspension of George W. Meade & Co., the well-known dealers in dried fruits, etc., is announced. It is hoped that the trouble is only temporary, and some business men who know Mr. Meade express confidence in his being able to extricate himself if he has time. It is stated that his debts are almost wholly to banks and not to producers.

SAYS the Shasta Courier of Dec. 24: Shasta oranges are now commencing to ripen. One tree in the grounds of Mrs. D. H. Dunn stands 15 feet high, has a spread of 14 feet, and the 20 props under the tree are strained to keep the main branches from breaking under the heavy load of fruit which ladens every limb from the ground up.

THE ORANGE CROP.—All reports seem to agree as to the excellence of the coming orange crop in the southern counties. The Pomona Progress names 2200 to 2500 carloads as the probable output, against 1600 carloads last year.

THE Water Storage Co.'s dam at Water Grove, A. T., 30 miles south of Prescott, when full holds 500,000,000 gallons of water, which is to be used on the desert 20 miles south of Prescott and for placer mines.

GRAPE-GROWERS should not forget the meeting of their State Association, which will be held in the Grand hotel in this city on Tuesday, January 10th, beginning at 11 a. m. Matters of importance will be up for consideration.

THE Placer County Citrus Exhibit in Los Angeles has attracted a great deal of notice and excited much admiration on the part of both Easterners and Southern Californians.

DANIEL MANNING, ex-Secretary of the Treasury, whom ill-health lately compelled to resign his position in the Cabinet, died at Albany, N. Y., Dec. 24th, aged 56 years.

SUFFICIENT capitalists have subscribed for the stock in the Woodland Woolen-Mill to assure the success of the project.

FRESNO and Los Angeles are pestered with petty pilferers.



A New Year's Song.

The world is full of mystery
Which no one understands;
What is before our eyes we see,
The work of unseen hands;
But whence, and when and why they wrought,
Escapes the grasp of human-thought.

There was a time when we were not,
And there will be again,
When we must cease and be forgot,
With all our joy and pain,
Gone like the wind, or like the snow
That fell a thousand years ago.

We live as if we should not die,
Blindly, but wisely, too,
For if we knew Death always nigh,
What would we say or do
But fold our hands, and close our eyes,
And care no more who lives or dies?

If death to each man in his turn
Is coming soon or late,
Be ours the soldier's unconcern,
And his courageous fate;
Better to perish in the strife
Than to preserve the coward's life.

Before my heart's fire pondering long,
As 'twere a bivouac,
I heard last night the solemn song
Which I had summoned back,
It seems my somber mood to cheer,
And is my greeting to the Year.

New Year, if you were bringing Youth
As you are bringing Age,
I would not have it back; in sooth,
I have no strength to wage
Lost battles over, Let them be.
Bury your head, O Memory!

You can bring nothing, all surprise,
And nothing but dismay;
No tears again in these old eyes,
No darkness in my day,
You might bring light and smiles instead
If you could give me back my dead.

I have beheld your kiss, New Year,
Full fifty times, and none
That was so happy and so dear,
I wept when it was done,
Why should we weep when years depart,
And leave their ashes in the heart?

Good-by, since you are gone, Old Year,
And my past life, good-by,
I shed no tear upon your bier,
For it is well to die.

New Year, your worst will be my best;
What can an old man want but rest?

—R. H. Stoddard.

A New Year Prayer.

The Christmas moon rides bravely in the skies;
The young and untired year is at the gate.
We tremble at his aspect, grave with fate;
At his inscrutable, unsmiling eyes,
Subtle with hope and full of prophecies.
Lord, he is all unknown, but Thou art true;
As in the old year, guide us in the new!

The clock has struck; with the last clanging knell
Comes in the new year, goeth out the old;
To-morrow is to-day, to have and hold;
The future binds us with her mystic spell.
For bliss? for bale? what man shall ask or tell?
Forward we look with wistful, questioning eyes;
Lord, who art wisdom's fountain, make us wise!

The old year's love shall live on in the new,
But love is weak and ignorant and blind,
Led by each wandering fancy of the mind,
Enticed by song of bird and scent of dew,
Misleading still where fain it would be true.
O Lord, whose love fails never night or day,
Teach us to love in Thine own perfect way!

That comes to end which now is just begun,
To wax, to wane, it is the common fate;
The new year must be old year, soon or late
The hovering shadow wrappeth every one,
And hides him from the day and from the sun.
Darkness and light are Thine, O Lord, most high;
Make us content to live and glad to die!

—Congregationalist.

Our Club of Four.

A Tale for the Holidays.

[Written for the RURAL PRESS by MRS. RANCHER.]

Thorndale is like 50 other farming districts in the San Joaquin valley. Its houses from a quarter of a mile to a mile apart, with nothing striking or original about them. Its schoolhouse the only public building, devoted not only to secular education, but religious as well; and also on occasions to exhibitions and merry-makings. Its scenery a long, almost unbroken stretch of waving grain or parched stubble, or rich, brown fallowed lands. How humdrum! you say.

Doubtless; but if the surroundings are commonplace, the inhabitants are not.

The settlement had been started by three families from New England. Old neighbors, with a regular New England raising; they brought

their love of religion, of education and of social intercourse with them.

The first addition was of two German families. These, finding a hearty welcome extended them, were no less hearty in their response. They helped with the Sabbath-school, joined in the festivities, and proved in the evening rehearsals for singing that Germans have not only a voice and love for music, but a thorough knowledge as well. After that came a family from Missouri, three or four from the mining counties, but the old social spirit had never died.

So the young people grew up; and finding a genial atmosphere of life and fun, as well as good morals, had given but little trouble about wandering in by and forbidden paths.

Among other social interests, the young ladies of the neighborhood, all of whom belonged to a Bible-class conducted by Mrs. Ainsworth, had formed a Y. W. C. A. with a regular monthly meeting; and four of the number, whose homes were near each other, had an informal weekly meeting at their teacher's house; and these meetings had so often been productive of good that the girls were familiarly spoken of as "Our Club of Four."

Bertha Sevensen was a quiet-mannered girl, with a frank face and intelligent look, that gave weight to her words wherever she was; while her particular friend, Lizzie Westbrook, was only saved from being a regular rattlebrain by a most judicious mother and an excellent bringing up. As it was, her love of fun led her into many a scrape, and many more Bertha's good influence kept her out of.

Georgie Brooks was the beauty of the quartette. Every one acknowledged the charm of her sweet, young face, with lustrous brown eyes, a skin so clear one seemed to see through it, and made no exception even though the shining braids she kept so smooth were undeniably red. "I can't afford to let my hair get disorderly," she would say; "you would say it looked redder than ever if I did."

Christine Harvey was often spoken of as "a real good girl, but so hard to get acquainted with." It was quite true that she had a distant manner that kept strangers from liking her, but Christine's friends if few were very warm ones, and ever ready to stand in her defense.

The four were assembled as usual one cold, gusty November night, in Mrs. Ainsworth's pleasant sitting-room, before the hospitable wood fire that could always be found whenever a chill evening wind gave the least pretext for such cheer.

Christine sat thoughtfully in an old-fashioned, high-backed chair, gently swaying to and fro, with a dainty touch of her slender feet that was grace itself.

Lizzie Westbrook had curled herself up on the hearth rug, looking almost as puffy-like as the tabby that purred under her gentle stroke; while Mrs. Ainsworth, in her low easy-chair, with Bertha and Georgie on the lounge, completed the group.

"I've been thinking 'since Sunday,'" began Georgie, "of Mr. Stone's sermon and the text, 'For the poor ye have always with you,' scarcely seems to apply to us. We really have no destitute among us."

"It is indeed true," assented Christine, "and the poor in the cities whom we read of seem so far away, one is apt to neglect giving altogether."

"Perhaps," suggested Mrs. Ainsworth, smoothing her hair thoughtfully with the shining needles that had been busily glancing in and out the bright wool sock, that was assuredly meant for some tiny foot, "perhaps there is other poverty than that caused by the lack of money. There's Mrs. Montgomery with her flock of little ones and her one armed husband. Doubtless his pension, with what he earns, leaves them no lack of daily bread; but I fancy she must often be weary for the lack of a quiet hour. Here is a case of poverty of leisure. Then there is poverty of health, even here in our lovely California. Many more cases I might mention, and we are not to excuse ourselves, even though the poor do not clamor at our door."

"Say, girls," exclaimed Lizzie impetuously, "let's see how much good we can do this Christmas tide. Let's postpone our next meeting until the new year, and then compare notes, or will that be disobeying the command, 'Let not thy left hand know what thy right hand doeth.'"

"Surely not, if we have the right spirit, and relate our experience for mutual help and improvement; and I trust my girls will attempt no good work to be seen of men. But there is one error," continued Mrs. Ainsworth, "of which I would warn you. When one undertakes any outside work, it is very natural to grow so interested in it, one is apt to neglect the old home duties, that are often irksome. Nevertheless these duties should not be neglected, should indeed come first."

A busy season followed. Intent on really accomplishing some special work for the Master, and yet remembering their leader's warning as to home duties, made this always busy group more busy than ever.

To them, time no longer rolled round, it flew; and ere they were aware the new year brought them together once more. It was long before the merry gossiping crowd could settle themselves down to anything like serious conversation; and Mrs. Ainsworth, whose success as a teacher lay partly in the real, not forced interest she felt in the young people, listened with a sympathetic smile to the oh's! and ah's! the interrogation points and exclamations, and

dasches, which even our sensible girls are apt to scatter so thickly through their sentences. After a time, however, they settled down quite contentedly to their favorite places, and the eager faces grew sober as they reviewed their month's work.

"Well, Lizzie, how is it that our little girl who is generally so ready has nothing to say?" queried Mrs. Ainsworth.

"I was so anxious to try missionary work, and I was so sure I could do something grand. That very night when I got home papa said: 'Well, Lizzie, girl, the old year's drawing to a close, and I would like you to go over all the accounts with me, that we may have a clean page to begin the new year with.'"

[Mr. Westbrook was blind, and Lizzie, the only child, was his book-keeper.]

"It was well you warned me, Mrs. Ainsworth, for book-keeping just then seemed prosy work, I assure you. But forewarned, you know, so I tried to speak cheerfully; but papa's ear is very acute to detect any false ring in one's voice, and he said at once: 'What is it, daughter? have you some plan for the holidays, some visit, or company, that you want your time? I suppose old folks forget that business is often dull music for young ears.' I had got my own voice by that time, and, besides, just then I had an idea.

"Oh, papa!" I cried, "how quick you caught me. Yes, I have a plan, but it is neither a visit nor company. And I'll make a bargain with you. I'll give four hours a day to the books if you'll give two to my project."

"I can promise that, I suppose, if it comes within the range of possibilities. Seems to me I remember some of your plans, though, that would have been more suitable for a monkey to assist in than a blind papa."

"Then I told him, and he really held to his promise, though since his sickness he has been so secluded.

"During this month we have been to see the sick folk far and near, and many times, though to tell the truth my part has been very small. But for papa, I never knew he had such a gift! He can quiet even a baby; and once when we were at Grandma Reed's, and she asked him to pray, he did, though I never knew papa to take part in meeting in my life. I believe everything I did was in the cooking line. That's shamefully prosaic, I know, but it seemed to be all I could do. The babies cried when I held them, and the grown folks liked far better to talk to papa. But once when I was sick I thought a deal of what I might and what I might not eat. So it seemed as if that was better to do than nothing. Besides, I believe I have a gift for that. You should see how sick people relish my baked apples and roast potatoes and broiled meats. You ought to hear them praise my gruels, and declare that no one else can cook an egg so 'just right.' It isn't much, but it's better than no gift."

Lizzie stopped to catch her breath.

"And whosoever shall give to drink unto one of these little ones a cup of cold water only in the name of a disciple, verily I say unto you, he shall in no wise lose his reward," quoted Mrs. Ainsworth, with a tremor in her voice, while pussy rubbed her soft head on the little brown hand, as if to testify her approval.

"I knew how it would be at our house," said Georgie Brooks, who had four younger brothers and sisters.

"That night when Mrs. Ainsworth spoke about home duties, it came into my mind, like a picture, that between the housework and the children there would be but little time for any systematic kindnesses. Then, in the midst of my perplexity, there came work right to our door. It wasn't very promising, and I don't know that we have accomplished much; but the next day after our meeting father came in with such a queer look. 'Maw,' he said (you know father always will call mother 'maw') 'a man came to me for work to-day. Says he lost his wife coming here; died on the cars; has five children. If I hire him he'd like to know if there is no cabin on the place where they could live and he with them. You see,' he added, 'I reckon I shall need but one man this winter, and if we make this arrangement we could be by ourselves without any hired hand.'

"But mother hesitated. 'There are the two lots of children to be considered,' she said. 'Where did you say they came from, paw?'

"From Missouri," he answered, "and I reckon if you were to hear him speak, you wouldn't doubt it."

"That settled it. Mother couldn't resist any one from Missouri; but she said to me that she would begin, as she could hold out. 'My duty is to my own children first; and if we find these little ones well behaved it will be easier to grow more familiar than to check familiarity once begun.' Then I told mother of our plans, and that perhaps this was my work; and she promised to help me all she could. So we've begun. But I fear we should have made but small headway had it not been for our Christmas-tree. However, we need not have been afraid of undue familiarity, for they seem to have a shell into which they draw whenever a stranger comes about. But I could see that they had been taught obedience, so by degrees we let our children get acquainted. Well, our youngsters wanted a Christmas-tree. I agreed to help if they would invite the little Hamiltons, and each one provide one present, and we asked them to help in the same way; all the presents to be home-made.

"And what do you think we had for the tree itself? A fir? Oh, dear, no. You remember,

that oleander mother has in a great barrel? It has never been set in the garden though it stands a good 10 feet high, and it's just covered with blossoms. Father and the boys moved it in the house for us, and Sue washed the leaves so carefully; Bessie Hamilton cut long, slender strips of cotton batting, and we laid it along the branches to simulate snow. Perhaps snow and oleander blossoms do not chime, but they looked sweet. We gathered oranges from our own tree and suspended them like golden balls. The walnuts and almonds also came from our own trees, and the raisins we had cured ourselves from our vines.

"Mary Hamilton is a right womanly girl, and has won mother's heart. Mother had her at our house, and taught her to make three kinds of candy; chocolate drops, nut candy and taffy. Some of the presents, too, were real ingenious. I think soon we shall be able to coax them into Sabbath-school, though they are very diffident. Odd, too; one of the little boys said to me, yesterday, in his queer drawl, 'Paw says you'd be a right peart gal if yer hadn't sech farnal red hair.'"

A shout of laughter greeted this, and then Mrs. A. turned to Bertha.

"About two months ago," she began, "a new family rented the old Robinson place. They sent for mamma once, when the baby was sick, and I drove her down. There was a roomful of little ones, and a girl about my age, who seemed to have all the care. The father and mother seemed very rough, and there was such a smell of whisky! But the young girl, Margaret—well, all I could think of was the old saying, of a dove in a hawk's nest. She is a half-sister only, but she seems to take all the pains possible with the little ones. She has been at our house several times, still, we get on but slowly. Mamma did the best thing. She made us each one of those neat walking jackets that are so stylish. Mine is gray, Maggie's brown; and the way she gave them to us, Maggie couldn't refuse. 'You two girls get on so nicely,' she said the day after Christmas, 'I thought you would be pleased to have these so nearly alike.' Maggie could see it was a surprise to me, and one can't say no to mamma. That's all I've done."

"And now, Christine," said Mrs. Ainsworth.

"Well, girls," responded Christine, "I thought for days what I might do, but Grandma is so feeble this winter, and she clings to me, I can't leave her but for a short walk. I wouldn't be here to-night but that Aunt Lou came up to-day, and she will stay till to-morrow. One day I was reading to Grandma, and I came across an article respecting the 'Shut in band' as they called themselves. So through this medium we got up quite a correspondence (for I told Grandma about it) and it has interested her and done her so much good. Sick people have few interests, and what they have is principally with the well ones, whose lives seem so far removed oftentimes.

"There was one poor girl who has been sick a long time with hip disease. She does fancy work for her living. We hunted bits of silk and velvet and ribbons for her crazy patch work, and Grandma enjoyed looking them over and telling me their history."

"There was a middle-aged lady who had broken her leg, but could sit up and knit. Grandma has had flannels knit for all of us, and the poor woman is busy at it yet. Then, there is an old lady like Grandma, who can only lie still and wait; and they enjoy each other's prayers and letters most of all." Christine paused and the tears fell as they all realized how soon Grandma Reed would be with them no more. "I have seen merrier times at Christmas, but never happier. There has been a satisfaction in doing even a little for others that I never had before, and I think after this our club had better take this for its motto: 'For even Christ pleased not Himself.'"

Chaff.

PROBABLY of all sensational developments boils are the worst.

SOME people are so sensitive that they seem to have corns all over them.

SOME men find fault because they are never lucky enough to find anything else.

THE great trouble with men who borrow from Peter to pay Paul is that they don't pay Paul.

THIN soup, according to an Irish mendicant, is "a quart of water boiled down to a pint to make it strong."

"MAMMA," said a little boy, as he left his bed and crawled into here one night, "I cango to sleep in your bed—I know I can; but I've slept my bed all up."

HE had evidently studied history.—She—"Freddie, how often have I told you not to play with your soldiers on Sunday?" He—"Yes; but, mamma, this is a religious war."

"You must not do that, my dear," said a mother to her four-year-old daughter. "Nice little girls never do so." "Yes they do, mamma, sometimes; didn't you just see me do it?" was the bright retort.

IN every human being there are many grains of gold. When one is down, even by indiscretions of his own, do not stoop to throw additional mud upon him. Strive rather to reach him a helping hand to extricate him from the mire in which he is wallowing. This is true manhood.

YOUNG FOLKS' COLUMN.

Eva Richards' Adventure.

A New Year's Story.

[Written for the RURAL PRESS by GEORGE MCLENNAN.]

"Oh, I do wish she would come." These words were impatiently uttered by a young girl as she looked for the tenth time down the muddy street. It was two days before New Year's and Eva Richards looked forward with pleasure to spending the remainder of the old year in the country home of her friend Bessie Lorane. As long as either could remember, Eva Richards and Bessie Lorane had been inseparable friends; for years they had been neighbors, until the death of Mr. Richards called his family to the city, where they resided at the time this story opens.

"I knew some of them would come," and Eva hurried on her cloak and hat as the kindly face of Mr. Lorane appeared at the gate. After inquiring for "the folks" and leaving the widow a kindly remembrance of the season, he helped Eva into the carriage and they soon started for home. She was so excited that she almost forgot to say good-by to her mother, and paid little heed to her parting words. Neither knew how much was going to pass before they met again.

Farmer Lorane's horses were noted for miles around for their speed; but to-day they could only plod along the muddy roads, and the cold wind brought the roses to Eva's cheeks long before they reached their destination. After what seemed to Eva a long time the hearty "Whoa" of Mr. Lorane indicated that they were home.

Eva sprang from the carriage and was half-way up the gravel path before he had time to help her out. With a good-natured laugh and "A mighty spry girl that," he drove on to the barn, where Bob and Bill were soon enjoying a liberal supper of hay and oats, for the kind-hearted farmer treated all dumb animals well. Eva's quick steps soon brought her to the veranda, where they were all waiting to welcome her. A hearty kiss from Bessie and "Well, well Eva, glad to see you; seems like a month of Sundays since your genial countenance greeted my eyes," and after delivering this burlesque welcome, Tom Lorane went whistling off to the barn to help with the chores.

"Oh, I am nearly frozen, the wind was so cold riding," and Eva led the way to the cosy sitting-room, where a bright fire was blazing in the old-fashioned fire-place. After inquiring of Eva for her mother and other friends, Mrs. Lorane left Eva and Bessie to have a good talk, while she got supper.

"I am so glad you came; I've so much to tell you, I don't know where to begin. I will show you my Christmas presents after supper; but now I must tell you all about the entertainment and supper to come off at the schoolhouse to-morrow night. We are going to watch the old year out and the new year in. You and I are to have a vocal duet; we will practice it to-morrow, and you can help me bake my cake, and in the afternoon we will go to the woods and get evergreens to decorate the schoolhouse. Here comes Tom and I suppose there will be no peace till he is out of the way. I do wish that boy was not such a tease, but I suppose we will have to stand it. There is one comfort, he is going to school after the holidays."

The topic of conversation was changed at this point by the appearance of the aforesaid Tom. As Bessie had prophesied, they had no more peace till they went to their own rooms that night.

Was there ever a girl that did not like to tell stories after the lights are blown out and the house still? Bessie and Eva were no exception to the rule; their room adjoined that of Mr. and Mrs. Lorane, and long after the farmer and his wife were in dreamland, they were making plans for the next day and frightening each other by telling the most horrible ghost stories their memories could recall; each trying to make her story appear the worst. The clock had struck 12 when Mrs. Lorane awoke and found them still talking.

"Girls, girls, you should have been asleep long ago. There will be plenty of time to-morrow to make all your plans. There will be no getting you out of bed in the morning. An early start is half the battle when there is so much to be accomplished as you propose doing to-morrow. Go to sleep at once," and the farmer's wife turned over and prepared to follow her own advice. After a short whispered conversation the girls fell asleep.

The sun was far on in his course the next morning, when a succession of raps awoke the girls, and the well-known voice of Tom Lorane was heard to say: "Early risers you are, aren't you? Eight o'clock and no sign of getting up yet. Mother called you two hours ago, but getting no answer she concluded to let you sleep. She said you were talking until 12 o'clock—telling ghost stories, I know, for I heard Eva screaming through the night and I knew some hobgoblin was after her."

Here Eva interrupted him, saying: "You must have been dreaming yourself when you heard me scream, for I did not dream anything last night."

"That is all right, but breakfast is all eaten and you and Bessie will have to cook your

own," and Tom slid down the banister and was out of the house before she had time to answer.

"How did Tom know we were telling ghost stories last night? I wonder if your mother heard us?" said Eva, somewhat puzzled at Tom's apparent knowledge.

"Oh, he always says that when he can't find anything better to tease me about; he only guessed at it."

"Did you dream of ghosts last night? I didn't, and I don't think dreams are the reflections of our thoughts; if they were, mine would not have been very pleasant last night after those stories."

"I am so glad it is a fine day. Let us go down now if you are ready," and the two girls hurried off "to make up for lost time," as Eva expressed it.

Two busier girls were not to be found in all Wild Rose valley than Eva and Bessie on that last day of the old year. Their feet and fingers seemed to be keeping pace with the flying moments, as they realized that before that time next day one more year of their lives would have flown. The cakes were baked and proved to be light and good, much to the satisfaction of both girls, who were novices in the art of cake-baking, a fact of which Tom was well aware when he told Eva that he expected to have the pleasure of using some of their cake as sinkers when he went on his next fishing excursion.

In the afternoon Tom hitched Bob to the spring-wagon and after procuring an ax they started for the woods with the purpose of getting evergreens and holly-berries to decorate the schoolroom. A merry time they had. Tom, good-natured and mischievous as ever, kept them laughing until the woods echoed with their merriment.

"I haven't had such a good time for months," exclaimed Eva, as she surveyed the wagon loaded with red berries and graceful branches of evergreen.

The woods were some distance from the schoolhouse, and it was near three o'clock when they drove up, and a large number of the young people of the neighborhood had already arrived. There was a general exclamation of delight when they saw Eva, who was a great favorite with all. What a good time they had! The boys did the hard work and the girls "bossed the job," as Tom was heard to say. He seemed to get more than his share of the objectionable "bossing," for he, too, was a general favorite. The sun was sinking to rest when they gave up their fascinating work and started for home with the expectation of meeting again a little later.

Eva and Bessie took a long time to dress that evening; like all other young girls, they wanted to look nice. Tom's exclamation of "Any time this week will do," was heard long before they were ready.

Eva Richards looked very pretty that night in her garnet dress and white neck handkerchief, with a bunch of red berries fastened in her curly black hair. Bessie looked at her for a moment with envious eyes, wishing she, too, were pretty; but she was a sensible girl, and she went downstairs with a happy heart, proud of her friend, who, in her estimation, was the model of all that was good.

The night was dark, not a star appeared in the heavens, and a dense fog was falling when they started. Mr. Lorane insisted on their taking a horse and buggy; but Tom assured him they could walk, as the schoolhouse was but a short distance from their home. On the way they were joined by several friends, and notwithstanding the fog and mud it was a merry company that arrived at the schoolhouse. How bright and cheerful it looked compared with the gloom outside! Every face looked as if for this once they had thrown aside the care of a busy, working world, and given themselves up to sociability.

They talked in groups until they were called to order by the president to hear the program, which all present seemed to enjoy. Eva Richards was happy as she watched the bright faces around her, and she wished morning would never come to bring back the common everyday life. She had a sweet soprano voice which blended with Bessie's alto to perfection, and their duet was encored, which added much to the pleasure of the evening for both. After the program was completed some of the desks were moved aside and a table brought in, on which was spread a tempting supper to which young appetites did ample justice. Cupid's messages were sent in the form of candy hearts and slips of paper on which were written sentimental poetry. Supper over, games were suggested, and all entered with a spirit into "Ruth and Jack," "postoffice" and "stage-coach." They were having such a good time that they did not perceive the flight of time until the voice of Tom Lorane was heard above the rest shouting "Happy New Year! Happy New Year!" General handshaking and wishes of prosperity for the year just entered followed. Guns were fired, tin horns blown, dinner and school bells rung, and tin pans rattled, and such a noise that you could not distinguish one sound from another greeted the coming New Year.

Eva enjoyed the excitement, but in the midst of it all her thoughts went to her mother all alone at home, and she sighed at the thought of the lonely days that must follow this happiness, and wondered why God had taken away her father and made it necessary for them to live in the city, where she felt like a caged bird longing for its freedom and pining for fresh air and

sunshine. In the midst of these thoughts she was interrupted by Bessie calling, "Eva, Eva, where are you? Come, let us get on our things and get ready to go home. Do you know where Tom is?"

"Here I am," answered Tom, appearing in the door with the girls' wraps. A few minutes after they started for home, accompanied by all the young people whose homes lay beyond theirs.

The night was much darker than when they had come and the lanterns were all ahead, theirs having been broken in the confusion; but they were all familiar with every step of the way and light hearts don't mind the dark. Walking along talking, laughing, commenting on the pleasures of the evening and enjoying themselves as only young people can, they did not notice Eva, who went skipping on before them in the darkness. Suddenly there was a scream, a cry for help, a groan, and all was again still.

They all recognized Eva's voice. How quickly the laughing and gay voices were hushed! Eyes which a few moments ago were sparkling with happiness, filled with tears. Terror seemed to seize them all, and they stood wringing their hands, not knowing which way to turn for help. Tom Lorane's voice was the first to break the deathlike silence.

"Go and get a lantern, quick, some one, any one! run for your life! Eva has fallen over the banks and is probably killed. We will stop here till you come, for we can do nothing without a light." His last words were heard only by the winds, for Ed Harris, an old friend of Eva's, was already far down the road. His cries for help soon arrested the attention of those who had not yet reached their homes. A lantern was procured and with its help they found their way back to their terror-stricken companions.

There are times in life when a moment seems like eternity. That time had come to Tom and Bessie Lorane and their friends as they awaited the return of Ed Harris. Eva, who but a short time ago was so light-hearted and happy, lay many feet below them, her voice hushed perhaps forever in the stillness of death, and they were powerless. When the lanterns arrived all were anxious to go the rescue. After some consultation it was decided to send Tom Lorane and Ed Harris. It was indeed a dangerous task they had undertaken, one which perhaps involved their lives. A short distance from the schoolhouse stood a large bridge underneath which ran a creek, whose waters the recent rain had rendered turbulent and deep, and their angry roar could be distinctly heard for some distance as they rushed along carrying stray brush and driftwood in their course. For two winters past the banks had been giving way, rendering the walking near them dangerous. The heavy rains of the winter not yet past caused an unusually large caving, taking a portion of the school ground and part of the fence, which did the double duty of separating the schoolyard from the bank of the creek. This gone, there was no protection between the road which led from the schoolhouse and the banks of the creek, rendering it an easy matter for any one who might venture too near to be thrown into the waters beneath. The trustees had noticed the danger, and intended to have it fixed, but as time and money were involved they put it off, little guessing what would be the consequence. Eva had been warned of the place when they were coming, but going back, the excitement of the evening had banished all thoughts of danger. In the darkness she had walked too near the edge, and been hurled down the rocky banks, and landed in a pile of brush and other debris which overhung the creek and saved her from being dashed to the bottom, where death awaited her in the angry waters.

The banks were steep and slippery, and as her companions looked down, it seemed as if human help could never reach her. With bated breath they waited. Tom and Ed cautiously descended, fearful every moment lest they should take a wrong step and be plunged into the surging waters, which seemed eager to make them its victims. Tom's foot slipped. Would he fall? No. He had regained his footing, and the breathless watchers above thanked God.

After what seemed ages they reached the brush on which Eva lay. Could they move the senseless form without her frail support giving way? Very frail indeed it looked in the eyes of those who had risked their lives for her. How slender was the tie between life and death for her and them. They realized this as they looked around and saw that they could not carry the senseless form up the steep bank without help, and how could help reach them there?

Tom's quick mind saw only one way of escape, and this was in having a rope on either side so that each could take hold with one hand, while they held Eva between them. This plan decided upon, they called for two ropes, and explained their idea to their companions, who at once procured the ropes and sent them to their help. As they lifted Eva the brush cracked and for a moment it seemed as if all hope were gone. But no; she was lifted safely off and they took hold of the rope. Tom's order of "pull for life" was soon obeyed, and again those above watched them ascend with their precious burden until it was laid in safety at their feet. None present ever forgot that moment; their thankfulness for her rescue was lost in sorrow as they gazed on that face beautiful in its whiteness, with the

blood oozing from an ugly cut in her forehead dampening her curly hair.

The schoolhouse being the nearest place, they took her there—there, where her own hands had helped to fasten the wreaths that still adorned the walls. But an hour ago that place had been a scene of happiness and gaiety, and Eva, who lay there so white and deathlike, the happiest of the happy. How changed it all was! Not being able to make her comfortable there, they took her to the nearest neighbor's, where the doctor had already arrived.

Mrs. Richards sat up sad and lonely watching the old year out, thinking of the sorrow and trouble that the year so nearly past had held for her, and hoping the one that was soon to dawn would be more pleasant. As the bells were ringing in the New Year, she thought of Eva in the midst of pleasure, and she was glad for her sake, although she missed her sadly; for this mother and daughter were all the world to each other. After the ringing of the bells had ceased, she went to bed but could not sleep; a strange wakefulness had taken possession of her. When she heard a step on the front piazza, followed by a rap at the door, something seemed to tell her Eva needed her. Mr. Lorane, for it was he, broke the news to her gently. The broken-hearted woman thought they would never reach their destination, although Mr. Lorane urged his horses to their utmost. At last they arrived, and with a sinking heart she went in. I will not attempt to describe the agony of that widowed mother as she beheld her only child. All night long they watched her, and before the light of a New Year gladdened the earth she was tossing in the height of brain fever. For weeks she hovered between life and death, and no one knew which would gain the day.

The crisis came at last, and the weary watchers were told that she would live. Eva is Mrs. Lorane now, and neither she nor her husband will ever forget the night of her adventure or the time that followed, of which a scar on her forehead is a constant reminder.

DOMESTIC ECONOMY.

Making Bacon.

EDITORS PRESS:—As many are making bacon now, I will give you my way. A cold, frosty time is best, but a rainy time is better than a north wind, which dries the skin on the meat so hard that it will not take salt. If the hogs are large and the weather not cold enough to cool them through, it is best to take out the back-bone and ribs as soon as killed. For salting I use a box six inches deep and three feet wide by four feet long. Pour into the box 50 pounds of Liverpool salt and 2 pounds of brown sugar. A little saltpeter will do no harm, but too much is worse than none. After the meat is cut up put each piece into the salt box and rub it well with the salt; then pack into a box large enough to hold all the meat and cover it up to keep out the flies. After it has lain one night take it out and let it air over night; then salt as before and repack. This must be done about three times, then two or three times on the third night.

After lying in the salt three weeks, take up the meat and wash off the salt and hang up to smoke. I take galvanized wire, cut it into pieces six inches long, and make hooks, which are much handier than strings. Almost any kind of hard wood is good to smoke with. Some use leather to finish smoking with, to keep off the flies. It will also keep a person from eating the meat unless he has a very strong stomach. The smoke should be kept up pretty steadily for a week, and once every two or three days for two weeks longer. Some pack the bacon in barley and some use ashes, first wrapping the meat in paper.

Vacaville, Dec. 20, 1887.

TO KNOW PURE GILDING.—A solution of chloride of copper will show the difference between gilding for which gold has been used and gilding with alloys of inferior metals. If the gilding is imitation gold, a touch of the solution gives a black mark, copper separating out through the zinc in the yellow metal; with pure metal no discoloration occurs. The test can also be effected with a solution of chloride of gold or nitrate of silver, the first of which gives a brown spot, the second, a gray or black spot; neither, of course, having any effect on gold. Common gold goods of 14 karat gold do not change their color with nitrate of silver. Leaf-gold is tested by being shaken up in a closed bottle with sulphur chloride. Beaten gold shows no alteration, while "metal" leaves grow gradually black.

"PULLED BREAD"—AN ENGLISH EDIBLE.—Pulled bread is an edible that ought to be on every American table. It is designed to be eaten with cheese, and it is delicious. Take a loaf of freshly made bread, and while it is still warm pull the inside out of it in pieces the size of your hand or smaller. Put these into the oven and bake them a delicate brown. When cool they are crisp and as full of flavor as a nut. Eat pulled bread once with your cheese and you will want it often.—London letter in Boston Herald.



A. T. DEWEY.

W. E. EWER

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Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

SAN FRANCISCO:

Saturday, Dec. 31, 1887.

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The Week.

The contract between Santa Claus and the weather clerk, securing fine weather for Christmas in the interest of the children and the tourists, expired on December 27. It has not transpired what was the consideration which induced the weather clerk to quiet the elements, but it is supposed to have been heavy, and a suspicion is afloat that the Last Spike Excursion and the Oroville Citrus Fair managers bore a good part of the expense. The contract was faithfully carried out, but at the first free moment the telephonic announcement to *Eolus* set free the pent-up *Eurus* and *Notus* and the result was high carnival among the elements and the first business-like storm of the season which began last night, and as we write on Wednesday afternoon it is progressing admirably, bringing joy to our whole industrial population. Telegrams show the rainfall to be covering a large area of the State and prospects good in parts whither the storm had not yet reached. The forecast of the signal service also favors the continuance of the desirable weather.

We shall write three 8's in our date-lines for a twelvemonth. It is a thousand years since

the combination last appeared, and it will be another thousand years hence ere it will occur again. What has been the progress in the last period? What will be the progress in the next? Here is a field for contemplation!

Close of the Volume.

The point in the earth's grand orbital curve which is accepted as one of the units of measurement of terrestrial time serves us also as a division in our little world of journalistic work. This issue goes forth as the last of Volume XXXIV and closes the 17th year of the life of the PACIFIC RURAL PRESS. It is not a long time: not long enough to vote, not long enough to marry without a guardian's consent, not long enough to inherit, and yet 17 years in the life of California as an American State is a considerable period and in her history as a great self-sustaining and world-feeding commonwealth, it is great indeed. As an instance of straightforward and successful journalistic growth in California, the RURAL PRESS may be included among the patriarchs. Though judged by one standard it is old, by all others it is young and is now entering its most effective and satisfactory growing period. It enters the most active period of laborious industrial history full armed and full of strength. The years which are gone have taught the conductors of this journal much wisdom. They have learned by experience and with such a teacher, there are few who are not profited. We think we are learning each month how to make our journal of more direct value to its patrons. We understand their needs better and can better recognize the conditions under which they work, and because of this knowledge which we have gained, we can the better guide the new-comer from distant and different fields. We confess we do derive some satisfaction from being able to do this work. We enjoy the agricultural gambols of the youngsters who are turning out the boom literature of the day, and are glad to know that the cause in which they work is so good and genuine that they are not likely to overdraw or overpoint the possibilities. When, however, the people desire the most trustworthy data of actual work and its methods, they are apt to be pointed to the old RURAL PRESS which does not flash or scintillate but shines clear and true, because through its columns there gleams the light drawn from those who actually do the work they write of.

Reference to the copious index, which occupies the last page of this issue, will show how broad has been the field in which we have labored during the last half year, and how varied the information we have furnished. To the regular reader, who keeps and binds the weekly issues, each volume furnishes a collection of practical points than which there is none superior to be had, and, as indexed, it is always ready for reference.

We go forward now into Volume XXXV with the determination not to be found lacking in the industry and spirit which these stirring times demand. We welcome the help and co-operation of all to that end, hoping to return to all a full equivalent for their favors in furnishing them a journal practically valuable, morally pure, and intellectually as intelligent as with the help of all we can make it.

PROGRESS IN LAKE COUNTY.—We had a brief call the other day from H. A. McCraney, editor of the *Lakeport Avalanche*. Mr. McCraney tells of the awakening of much interest in his county on the planting of fruits and development of the higher agricultural arts generally. Great attention is being paid to the olive, for the growth of which Mr. McCraney believes a large area in his section is well adapted. A trial is to be made of cranberries by Mr. Riggs; the plants have been obtained from Wisconsin. The *Avalanche* was caught in a recent conflagration and a new outfit has been purchased. Rather more than the loss of his printing office Mr. McCraney deprecates the loss of a fine exhibit of Lake county products, which he had been for a long time collecting, and to which many of the leading farmers had contributed. We hope it may be reproduced and that we may see it when we go to Lakeport over one of the railway lines now in course of building to the famous Clear lake.

The new Healdsburg cannery is to be the largest in Sonoma county.

The Tariff Question.

The great question of protective tariff which has for years figured in our public affairs with intermittent strength has sprung into the prominence of a great political issue through the declaration of President Cleveland in his message to Congress, to which we have already alluded. It is evident that an effort for free trade is to be made on a wider scale than has been attempted for years. This fact does not, however, change the question in the least, but merely changes the associations in which it appears. It has often been said that neither of the great political parties would dare to make this issue, nor has, in fact, either one yet assumed it, but the President's action approximates that result as nearly as can be done at present.

We have no disposition to discuss this matter upon general or theoretical grounds. It is too great for our space. Nor do we desire to present it as a political issue—that is foreign to our field. It is a question the direct and immediate importance of which appears with greater or less clearness in different parts of the country, and each owes it to its own prosperity to set forth what seem to be facts of the benefit or injury which such sweeping revision of the tariff as the President proposes would visit upon its productive industries. The arguments of the indirect effects of protection or free trade can be set off one against the other. Advocates of each side can talk the other deaf and yet reach no conclusion or agreement, but each becomes the stronger in his own view. Into such argument we do not care to enter.

Concerning the effect of removing the tariff from certain products which are being pursued in California and which are just now succeeding in holding their way against similar foreign products, there can be no such indefinite and indirect issue. Our wool product stands perhaps in the most ticklish position of all, and should be mentioned first. In this product we join with other States and Territories, and the experience of the last few years, since the last revision of the tariff was effected, shows that further reform in the same direction will practically blot out our wool-growing industry. It has been hard to maintain even the slow rate of decrease which it has experienced of late, and to open the doors to foreign wool will make short work of the remainder of it as a great interest, although of course some sheep will always be grown. Remove all protection on wool and our great ranges will go ungrazed, and the millions of money now distributed among our own people will go to Australia and South America. It is rumored, we know not with what truth, that the woolen manufacturers who were so eager in 1867 to secure the aid of the growers in obtaining protection are now inclined to be very moderate tariff men. This disposition cropped out during tariff revision a few years ago. It seems as though the manufacturers, having built up their enterprise by the aid of protection which they could never have obtained without the grower's aid, are now willing to cast off the old alliance and the old tariff, so that they can obtain cheap wool from foreign sources that they may sell their cloths and carpets to our farmers not at less prices but with greater profit to themselves. They do not stop to inquire where these farmers are to get money to buy new clothes and carpets when their industry is ruined. But this is trenching on the general subject, which we did not intend to pursue. Our woolmen must exert themselves to their utmost in their own protection if they are to succeed. How they are to do this is suggested in an address by Hon. C. Delano, president of the National Wool-Growers' Association, in which he says:

The officers of your National Society desire to organize a resistance to this cruel attempt, and in order to secure its defeat by active consolidation and resistance, I advise that you petition Congress freely from all parts of the country. Send letters to Congressmen from every district. Have each association of wool-growers, State, county, township or town, pass and forward appropriate resolutions. Incite the Grangers or associations of husbandmen to unite their voices with yours in urging Congress to promote the welfare of agriculture.

But there are other products than wool, and which are of greater importance to the State, which are seriously menaced by the anti-protection movement. These are products which are essentially Californian in their develop-

ment, and though their achievement has already reached considerable figures, they are still, to a certain extent, in an experimental stage, and are being promoted with the surety of the Government that it desires such industries built up within our own borders rather than pay tribute to foreign producers. This description applies to our whole dried and preserved fruit product, to our nuts, olives, and olive oil, and in a measure to our fresh fruits, which we desire to market in distant parts of the country, and to our great wine product. Of what importance these products are to our State, let the reader examine the estimate of our dried-fruit output as given in last week's RURAL. All these products are struggling against foreign goods and are making progress. To sweep away the protection now, after our people have invested their time and money to build up such resources for their own benefit and that of the nation, is an act of ill-faith which should not be for a moment considered.

California may be trusted to die hard in this issue and California senators and representatives should lose no opportunity to make their influence felt in defense of the great and promising industries of the State. There should be no sleeping over the question either here or at Washington. We are gaining our present growth through the promise in these products. They are a high grade of products. They demand the most devoted and careful work to bring to excellence. They should be fostered and protected at least until they are brought upon a stronger basis than at present. Instead of this, as we understand the proposition of the President, they would be left almost wholly without protection or defense. This is the issue which just now calls for action. Our leading organizations have taken steps to make their views known, as has been reported in our columns. It remains now for the local organizations and for individuals to do everything they can to hold Congress to its duty in defense of American industry. Every word will perhaps be of some avail. Let it then be written or spoken as effectively as possible.

A DISTINGUISHED HORTICULTURIST.—One of the best known horticulturists of the Western States, Prof. J. L. Budd of the Iowa Agricultural College, is now in California, and will remain until after the meeting of the American Horticultural Society at Riverside. Prof. Budd is using his time to good advantage in studying our horticultural industry, and his presence at Pomona is noted by the *Pomona Progress* of Dec. 15th, and some interesting facts of his horticultural career are mentioned. Some six years ago he was selected as agent for the United States in connection with the Commissioner appointed by the Canadian Government to visit Europe, especially Eastern Europe and Central Asia, for the purpose of importing trees and plants from those countries adapted to the climate of the Northern portions of this country. Since his return he has been engaged, while in his capacity as Professor of Horticulture at the Iowa Agricultural College and in charge of the Experimental Station at Ames, in testing and disseminating varieties of his own and other importations. The work is a great one, and is destined to prove of great value to all the Northern States as well as the Northern portions of the Pacific slope. Our Southern cotemporary states that Prof. Budd intends to visit the upper portion of the State and will probably be on hand to welcome the grand excursion of his fellow-horticulturists, and to participate with them in the grand event at San Jose on January 24th.

ANALYSIS OF SUSPECTED BUTTER.—The Treasury Department has issued a circular directing that any substance suspected of being oleomargarine held in Michigan, Ohio, Kentucky, Mississippi, the Fifth District of Tennessee, and in any internal revenue district west of the above-named States, shall be sent in sample to Louis C. Starkel, the analytic chemist, Internal Revenue Office at Chicago, and the Washington office notified at the same time. Samples of such substances held in the Second District of Tennessee and in any State east of those above-named will be forwarded directly to the Commissioner of Internal Revenue at Washington.

ONE man has determined to plant 10,000 orange trees on his ranch between Penryn and Rocklin, Placer county, this year.

Annual Forestry Meeting.

At the annual meeting of the American Forestry Congress recently held at Springfield, Ill., the convention adopted a memorial to Congress urging the adoption of measures to provide for the protection of the forests; the withdrawal of forest land from entry under existing laws; the classification of forest lands; the creation of forest reserves; the sale of timber on Government lands; the creation of a Commissioner of Forests in the Department of the Interior and four assistant commissioners; the organization of a force of inspectors and an appropriation of \$500,000.

The State Board of Forestry.

We have given elsewhere a brief notice of what the California State Board of Forestry is doing. It will be noticed that one of its chief labors is the suppression of fires, which have of late been so frequent and destructive in various portions of the timber districts of the State. In reference to this matter the *Press and Horticulturist* of Riverside speaks as follows:

Our Forestry Commission have a large contract before them if they are to suppress the fires raging in the woods and preserve our wood for future generations. There is the same cry this year as last—fires on the mountains—and they are even more destructive than usual. In Northern California the quantity of timber destroyed and the district burned over is very extensive, the direct damage amounting to many millions of dollars and the future loss occasioned by denuding the mountain ranges of their protection will be greater than the present damage.

For many weeks the work of burning of the forests in this country has been going on. In nearly every direction fires can be seen at night, either set maliciously or accidentally. The Forestry Commission seem to be a useless figure-head, so far as practical work is to be done, and their whole duties consist in meeting once a year and passing resolutions. When they get right down to work and arrest some of those who are burning our forests they will be of practical benefit.

If they fail to do anything, the people should take the matter in hand and with rope and tree make short work of those setting the forest fires. The old saying, "first catch the hare," should be considered, and a paid patrol placed on our mountains and foothills, and when they discover an incendiary, let no mercy be shown him, as self-preservation is the first law of nature, and to preserve the forests is self-preservation.

From every part of the State the complaint comes of the devastating fires. The *Fresno Democrat*, in a recent issue, has an article on the subject, in which it says:

The rapid settlement and improvement of the great and fertile valleys of the State by the home-builders, the merchants, the tradesmen and the numerous manufacturing enterprises now being inaugurated throughout—notably so in this part of the great San Joaquin valley—brings a heavy demand for the legitimate use of timber, and we are compelled to have it. And as this demand will steadily and rapidly increase from year to year, where is the supply to come from a few years hence if this wanton and malicious destruction of our forests is allowed to continue? This destruction has also a still deeper significance; it tends to dry up and sap the great mountain reservoirs of our indispensable water supply, which is our very life-blood.

The damage from fires is serious in the extreme, even in the higher mountain regions where the timber is useless for lumber purposes, in the influence which such devastation has upon the flow of water in our rivers. As a result of cutting down the forests, statistics show that in 1853 Ohio had forests equal to 55 per cent of the area of the State, and now it is not over 20 per cent. Formerly droughts and destructive floods were unknown, and now these two causes alone bring a heavy loss to

the State, and every year burning drought in summer and floods in spring are a serious drawback to the prosperity of the State. Numerous other instances of a similar character might be referred to. There is scarcely any punishment too severe for the wanton or even careless setting of fires either in mountain or valley.

A Fine Group of Percherons.

We give on this page a view on Oaklawn Farm, the property of M. W. Dunham, the well-known importer and breeder of Percheron horses of Wayne, Illinois. Oaklawn is probably the largest breeding establishment in the world, unless it be exceeded by some of our great California horse-farms. The group includes Brilliant 1271 (755) head of the stud; the imported mare Francena 2744 (1577), and the colt Black Bart and filly Fortuna, both sired by Brilliant.

Brilliant 1271 (755) is black; 16½ hands; weight, 2000 lbs.; foaled 1876; imported 1881; bred by M. Ernest Perriot, of Cheneliere, near Nogent-le-Rotrou, department of Eure-et-Loir; got by Brilliant 1899 (756); dam, Rigout by Favori I (711) out of Aline by Coco (712).

In Brilliant we find concentrated the blood of the most noted Percheron stallions, all of which



GROUP OF PERCHERONS AT OAKLAWN FARM.

are traceable through their different lines directly to the famous Jean-le-Blanc, and through him possess the blood of the Arab, Gallipoli, thus intensifying in him those powers of reproduction that have made Brilliant noted. His progeny are sought after, both in this country and France, to place at the heads of the great breeding establishments of both countries.

Francena, 2744 (1577) is dapple gray; foaled 1878; imported 1883; got by Philibert (760), he by Superior 454 (730), he by Favori I (711); dam by Margot 295 (795), he by Favori I (711); etc. Bred to Brilliant 1271 (755), May 9, 1886. Black Bart is black; foaled in 1885, home bred, recorded 4259 in the Percheron Stud-Book of America. Fortuna 4384 is black; foaled April 4, 1885; bred at Oaklawn.

EUCALYPTI VOTED NUISANCES.—The trustees of Alameda have passed an ordinance declaring eucalyptus trees to be a nuisance, because of their destructiveness to sewers and their obstruction to the electric lights, and authorizing the Superintendent of Streets to remove them from the public streets.

BUT few grapes for wine are being planted in the State this season, but an unusually large acreage is being set to raisin and table grapes, especially in Central and Southern California. Muscat seems to be the favorite.

In the United States the average yield of wool is about six pounds per head.

ENTOMOLOGICAL.

Experiments With Insecticides.

The following is a detailed account of experiments made by W. G. Klee, State Inspector of Fruit Pests, with various insecticides during the months of March to September, 1887:

Whale Oil and Sal-Soda.

March 31.—Experiments at Berkeley (University orchard): 1 pound of whale oil to 25 gallons of water; 1 pound of sal-soda to 1 gallon of water. Oil poured into the boiling hot sal-soda solution. Applied warm.

1st Experiment.—Tried on orange tree infested with *Lecanium aurantii*. Tree very little affected, and all the insects touched killed in two days.

2d Experiment.—Seedling olive infested with *Lecanium oleæ*. Foliage all lost (commenced dropping the next day). Tree completely recovered in a month. All insects killed.

3d Experiment.—Bartlett pear tree infested with *A. rapax* (greedy scale). Insects nearly all killed after a week. Buds affected a little, but not enough to injure the bearing of the tree.

Sulphide of Potash Soap.

April 1.—Sulphide of potash and soap prepared as given in Bulletin No. 5. Applied warm.

4th Experiment.—Winter Nelis infested with

were made at the orchard of Mr. L. D. Green on the Sacramento river by Mr. Green and myself. Results reported by Mr. Green similar to those above.

On peach trees the results were equally good, but the same strength affected the foliage of the peach, while it did not injure the pears.

Experiments with Rosin Washes.

August 10.—Tried with Mr. A. Koebele at San Mateo and Berkeley, 4 pounds of rosins, 3 pounds of sal-soda; water to make 36 pints of solution.

1st Experiment.—A Jonathan apple tree infested with woolly aphis. One pint to the gallon, 6 gallons used on the tree. A large proportion of aphis killed the next day—caking together. Leaves mostly all dropped off. (Probably safe earlier in the season.)

2d Experiment.—2 pints to the gallon on autumn bough. Nearly all aphis killed. Foliage dropped off. [Conclusions as above.]

3d Experiment.—1 pint to gallon on Fellenberg plum affected with plum aphis. All aphis killed which were touched. No change in appearance of tree. [A very cheap and promising insecticide for aphis.]

On Orange Trees at San Mateo.—Trees infested with *Icerya purchasi* (fluted scale.) Trees not in very rapid growth.

1st Experiment.—One tree. Strength of solution, 1½ pints to gallon of water. Majority of scales found dead when examined next day. Foliage dropped a few days later. After two weeks a great many leaves had fallen. Many insects alive.

2d Experiment.—One tree. Strength of solution, 2 pints to the gallon. Same results as above.

NOTE: Mr. Koebele has told me that he has again tried the compound on orange trees in Alameda with good effect on the scale, and no injury to tree. Condition of trees must account for difference in results.

Kerosene Emulsion.

Professor Riley's kerosene emulsion with common soap.—Tried on a number of plum trees (1-9). Very effective, but owing to the curly condition of the leaves many were not touched by the spray, and the trees became rapidly infested.

Rosin Solution.

Formula: 60 pounds of rosin, 60 pounds tallow, 10 pounds commercial potash dissolved in 10 gallons of water, 10 pounds caustic soda (98 per cent) dissolved in 10 gallons water. Dissolve the rosin and tallow. When dissolved, add caustic water slowly. After mixture is made, add 10 gallons of water. Of this was used 1 gallon of mixture to 10 gallons of water, lukewarm.

Experiment made on the property of Mr. Ch. Lefranc, Santa Clara county, on various trees.

September 1.—1st Experiment.—One large orange tree infested with *Icerya purchasi*; sprayed thoroughly. Reported by Mr. H. Lefranc as having done good work. No injury to foliage. Examined in November again by myself. Tree comparatively free from insects, having been sprayed again a short time before my visit.

2d Experiment.—On oleander badly infested with black scale, nearly all lately hatched. Examined in November again. Much foliage lost, but nearly all scales killed.

Compound Furnished by Mr. L. D. Green.

Time of application on University grounds, end of March.

1st Experiment.—One pear tree with buds expanded. Strength used, 1 part to 12 of water. Tree infested with *Aspidiotus rapax* (greedy scale). Portion of scale killed when examined two weeks later.

2d Experiment.—One apple tree with buds not much developed. Tree infested with *Mytilaspis pomorum* (apple bark louse). Strength, 1 part to 6 of water. Examined two weeks later; only a small portion of scales killed.

Third Experiment.—One acacia tree infested with *Aspidiotus rapax* (greedy scale). When examined two weeks later, about one-half of scales killed. Application with the compound made at a temperature of 135° F.

Woodbury Tree Cleanser.

I have examined large orchards treated with this compound last winter, and find very good results in almost every case. The compound must be well mixed, otherwise it may damage trees badly, in summer especially. As prepared

A. rapax, and also against black fungus. Buds shriveled.

5th Experiment. Pear tree. Same dose. 6th Experiment.—Acacia floribunda. Same dose. Ninety-five per cent of scale killed after a week.

Sulphide of Soda Soap.

March 31.—Sulphide of soda and soap prepared according to Bulletin No. 5.

7th Experiment.—Applied warm to one lemon tree infested with *Lecanium Hesperidium*. Foliage slightly affected. All insects touched killed.

8th Experiment.—Small olive tree infested with *L. oleæ*. Foliage not affected. Some of the older insects not killed.

June 9.—On asylum orchard, Berkeley: Sulphide of soda prepared by using 1 pound of lye and 1½ pounds of sulphur to 5 gallons of water, adding soap, 1 pound to 5 gallons. The mixture thus prepared was used at the rate of 2 quarts to 5 gallons.

1st Experiment.—Plum tree infested with *A. perniciosus*, the majority of them running about. Examined six weeks later; very few living scales to be found. No damage to tree.

2d Experiment.—Sulphide of potash, same strength and soap the same. Three plum trees badly infested with *A. perniciosus*. Examined in six weeks, very few scale alive. No damage to tree.

Arctic Oil Works Insecticide.

3d Experiment.—Insecticide from Arctic Oil Works, one pound to three gallons on pear tree badly infested. Same results as above. Tree examined again in December—very few live scales. This is a valuable summer remedy and perfectly safe.

With Sulphide of Soda and Potash Soap.

Similar experiments on a number of pear trees badly infested with *Aspidiotus perniciosus*

by Mr. Woodbury I have known of no case of injury.

In addition to the experiments here recorded, the experiments mentioned in my paper on the codlin moth, and which were made both at the University and at Santa Cruz, were made partly under my direction. Regarding the experiments made at the University, I desire to state that they have been co-operative; I, in most cases, furnishing the various washes and mixtures for trial, and the authorities there the apparatus and labor. I hereby extend my thanks to Professors Hilgard and Wickson and their assistant for all the facilities they have offered me in this way, as well as for other favors of which I am continually the recipient.

Besides the experiments mentioned here, I have made and caused to be made a number of others, the results of which I have not yet been able to ascertain.

Mr. Block's Report.

The State Board of Horticulture has received an interesting report from A. Block of Santa Clara, Commissioner for the San Francisco district.

The Commissioner represents that the orchards in his district have during the past season yielded good crops of fruits, and that the prices have been very fair for all qualities and kinds of fruits. The insect pests have been fairly well controlled, and the industrious horticulturist can now rest assured that with ordinary attention and care he can, if not exterminate, at least control the most pernicious insects, and keep them in subjection so that the largest part of the crop can be easily gathered. As a remedy for the codlin moth, the Commissioner recommends one ounce of Paris green to every ten gallons of water, with a little soap, sprayed at least twice or even three times during the season. He says at this time a united effort ought to be made to exterminate that greatest of all the pests, the cottony cushion scale. The great secret of successful warfare against this dread enemy of the fruit-grower, he says, is a treatment which will prevent their multiplication. There have been discovered several remedies which are efficacious in this direction, for which the Commissioner refers to the reports of the State Inspector of Fruit Pests.

SPIDERS AND INSECT PESTS.—It is stated by a German entomologist that more of the insect enemies of trees are destroyed by spiders than by all the insect-eating birds.

THE HONEY.

The Honey Trade of 1887.

Geo. W. Meade & Co. of San Francisco make the following reference to the honey product of California:

Extracted Honey.—This was the off year in the extracted honey industry, and we report quite a large decrease in the product from last season and the quality generally, as far as color is concerned, has not been as good. On account of the light crop, however, prices have ruled from 25 to 50 per cent better, so those producers who had good crops have received very satisfactory returns. We do not think there is any question, anyway, but what the honey of California is the finest produced in the world, both as regards color and flavor. Our bee-men have had many discouragements to contend with, the principal among which is the competition with the low-grade black honey of Cuba as well as the Chili honey, but as the consumers get to using California honey more, they call for it and are willing to pay advanced prices. One thing can be said in regard to California honey, and that in nine cases out of ten, shipments made from here are absolutely pure honey. The article has been and is still so reasonable in price that there is nothing that it could be adulterated with or that would pay to do so. We are pleased to note that our suggestion made last year, in regard to dispensing with old oil cans and cases and using new cans and cases, has been to some extent adopted, but there is still considerable room for improvement in this matter. While the old tins as used here are thoroughly cleaned with potash and as a rule are all right, they have a very unrepresentable appearance and it would pay our producers much better and they would get enough more for their honey if they would put it up in new cases and cans.

California Comb Honey.—Like extracted honey, this product is also reduced in quantity this year. The quality, however, has been very good and has brought much higher prices. Our suggestion made for several years past to put up this honey in one-pound frames instead of two-pounds, we are glad to note is being gradually adopted. As a general proposition the one-pound frames are preferable, especially when the goods are to go East. On this coast and in the Territories two-pound frames are all right enough, as the average consumer there is willing to buy that quantity, but for the far Eastern trade, where things are brought down to a finer point, one-pound frames are much more desirable and sales are frequently lost on California comb honey from the fact that it is put up in two-pound frames. Notwithstanding discouragements now and then, the honey industry of California is bound to increase year by year, as there is no more favorable location in the world to produce honey than in this State.

PUBLIC AFFAIRS.

Reciprocity With Mexico.

EDITORS PRESS:—A reciprocity treaty with Mexico was made a few years since, but as yet has not been ratified by the United States. This treaty has generally been condemned by the fruit-growers of California as something inimical to their interests.

Reciprocity of trade between two nations or peoples is one simply of policy. It may be free and unrestricted or it may be trammelled with conditions in the way of tariffs looking to revenue. By the terms of this Mexican reciprocity treaty certain productions of the two countries might be sold, traded or made merchandise of in either country without any tariffs, restrictions or duties levied on such merchandise by the government authorities of either country. Among such merchandise fruits were included. To this the fruit men of California objected. In imagination they saw in the near future the markets of the United States flooded with Mexican fruits to the exclusion of their own. Now is there in fact anything in this fear? Is it not the baseless fabric of a dream?

Mexico as a country has not the reputation of being adapted to the growth of the fruits of the temperate zone, the apple, peach, plum, apricot and kindred fruits, while she does produce in abundance the citrus fruits, the pineapple, the tamarind, the banana and other tropical fruits. Now, if the people of California and other of the United States consent to swap fruits with the people of Mexico, would not all be benefited? The people of the United States want tropical fruits and they send out of the country for them. Mexico has them and to spare; Mexico wants our fruits and is desirous to swap her fruits for ours. Now why should we not trade?

Mexico grows tobacco of fine quality suitable for choice cigars. Why should we not buy the same, duty free, and pay for it in fruit?

Mexico has a population of ten or a dozen millions of people, many populous cities whose population would, under a treaty of reciprocity, take and consume vast quantities of our canned and dried fruits. Why, then, not meet the Mexicans on equal terms and buy and sell of them just as we do of each other at home, thereby enlarging the markets for our orchard productions?

Orange and lemon culture is the only possible fruit industry which could come in competition with us in our markets, but Mexico has never produced largely of these fruits. Mexican oranges are seldom seen in San Francisco market, while Tahiti sends over shiploads every year. Mexican oranges are never seen in the New York or New Orleans markets, while every year those markets are flooded with oranges from the East Indies and the Mediterranean.

Now the U. S. tariff on oranges and lemons (which, by the way, is pretty heavy, being for oranges 25 cents and lemons 30 cents per box) does not seem to deter the shipment of these fruits into the United States, but from Mexico none or next to none are imported. The inference is, these fruits are not grown in Mexico for export. Free trade in these fruits would not soon largely increase their production, so I think the growers of citrus fruits in California have little to fear from Mexican competition in those fruits.

The great body of the surface of Mexico is, as is well known, an elevated table-land, 5000 to 7000 feet above ocean level. Its climate is temperate and healthful, but it is traversed by few streams, and these few generally wind their courses toward the sea in channels of great depth, so little can be done in the way of irrigation. Hence the immense table-lands of Mexico have little value, except as stock ranges.

The leading industries of Mexico are mining and stock-growing. The growth and prosperity of her cities and towns depend upon the success of these industries. In exchange for the products of our industries we are offered the products of theirs. They offer nothing but what we want and need, and but little which we produce ourselves. There may be a few oranges and lemons, and perhaps a few grapes, but in such limited quantities as to have no appreciable effect upon the markets of the United States. And judging from the characteristics of the Mexican people, crystallized by three hundred years of occupancy of the country, there is little danger of any material increase in the quantity of these fruits.

But with free trade between the United States and Mexico, would not the ever-pushing Yankee go there and with cheap labor and cheap land start a fruit industry which in time would become overpowering to the industry in this State? I think not. The *Caliente*, or hot-moist belts of Mexico, and the only really natural fruit regions of the country, he would not seek because of yellow fever always prevalent there. If he turned his attention to the elevated table-lands of Mexico, confessedly healthy, he would be met at the threshold by a scarcity of water for irrigating purposes, and without irrigation he could grow no fruits there, and if he turned his attention to the mountain valleys, in themselves small in extent, he would find them all occupied by the native population, and cultivated to corn, beans and red peppers, with some little fruit for domestic uses. Seeing there no inviting opening to start in the fruit industry, he would turn his

attention the same as he now does, to mining; success in that, the leading industry of the country, becoming the aim of his life. With that in view he would leave the fruit industry to those enterprising men in California who are, or who may hereafter engage in the industry, to make the most of it according to their skill and ability. He would say to them: Prosecute your industry to success; send me of your fruits and I will send you silver in exchange.

No; I think we have nothing to fear from Mexican competition in the fruit industries of our State under any circumstances. And with a free unrestricted interchange of commodities between the United States and Mexico, the fruit-growers of California would profit immensely. We would open a new and profitable market for our canned and dried fruits, our apples, peaches, apricots, prunes, and raisins; and some kinds of canned fruits, by reason of their being admitted free of duty, would come in successful competition with similar fruits of Spain, France and Germany, which are admitted under tariff duties. We would have such an advantage that eventually our merchants would control the market in the dried and canned-fruit line. But this is not the only advantage which would inure to us. Mexico produces largely of tropical fruits, of dyewoods, drugs, and medicinal herbs. All of these things we import, paying thereon heavy duties. By free interchange those duties would be abolished, and the consumer would be relieved from the burden of them. In a word, under the reciprocity treaty, which has so long held fire, we would be able to sell more at a profit, and buy many things cheaper than we now do.

The fruitmen of California seem to think and act as though all the world has the advantage of them in production and trade, and that to maintain an equality in production and trade they must have tariffs. They would close the entry ports of the United States to all importations of anything likely to compete with their own productions. They would monopolize the home market, forgetting their ability to much more than supply the home demand. To dispose of their surplus productions is now the problem they are called upon to solve. Mexico proposes to help them out to the extent of her ability on the basis of a few interchanges of commodities. Oh no! that won't do; your system of cheap, poor labor would ruin us. What stuff and nonsense! If the Mexican can produce cheaply, competition under the great laws of trade, supply and demand will compel him to sell cheaply and he will buy of our productions in our markets according to his necessities as cheaply as he can. But he will buy and thus a trade is effected. By the trade all concerned are benefited; no one is injured. This continued restrictive policy contended for by the fruit-growers of California is a penny-wise pious-foolish policy, and the sooner it is abandoned the better it will be for the California fruit-growers. WM. C. BLACKWOOD.

Haywards, Cal.

POULTRY YARD.

A Turkey Transaction.

EDITORS PRESS:—Whenever the editor makes an appeal to the patrons of his paper to renew their subscription, or when the agent on his rounds strives to add new names to his list, some people there are who look upon the gain as wholly on the side of the paper. The following incident which fell under my notice, and which I relate just as it occurred, in the essential points, shows that the benefits are mutual.

Two ladies, living on adjoining farms, were engaged in raising turkeys. The first was a widow, whose small ranch, not very judiciously managed, scarce met her expenses, and it was by having a fine band of turkeys each year she was able to add many comforts to her home. The other, a girl, still living with her parents, but having a true American feeling of independence, was striving in this way to make not only her spending money, but to help others, in small ways, as well. In the spring both ladies had been faithful, though the widow, whom we will call Mrs. Thornton, was considerably ahead; her band numbering, when grown, 123; while her neighbor, Sadie Caxton, had but 97.

The holidays drew near, but our turkey-raisers concluded that prices were too low, and held over. It happened that year that the spring plowing came on very early, and even in February men and teams were so busy one could scarce get a team for the weekly marketing.

"Come, Harry," said Mrs. Caxton one morning, "hitch up old Jerry and drive into town for the mail, and whatever mother wants; and be sure to go by Mrs. Thornton's; she may have no chance to send."

Harry was soon at the good lady's door. "Now, that's real thoughtful," she declared; "and as I have a number of errands, if you will let Jack go with you, I will have him ready in a short time."

As Mrs. Thornton buttoned Jack's collar and adjusted his necktie, she gave him many and varied injunctions, "and remember, Jack," she added as she pulled down his jacket by way of emphasis, "to be sure and ask the price of turkeys." That night Mrs. Thornton was busy when the boys returned, but to her first question that she asked as Jack entered with his

arm full of bundles his answer was "Oh, I forgot!" Supper over at the Caxton homestead, Mr. Caxton settled himself with a sigh of satisfaction to the contents of his mail. "Turkeys are up," he called out to his daughter, who was busy in an adjoining room. "The *RURAL PRESS* has them quoted at 28 cents." Morning found them a busy household. Every one was helping, and by night, 85 fine fat birds were hanging up ready for packing and transportation; and partly because they were so busy, partly because they knew Jack had been with Harry, no one thought necessary to send word concerning the price of poultry to Mrs. Thornton; and she being a woman who thought she could not afford \$3.00 for a paper when she could "get plenty for 50 cents," was quite ignorant as to the rise. I cannot here give all the details; but Susie received, after freight, commission, etc., etc., were all paid, \$320.42. Great was Mrs. Thornton's consternation when she heard at the end of the week of the whole transaction. "Of course they'll drop," she prophesied; "that's just my luck." Which is the word some folks apply to the results of their mismanagement.

And drop they did. The next week Mrs. Thornton sold for 19 cents; and though her friends told her, by way of comfort, that it was still a good price, the thought of the extra nine cents she might have had, and the fact that Susie Caxton received just \$31.39 more for 85 turkeys than she for 111, quite took away her satisfaction.

So like the man who thought he could not afford a pair of boots, but did afford a doctor's bill, our good lady found that "there is that which holdeth more than is sweet, but it tendeth to poverty."

ONE WHO KNOWS THE BENEFITS.

Dec. 24, 1887.

Santa Rosa Notes.

EDITORS PRESS:—This morning Venus shone brightly at 10 o'clock, and was viewed by many citizens. This is evidence enough that our sky is clear, atmosphere light and weather beautiful.

Farmers are now busy from "early morn to dewy eve" turning over the soil preparatory to planting and sowing for the coming season.

Many hundreds of acres will be planted next spring in olives and the California petite prune, formerly known as the French prune; but why call it the "French prune," for our prune is much superior to the French prune? Our local nurseries cannot supply the demand for the olive or prune, either from their own stock or the nurseries of the State. Our country is especially adapted to the growth of the prune, and any one engaging in that industry is bound to reap a reward for his labor. Both the quality and the price are generally advancing. While the districts adapted to the growth of the prune are limited, other fruits are being set out to considerable extent—but the prune and the olive are taking the lead by a large majority.

The Santa Rosa & Carquinez railroad is gradually approaching our young city. The graders are now in camp in the lower end of Los Guillecos valley, about 14 miles from Santa Rosa, and are coming ahead as fast as they can under the circumstances.

Our people here think they appreciate the advantages that this railroad will be to them, but they do not nor will they until the road is completed. Then a market for our various products, particularly fruits and wine, will be brought to our doors; then, and not till then, will we fully appreciate the inestimable value to Sonoma county of the Santa Rosa & Carquinez railroad.

Santa Rosa is improving, growing gradually and healthfully all the time. New sewers are being laid in our streets and the streets graded and macadamized. The Santa Rosa Water Company has made large improvements by laying down new and large mains and increasing the supply, and now will have a bountiful supply, with good pressure, of the purest of water; or pure as water can come from an undefiled mountain stream.

Santa Rosa.

URSA MAJOR.

A NEW STYLE OF HARVESTER.—A. W. Lockhart of Woodland, the *Democrat* says, has devised a harvester which promises to surpass any machine of the sort made heretofore. No sickle is used, the heading being done by the "stripping" process which has been in use in Australia for years. The front, or finger-board, is lined with wide teeth, grooved on top, between which the heads of the grain are caught and shaved from the stalk, leaving all the straw standing. The heads are caught by fans which strike them just as they escape from the teeth and shell the grain. The grain and chaff are carried by succession back and up an elevator, where they are separated, the clean wheat going into one spout, the mixed into another, and the chaff into still another. The cleaning process is one of Mr. Lockhart's own inventions, independent of the rest of the machine, and is a great success. The most striking thing about the machine is its simplicity. Only two belts are used, and no sickle, cylinder, screens, auger or riddle. The machine just completed is a 12-foot cut, and can be run easily, it is thought, with eight horses, as the absence of machinery renders the draft light. Many good machine-men have examined it, and say it will excel anything yet invented in the harvester line.

THE STOCK YARD.

Dehorning.

[Written for the RURAL PRESS by I. C. STEELE.]

The subject of dehorning cattle is evidently receiving consideration by thoughtful men engaged in the cattle industry. This is as it should be. It is an important subject, and those directly interested should furnish the facts necessary to a correct solution of the question. There are two sides to every question, and it is to be expected that intelligent men will honestly differ.

For myself, this question has been decided for dehorning, from observation and experience, after what seems to me ample opportunity; but facts are what is needed, and I shall feel obliged to my fellow-farmers who differ with me if they will furnish the facts on which they base their judgment. There are doubtless many who will feel obliged for the publication of such facts.

I have read the account in the *Rural Press* of Nov. 10th of a man killed in England and another in Iowa by polled Angus bulls. This I take as an argument in favor of horns. To me it appears to be the exception to a general rule. That polled cattle are sometimes vicious there is no doubt. I have handled such myself, but the two instances above mentioned are the only ones I remember to have ever heard of in which any person was killed by such animals. Polled cattle never injure other stock. I have read of four men killed by horns in California within a few months. In one case a bull took a man from under a fence and impaled him on his horns. What my friend says about handling bulls is undoubtedly true. I know he handles his bulls, and all his stock for that matter, with consummate skill. He never takes any chances with a bull, and is safe for that reason. If a bull never has an opportunity to gore a man it is certain he will never kill a man, with or without horns; but how many bulls or herds in this vast country are handled or likely to be handled in this way? Bulls by the thousand are free from such restraint or handling, and in the conditions surrounding us will remain so indefinitely, and the subject must be examined from that standpoint. The question naturally arises, what compensation is there for growing horns for the dairy or for beef? I can readily see how men engaged in raising fancy stock, expecting to get fancy prices, and who make symmetry and color in horns a point to breed for, and who have mastered the subject of fancy breeding, should regard dehorning with disfavor. And here I desire to pay a tribute of respect and to gratefully acknowledge the services of these men to the cattle industry by demonstrating the important fact that careful, intelligent breeding will secure the qualities in cattle desired by the breeder. With these men I have no contest. To those who fancy horns I would say—let them be things of beauty, for that is their only value.

To the dairyman, horns are a constant menace. In traveling to and from the place of milking, cows horn each other; if milking is done in the corral, there are times when a general horning will occur, and nearly every cow in the herd will get the benefit of some other cow's horns, and is more or less injured. Milking is delayed, and bad temper prevails. If milking is done in the stable, extra help is necessary in putting in and letting out the cows, to prevent horning. If a cow gets free, some other cow is almost sure to get a severe horning. Add to this the occasional loss of a fine cow or horse from horns, and it presents an array of annoyances that will rattle the temper of a saint. H. H. Haaff says in his work on Dehorning:

If dehorning should become a uniform—a common—practice, there would follow a saving of:

1st. 200 lives of human beings in the United States each year.

2d. The lives of 100,000 cattle and horses each year, not to mention sheep and hogs.

3d. Nearly all loss of calves by abortion.

4th. One-quarter of our winter feed for cows and stock cattle.

5th. One-half our shed room.

6th. All manure now wasted around sheds and stables.

7th. All loss in shipping cattle.

... Allowing that there are 200 deaths by horns yearly, that would give only 10 as the quota for Illinois, and is under the mark; that is to say, the average would be one death to each 300,000 of population (nearly). The loss of stock no man can more than estimate; but when one considers that every farmer almost loses animals right along by horns, it will be seen that the esti-

mate is not too large. The saving in feed comes, of course, because cattle without horns will pack and keep warm and quiet, and because warmth saves feed. I have carefully tried the matter for three winters, and can say that one-quarter of my hay is saved to me in this way. . . . As to shed room, I keep 250 head of cattle in a shed 3 by 160 feet. Does any one suppose that one-half that number of cattle can be kept in that shed with horns? No, not 100 head. . . . As to shipping cattle, I will repeat the statement made to me by a representative of the *Drovers' Journal* recently. Said he: "They have tried all kinds of patents and nothing yet found but bruises the cattle, and there is but one way out—but one solution of the question—and that is a car with no protuberances, and no horns on the cattle." Said another: "Give me the loss by horns on the plains, and I will outrank a Vanderbilt in wealth in a very short time." Said another: "Give me the losses by horns in shipping, and I will rank with you." And I will add: "Give me the losses by horns in the States alone on small farms and the homes of every-day people, and I will become a Croesus in wealth in ten years." If then I can help to save the lives of men and cattle, the feed and the manure, what better work can one do for his day and generation?"

As to the effect of dehorning on the disposition of cattle. We have practiced cutting off a portion of the horns of cattle that became unusually troublesome with their horns for years, and have always found it salutary. The four bulls we dehorned last summer are well and thriving, and are turned into the corral together every day, and are quiet and gentle. They all take feed from the same box as quietly as calves would do, in fact two Holstein calves feed with them, and are not molested.

Horses' Shoulders.

EDITORS PRESS:—As it is plowing time and plowing is the hardest work on the farm upon horses' shoulders, perhaps a few words about curing sore shoulders would not be out of place. I tried vitriol, alum, salt water and sugar of lead, but never found anything with which I could cure a galled shoulder while working the horse, until I tried tallow. As soon as the collar is taken off the horse, clean it well and rub on the face of it a good coat of tallow, and rub the horse's shoulder well with tallow, putting on plenty. I can cure a sore shoulder by this treatment and work the horse every day.—G., Vacaville.

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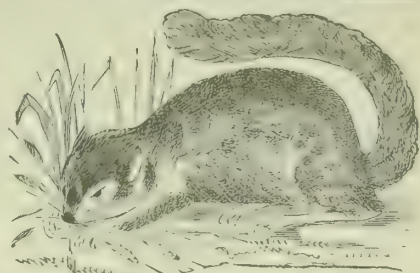
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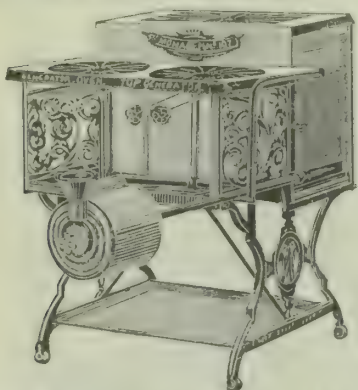
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The Butte County Citrus Fair.

The Citrus Fair, whose happy opening in the spacious tent at Oroville we noted a week ago, appears to have quite fulfilled the high promise of its outset. Words of praise, pleasure and admiration only, make up the varied and voluminous reports, in both country and city papers. The abounding wealth of citrus and other fruits, with the completeness of the arrangements that had been made, and the taste evinced in placing the exhibits, combined to bring about a result that more than satisfied expectation.

The tent, it may be remembered, was 150 feet long by 50 feet wide, and all around this great room, from the floor to the eaves—16 feet vertically—were sloping piles of fruits, vegetables and other products, while the middle of the hall, saving an aisle on either side, was occupied with numerous and beautiful citrus designs.

Space had been assigned to every town in the county, and in some instances to individuals who desired to make separate showings.

The exhibitors numbered hundreds, and the displays included oranges, lemons, limes, shaddockes, citrons, persimmons, pomegranates, olives, figs, apples, pears, quinces, plums, grapes and strawberries—all grown outdoors, and picked from the trees or vines since December 18th—besides almonds, walnuts, butternuts, pecans, chestnuts and peanuts. Then, too, there were cabbages, potatoes, tomatoes, peppers, squashes, pumpkins, water and muskmelons, beets, celery, artichokes, peas, castor beans and hops, with 49 varieties of wheat, in sheaf and jars, 10 of barley and 15 of corn, beside Egyptian pop and broom corn, sorghum and sugar-cane.

It is, of course, impossible for us to attempt an enumeration of the exhibits, which came from Bangor, Berry Creek, Bidwell's Bar, Big Bend, Biggs, Bloomer Hill, Chico, Central House, Cherokee, Clear Creek, Concord, Enterprize, Forbestown, Gridley, Hurlston, Magalia, Messilla Valley, Morris Ravine, Mud Creek, Nimshew, Oroville, Paradise, Spanishtown, Sundale, Thompson's Flat, Wyandotte, Wyman's Ravine and Yankee Hill; we can only notice a few of the more striking.

The Chico exhibit, stretching for about 80 feet from the northeast corner to the center of the north side, was the handsomest and most varied in the pavilion. The leading feature was a cottage front with two windows and a door, of full size, in which openings were placed mirrors which gave a fine effect. The house with all its panel-work and cornices was entirely covered with oranges and evergreen trimmings. Here too was the "golden candlestick," described in the books of Moses, represented in due form by gaspipe, hidden in oranges, with seven flaming tips—an ingenious and pleasing design, for which, as well as for the cottage, much praise was accorded to B. F. Allen, who planned them both.

The exhibit from Gen. Bidwell's ranch, tastefully arranged by H. H. Camper, was very elaborate and was thought to illustrate more fully than any other the scope of Butte county's producing capacity.

From Messilla valley, situated about 12 miles north of Oroville, at an altitude of over 2000 feet, came remarkably fine oranges, lemons, persimmons, pomegranates, nuts, vegetables and raisins. Among the exhibitors from this region was Jesse Wood of the *Chico Chronicle Record*, who calls his pretty place "Eyre Villa," and had above his display a large brown eagle with wings outspread. Six years ago Mr. Wood went to the place that is now his home and made a homestead claim on 160 acres of Government land. It was covered with chaparral and timber, but energy and industry cleared 20 acres or more, a variety of fruits was planted, a house put up, and now from the 15 acres of orchard a marvelous number of products have been sent to the fair. In his exhibit was a chair representing "Comfort," made of oranges, lemons, persimmons, limes, apples, walnuts, almonds, olives and several kinds of grains and grasses, which looked delicious, if not comfortable. Another design emblematic of "Industry" was a plow, with share and point fashioned in apples, and the beam and handles of oranges. There was also a large display of roses and other flowers grown in the open air.

D. N. Friesleben, the manager of the fair, and his daughter, had a very ingenious and attractive exhibit. Oranges were piled into the symmetrical form of a beehive, and surrounding it was a gigantic horn of plenty—also of oranges. By a contrivance of pulleys and belts and a water-motor below, oranges appeared to be pouring constantly from the horn, and other oranges on a wheel represented bees going in and out of the hive. The forms were symbolical of the industry and plenty that prevails in the Oroville district.

The largest single exhibit of oranges was made by George Le Rossignol of Oroville, who had 4300 choice samples of the fruit in a wire crate five feet square and two feet deep.

From Nimshew, 31 miles north of Oroville, at an altitude of 2300 feet, M. V. Roe sent 22 boxes of mountain apples, of as many varieties, besides pears, persimmons, dried fruit, including plums, nectarines and apricots, English walnuts, raisins, figs, various vegetables, and 19 varieties of jellies—a wonderful exhibit for a foothill ranch of such elevation.

One of the most attractive things within the canvas was an accurate miniature model of the

Oroville Congregational church, clad in evergreen and oranges, large enough to contain an organ and choir, whose music was heard from time to time.

Among the more conspicuous exhibits were those of Dr. R. Parker, H. W. Skinner, O. H. Wilcox, Judge Lott, Jos. Gardella, Judge Freer and H. C. Bell. Mrs. E. W. Fogg's floral display was singularly artistic, and C. H. Leggett and Son's freshly gathered grapes and strawberry-plants, with blossoms and ripe fruit upon them, grown in the open air, impressed the fugitives from Eastern winter.

The town was thronged with visitors, whom the pavilion was all too narrow to accommodate. There were excursions from Marysville and Chico, and a number of delegates returning from the "last spike" celebration, having been received with high honors, addressed a testimonial to the Executive Committee of the fair, in which they say:

The oranges include Seedlings, Washington Navels, Mediterranean Sweets, Malta Bloods, St. Michaels and other fine varieties, and are of unusual excellence and of high commercial value.

The display of lemons is large and of the finest quality. The exhibit of Sicily lemons, the most delicate and sensitive to frosts of all semi-tropical growth, is especially noticeable. The figs, raisins, pomegranates, persimmons and other semi-tropic products are remarkable for quantity and good quality. We have visited the many citrus groves surrounding Oroville and found the trees laden with the ripe and golden fruit, and the growth, without exception, healthy, luxuriant and entirely free from disease or tree pest.

We saw many trees, both orange and lemon, a quarter of a century old, which have had no protection, and which have in all that time suffered no injury from frost.

The new citrus plantations at Thermalito and other places show very vigorous growth and give great promise of future production and profit. The wide area surrounding Oroville and the foothills, with low altitude above tide level in a comparatively frostless belt, now available for citrus cultivation, with the great abundance of water for irrigation, points to a wonderful production in the near future. The absence of devastating winds, cold storms, fogs, frost and cold ocean air currents, and the early maturing of fruits, are favoring conditions that will speedily produce such desirable results.

Among those who signed the address just quoted were A. T. Hatch, Pres., and J. M. Davies, Sec. State Board of Trade; R. G. Sneath, Ex-Pres. S. F. Chamber of Commerce; N. W. Spaulding, A. H. Phelps, John F. Swift and other noted citizens. "I've been to six citrus fairs in this State, at National City, Riverside, San Jose, San Francisco, Sacramento and Oroville," said Mr. Hatch, "but none came up to this Oroville fair."

Nearly all the visitors went over to see Thermalito, the "warm-belt" colony, just across the river.

No court was held in Oroville during the week, and the people of the place generally took a holiday and shared with their guests in the enjoyments of the occasion. Addresses were delivered by ex-Congressman Luttrell, Gen. Bidwell and others. The ladies of the Congregational church served lunch daily and netted a handsome sum toward buying a library for the town. All county people were charged an admittance fee of 25 cents, but all visitors from out of the county were given complimentary tickets. An idea of the attendance may be gained from the fact that the week's receipts will foot up near \$1000.

On Saturday it was announced that the fair would be kept open until Wednesday evening, the 28th, and that an excursion would be run from San Francisco on that day, when the judges of exhibits would announce their decisions. As this is the evening on which the *RURAL* goes to press, we are obliged to defer all mention of the awards to a later issue; but the general verdict has already been enthusiastically rendered, "It was indeed a grand success."

HOLIDAY OVERLAND.—The *Holiday Overland*, which appears this week, is a very creditable production. The articles are of high literary merit, and their local flavor, gratifying at home, should make the publication fresh and interesting abroad. The illustrations are excellent. We are glad to see the *Overland* showing so many signs of prosperity. It has a well-defined field, occupies it well, and is a credit to our far Western progress.

HARDY NORTHERN GROWN SEEDS.—Westcott Brothers, a new firm of seedmen, have just established themselves in this city at 406 Sansome street. H. R. George, formerly of Geo. F. Silvester, will be with them. They keep a full line of seeds, bulbs and plants, but their specialty is hardy northern-grown seeds from Minnesota, which are much sought by Southern gardeners on account of their superior vitality.

WELCOME IN THE WEST INDIES.—A Cuban bee-keeper writes, Dec. 31: "The *PACIFIC RURAL PRESS* comes to me every week, and I can assure you it is a welcome visitor. Its editors may well be proud of so clean and healthy a sheet. Long may it live to reap the reward it so justly deserves."

SANTA CRUZ.—We have received the November issue of Herbert Myrick's "Real Estate Exchange and Mart," a publication which contains much information about lands in the vicinity of Santa Cruz.

Other Notes in Santa Cruz County.

EDITORS PRESS:—Aside from the numerous attractions which the Ben Lomond district presents as regards scenery and healthfulness, the soil is very productive. Among the fine places I visited was that of Mr. Sanford Blodgett, who is extensively engaged in fruit-growing, having an orchard of 30 acres of thrifty bearing trees of almost every variety grown in the State. To my surprise I saw a crib of corn here that reminded me of the old Hoosier State, which I left some 20 years ago. Descending the mountain and following up the San Lorenzo river a few miles I put up at the Hartman house, Boulder Creek, on the evening of the 4th inst. Here I met a number of staunch friends of the *PRESS*. Mr. J. W. Perry, one of the first settlers of the place, and to whose enterprise the inhabitants acknowledge much indebtedness for their prosperity and the development of the lumbering interests of the region, has been a patron of your journal since the first issue, and still regards it as indispensable to housekeeping.

About two miles from Boulder Creek, on what is called Bear creek, Mr. W. O. Porter has one of the finest young orchards of the country, principally French prunes. The soil being a sandy loam with clay subsoil, seems especially adapted to this variety of fruit. Midway between Boulder Creek and Felton, three miles from each, is situated Pacific Mills, owned by Mr. Pierce. A new town is here being built, and it seems to have a bright future.

At Felton I found good accommodations at the Central hotel, kept by Mr. I. N. Hayes. The Creamer house, Mrs. M. Cassidy proprietress, has also the reputation of dispensing home comforts to guests. The town was started in 1868 by Walter Cooper, who built the first house. Up to two years ago Felton ranked among the most lovely villages of Santa Cruz county. The narrow-gauge railroad which was built from Santa Cruz to your city, passing on the opposite side of the San Lorenzo river, has left the inhabitants to mourn the day it was built. The principal industries that built up the place were lumbering and lime. The I. X. L. Lime Works, one and a half miles west of town, are among the largest in the State, turning out as high as 30,000 barrels a week. The present population is about 200.

One of the pleasantest drives I have had since I left your city was through the Scott valley, which, on account of its fruitful fields, gardens, and orchards, envied with wooded mountains, from which flowed down clear cold and sparkling waters, I pictured in my imagination as the fairy land. Among the model homes that beautify the valley, we recall those of D. M. Locke, A. S. Hicks and others, old patrons of the *PRESS*. Near the head of the valley lay the Vinehill and Highland districts, famous fruit and wine-producing districts.

On my return to Santa Cruz on the 9th inst., I visited the California Powder Works, and was placed under obligations by Mr. B. Peyton, the superintendent, for courtesies. These works were constructed 25 years ago. The cost is computed at nearly half a million of dollars. The capacity of the works is 15,000 pounds per day. The company employs from 60 to 100 men. An inexhaustible supply of the best powder-producing wood is found in the vicinity—madrone charcoal being used for blasting powder, while alder and willow are utilized in the production of gunpowder. Mr. Peyton's residence is superb and the location on an eminence above the powder works commands a magnificent view of glen and dale, the city of Santa Cruz, the mountains and the sea.

On Sunday, the 11th inst., I stopped at Hall's house, Soquel, four miles south of Santa Cruz, and one mile from the bay. This place, like almost every place I have visited, is claimed by the inhabitants to have a monopoly of climate and most of the other advantages which make life worth living. All I can say concerning the claims advanced is that the weather was quite pleasant during my short stay.

The population is estimated at 300 happy go-away people. The most notable enterprise of the village is the South Coast Paper-Mills, owned by the O'Neil Bros., which turns out 4½ tons of brown paper per day at a cost of about \$90 for running expenses. The value of the product is about \$150, leaving a net income for the company of \$60 per day. F. B. L.

NEW CATTLE COMPANY.—*Reno Gazette*, Dec. 7: The Sun Creek Cattle Co. has been incorporated in Virginia City, which is its principal place of business. The capital stock is \$20,000, divided into shares of \$1000. The trustees are W. J. Hanks, F. E. Fielding, W. J. Westerfield, R. Searls and J. Beresford. The object of the company is the purchase and sale of land and live stock of every description in Nevada. Sun creek is a stream in the southern part of Elko county.

EASTERN IMMIGRANTS or older residents, who are seeking places for new homes or desirable land for farming or fruit-growing colonies, should not fail to read the advertisement of the Santa Ynez Co., which appears in another column.

A PARTY of engineers with three cars loaded with supplies have been sent from Stockton to Oakdale to survey the proposed Southern Pacific extension from Oakdale to Posa, Kern county, along the foothills on the eastern side of the San Joaquin valley.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in DEWEY & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING DECEMBER 20, 1887.

- 375,246.—GLASS-PRESERVING JAR—Mark Anthony, S. F.
- 375,122.—WOOD-SPLITTING MACHINE—T. P. Chen, S. F.
- 375,296.—INSULATOR—E. C. Emery, San Diego, Cal.
- 375,153.—STAVE JOINER—John Greig, Santa Clara, Cal.
- 375,155.—WRENCH—J. M. Hynes, Maxwell, Cal.
- 375,158.—CANHOLDER—G. W. Hill, Starks Point, W. I.
- 375,164.—ROAD CART—M. J. Katzner, Marysville, Cal.
- 375,182.—STATION INDICATOR—T. W. Munroe, Berkeley, Cal.
- 375,326.—STATION INDICATOR—T. W. Munroe, Berkeley, Cal.
- 374,991.—CHURN—B. F. Nelson, Santa Maria, Cal.
- 375,199.—CRUSHING MILL—A. E. Roe, S. F.
- 375,212.—AMALGAMATING PAN—A. Soderling, Bodie, Cal.
- 375,024.—RAILWAY PUMP MOTOR—W. Tiffany, Creswell, Ogn.
- 375,227.—SAFETY CAR STOVE—John Tilton, S. F.
- 375,040.—LINK BELTING—D. Young, Stockton, Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates and in the shortest possible time.

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To favor subscribers to this paper, and to induce new patrons to try our publication, we will furnish, to those who pay fully one year in advance of date, if requested the following articles (while this notice continues), at the very greatly reduced figures named at the right:

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- 2.—World's Cyclopaedia, 794 pages, 1250 illustrations; (exceedingly valuable).....50
- 3.—Dewey's Patent Elastic Binder (cloth cover), name of this paper stamped in gilt.....50
- 4.—Niles' Stock and Poultry Book for Pacific Coast, pamphlet, 120 pages, illustrated.....25
- 5.—Kedall's Treatise on the Horse and Diseases, 89 pages, instructive illustrations.....05
- 6.—To New Subscribers, 12 select back Nos. of the *RURAL PRESS*, "good as new".....Free
- 7.—Any of Harper's, Frank Leslie's and most other first-class U. S. periodicals, 15 per ct. off regular rates—class U. S. periodicals, 15 per ct. off regular rates—class U. S. periodicals, 15 per ct. off regular rates—class U. S. periodicals, 15 per ct. off regular rates.....25
- 8.—March of Empire, by Malle Stafford.....25
- 9.—Life Among the Apaches, 322 pages, stiff cloth.....25
- 10.—\$1 worth of choice seeds, to be selected from a list of 107 flower and 82 garden seeds, as previously published, or which list we will send on application.....25
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- 13.—Webster's Dictionary, 634 pages, with 1500 illustrations; very handy and reliable.....50
- 14.—Architecture Simplified, 60 pages.....05
- 15.—M. B. Bickard's Life with the Army; patriotic and ably written; 166 pp., cloth, \$1.00.....50
- 16.—Ropp's Easy Calculator, cloth, 80 pp.....25
- 17.—How to Tell the Age of a Horse.....05
- 18.—Percheron Stud Book—French—bound in leather, 192 pages (full price, \$3).....1.00
- 19.—What Every One Should Know; a cyclopaedia of valuable information; 510 pp.; cloth; (full price \$1).....50
- 20.—Knitting and Crochet, by Jennie June; 144 pp., 200 illustrations.....25
- 21.—Needle Work, by Jennie June; 128 pp., 200 illustrations.....25
- 22.—Ladies' Fancy Work, by Jennie June; 152 pp., 700 illustrations.....25
- 23.—The Way to do Magic; illustrated, 60 pp.....10
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C. E. WILLIAMS—Yuba and Sutter Co.'s.
DR. STANLEY T. FEET, San Diego Co.

The *Visalia Times* advises farmers who live at a distance from the timber belt, and have to haul their firewood, to cultivate a half acre of Russian sunflowers. They grow to a height of eight or ten feet and a diameter of two to four inches. The stalks when dry make excellent fuel for kitchen use, and the seeds are valuable as chicken feed.

The Bavispe country in Mexico continues to be shaken by earthquakes. So constant have they been since last spring that the people are abandoning that region.

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Breeders' Directory.

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J. H. WHITE, Lakeville, Sonoma Co., Cal., breeder of Registered Holstein Cattle.

R. J. MERKELEY, Sacramento, breeder of Norman, Percheron Horses and thoroughbred Shorthorn Cattle.

HOLSTEINS—New lot Eastern-bred animals, including Netherlands, Aazies and Case Strains. Pouch for ringing bulls, \$1.00 postpaid. Berkshire Swine. Catalogues. F. H. Burke, 401 Montgomery St., S. F.

M. D. HOPKINS, Petaluma, Cal. Eastern Imported registered Shorthorn Bulls and Heifers for sale.

SETH COOK, Danville, "Cook Farm," Contra Costa Co., breeder of Aberdeen Angus, Galloways and Devons (Registered). Young stock for sale.

PETER SAXE & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 16 years, of every variety of Cattle, Horses, Sheep and Hogs.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

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J. R. ROSE, Lakeville, Sonoma Co., Cal., breeder of Thoroughbred Devons, Roadsters and Draft Horses.

J. A. BREWER, Centerville, Alameda Co. Short-horn Cattle and Grades. Young stock for sale.

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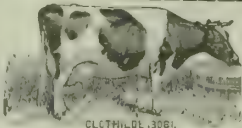
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The only four-year-old that has given 23,602 lbs. 10 ozs. in a year.
The only two-year-old that has given 13,434 lbs. 13 ozs. in a year.
The only herd of mature cows that has averaged 17,166 lbs. 1 oz. in a year.
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The only two-year-old Holstein-Friesian that has made 21 lbs. 10 3/4 ozs. of butter in a week.
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100 cows and heifers in this herd average 17 lbs. 1 1/4 ozs. of butter in a week. Over 100 cows in the Advanced Registry. Fine studs of choice highly-bred Clydesdales, French Coach and Hambletonian Horses. Send for Catalogue giving full records and pedigrees. In writing always mention PACIFIC RURAL PRESS.

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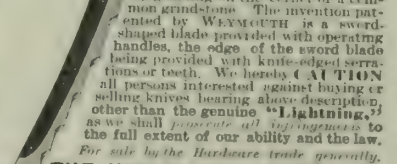
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Hay Knife known for cutting HAY and STRAW from the Mow, Stack or Bundle. It is a rapid, easy cutter, the blade of the best quality of cast steel, spring tempered, and it is easily sharpened by grinding on the corner of a common grindstone. The invention patented by W. W. MOUTH is a sword-shaped blade provided with operating handles, the edge of the sword blade being provided with knife-edged serrations of teeth. We hereby CALL ATTENTION to all persons interested in buying a cutting knife, bearing above description other than the genuine "Lightning," as we shall positively all ingenuities to the full extent of our ability and the law.

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Registered and Thoroughbred. My herd consists of the best strains that can be found. Stock all recorded in A. P. C. R. I have a fine lot of spring, summer and fall pigs, also a few choice yearling sows, for sale. Prices to suit the times.

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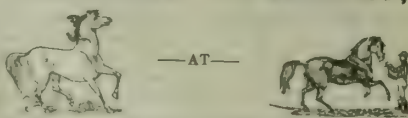
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TROTting STALLIONS,



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AT 11 A. M. ON

Thursday, Jan. 12, 1888.

PROPERTY OF

COLONEL CALEB DORSEY.

THOROUGHbreds.

Birdcatcher, brown horse, 8 years, by Spectre—Pet by Melbourne.

Pickpocket, chestnut horse, 4 years, by Joe Daniels—Mattie C. by Spectre.

Trouble, brown colt, 2 years, by imp. Partisan—Partisana.

Fred Archer, chestnut colt, 3 years, by Thad. Stevens—Brown Bess.

Theo. Winters, che. trut colt, 2 years, by Joe Hooker—Mattie C.

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Crecent, sorrel horse, 6 years, by Nutwood—Pet by Melbourne.

Phony, black colt, 3 years, by Revolution—Lady Early by im. Nena Sahib. Revolution is an inbred Hambletonian.

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Boars and Sows not akin, full grown, and small Pigs for sale; imported stock.

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To grow large and profitable crops and at the same time to make the farm
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NITROGENOUS SUPERPHOSPHATE.

UNIVERSITY OF CALIFORNIA, Nov. 3, 1886.
Dr. J. KOEBIG—Dear Sir: I have analyzed your sample
of "Nitrogenous Superphosphate," with the
following result:

Soluble Phosphoric Acid.....	12.90 per cent
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Potash.....	2.23 "
Ammonia.....	1.87 "
Nitric Acid.....	2.95 "

The above amount of Nitric Acid is equal to 0.85
per cent Ammonia, therefore, total of Nitrogen calcu-
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This Fertilizer is a Valuable Manure for vine-
yards, orchards, gardens, farms, and I recommend its
use by the cultivators of the soil generally, in Cali-
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DR. E. A. SCHNEIDER.

University of California, College of Agri-
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BERKELEY, Nov. 20, 1886.

Dr. J. KOEBIG, San Francisco—Dear Sir: I take pleas-
ure in adding my testimony to that of Dr. Schneider as
to the high quality of the "Nitrogenous Super-
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Booth's Sure Death Squirrel Poison

For Squirrels, Gophers, Birds, Mice, Etc.

Endorsed by the Grange and Farmers wherever used.
The Cheapest and Best.

Put up in 1-pound, 5-pound, and 5-gallon Tins.
Every Can Warranted.

This Poison has been on the market less than two years, yet in
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as in Australia and New Zealand.

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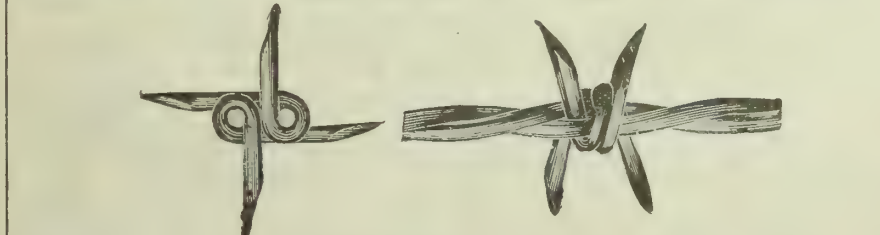
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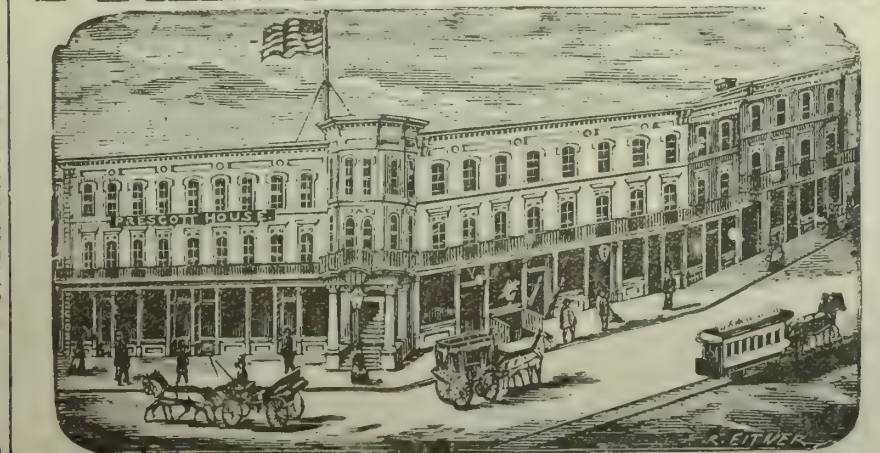


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C. L. BENTON & CO.,
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Wholesale and Retail Dealers in
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TIC SODA** (tests 99.3-10 per cent) recommended by
the highest authorities in the State. Also Common
Caustic Soda and Potash, etc., for sale by

T. W. JACKSON & CO.,
Manufacturers' Agents,
104 Market St. and 8 California St., S. F.

S. F. MARKET REPORT

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Dec. 28, 1887.

Showery, rainy weather, with a lower temperature the latter part of the week, under review, averages the belief that the long-wished-for rains are near at hand. In farm products, trading the past week was fair, with prices well maintained. Eastern telegrams report a strong wheat market, as do English cables. They both give an advance.

Foreign Review.

LONDON, Dec. 26.—The *Mark Lane Express*, in its review of the British grain trade during the past week, says: English wheat was slow to sell but values were steady. Foreign wheat was steadier, especially Russian and American red winter. The Liverpool quotation for reds a penny per cental higher. Maize is in fair inquiry, and prices show a hardening tendency. Beans and peas are firm. There has been no market since Friday.

Eastern Wool Markets.

BOSTON, Dec. 24.—The wool sales for the week foot up 2,476,800 pounds, including 239,700 pounds for foreign. The sales include 210,000 pounds California spring and Oregon at 17@18c, and 21,000 pounds California fall at 60c.

NEW YORK, Dec. 24.—The imports of foreign wool since January 1st were 116,088 bales; the previous year, 152,476. Domestic, 149,942; the previous year, 171,977. The wool market up to date showed cautious dealings. The sales of domestic wool amounted to 422,000 pounds, at current rates, and 208 on private terms. None of it was California. California full fine sold at 10 1/2@20c; low grade, 11@17c; spring, fine, 23@24c; medium, 20@22; low, 13@17c; domestic fleeces XXX, 34@35c; XX, 32@34c; X, 31@32c; No. 1, 30@31c; No. 2, 28@30c; common, 26@31c; combing and delaine washed fine, 37@38c; medium, 33@36c; coarse, 30@32c; extra pulled, 28@30c; super, 26@28c; lambs, 28@36c; Territory choice, 24@26c; fair to good, 19@22; coarse and carpet, 16@18c; Texas, Eastern and Northern spring, fine and medium, 19@25c; coarse, 17@19c; fall, 18@19c; Western and Southern spring, 18@22c; fall, 14@21c.

Raisins.

NEW YORK, Dec. 24.—Raisins have indications of a stronger future, and the shortage of the early estimates is deplored.

A prominent house on Saturday marked two crown loose at 15@16c; three crown loose, 17@20c. London layers a/gone to the trade. Valencias have been over-ported, which, with the rain-damaged quality, is making importers lose materially.

Hops.

NEW YORK, Dec. 24.—Several carloads of 1886 hops were sold at 5@6c.

Local Markets.

BAGS—The reported forming of a syndicate is not credited, it being put out to force buyers. But then stocks are well concentrated and holders are trying to force prices up. Calcuttas are a shade firmer at 7 1/2@7 3/4c for June-July delivery.

BARLEY—The sample market closed stronger today. The stock is being rapidly depleted. After the large deliveries of this month are cared for, a higher range of values is looked for. In options trading was fairly active with only slight fluctuations reported. At today's Call the sales reported are as follows:

Morning Session: Buyer season—200 tons, 96 1/2c; 900, 97c; 1500, 96 1/2c. Buyer 1887—200 tons, 87c. Seller 1887—100 tons, 87c @ ct. Afternoon Session: Buyer season—900 tons, 96 1/2c; 500, 96 1/2c. Buyer 1887—200 tons, 87c @ ct.

BUTTER—Pickled butter is all gone, which creates a strong and higher market for other descriptions. Receipts are only fair, while the demand is good.

CHEESE—Choice Californian mild is a shade higher; old stock is slow. Eastern cheese has a firmer tone.

EGGS—The market holds strong and will probably continue so until after next week, as the consumption is free.

FLOUR—The market is firm, but still there is some cutting in prices.

WHEAT—The market is very strong, with holders indifferent. Very few parcels are on the market. Buyers are forced to pay an advance on quotations given to the daily papers. Millers buy freely in Oregon or Valley, but their prices there are higher. In options, trading on Call was fairly active throughout the week, with prices strengthening. At today's Call, sales reported made are as follows:

Morning Session: Buyer season—200 tons, \$1.48 1/2; 500, \$1.48 1/2; 300, \$1.48 1/2; 200, \$1.48 1/2. Buyer 1887—100 tons, \$1.36 1/2 @ ct. Afternoon Session: Spot—400 tons, \$1.36. Buyer season—100 tons, \$1.48 1/2; 100, \$1.48 1/2 @ ct.

[COMMUNICATED.]

Market Information.

The following are the receipts of the principal items of California produce at San Francisco from the beginning of the harvest year to date, compared with the corresponding period in the previous harvest year:

	July 1 to Dec. 25, '86.	July 1 to Dec. 24, '87.
Flour, qr. sks.	2,489,294	1,776,289
Wheat, cts.	8,716,886	4,854,756
Barley, cts.	1,759,130	1,547,980
Oats, cts.	105,402	124,871
Potatoes, sks.	523,437	631,413
Corn, sks.	42,966	116,593
Rye, sks.	13,367	12,591
Buckwheat, sks.	4,448	742
Beans, sks.	321,396	325,081
Bran, sks.	247,012	246,004
Hay, tons.	59,228	67,930

Salt, tons.	13,178	9,440
Wool, bis.	44,993	38,276
Hides, No.	58,846	52,720
Raisins, 20-lb boxes.	107,957	75,629
Quicksilver, flasks.	7,487	16,357
Hops, bis.	12,101	13,832

The receipts of certain articles of produce from Oregon, Washington Territory and other distant points, for the same period, compare as follows:

	July 1 to Dec. 25, '86.	July 1 to Dec. 24, '87.
Flour, sks.	38,871	119,343
Wheat, cts.	231,687	453,102
Barley, cts.	1,693	75
Oats, cts.	191,537	99,770
Corn, cts.	51,008	12,599
Wool, bales.	9,056	7,107
Bran, sks.	26,418	33,290
Hops, bales.	731	228
Hides, No.	16,106	17,969
Potatoes, sks.	31,632	2,247

Cereals.

English mail advices from the best authorities summarized are as follows: The deliveries of English wheat from farmers have been considerable, and for the month of December have equaled about 750,000 qrs. Prices have not been so firm as they would have been with smaller deliveries, but, on the whole, the burden of heavy local supplies has been well supported. Whether farmers will continue to sell at the rate of 750,000 qrs. a month all through the winter is at least doubtful, but even should they do so the three winter months will have full need of the 2,250,000 qrs. obtainable from this source. Winter wants of wheat may be reckoned at 6,500,000 qrs., so that if farmers deliver 2,250,000 qrs. there will still remain a deficiency of 4,250,000 qrs. for the foreigner and the granary-owner to supply. With respect to the first named, the quantity of wheat and flour on passage and likely to arrive before the end of February is not much over a million qrs., and even with favorable winds for the large Californian fleet due, the imports will not be over 1,250,000 qrs. out of the 1,500,000 qrs. afloat, the remainder going elsewhere. This still leaves 3,000,000 qrs. to be imported from other sources. The Atlantic seaports will furnish say about 1,000,000 qrs., while India is virtually exhausted, pending the harvest in next March, and Russia is dependent on weather. Should mild weather obtain in the Black sea, the shipments from there would aggregate say 250,000 qrs. Estimating that India will furnish a like quantity and other sources 250,000 qrs., still there would be a shortage of 1,300,000 qrs. This will, to all appearances, have to be met out of the reserves in granary, which are about two and a half millions at most. The depletion of stores to the extent of more than one-half is likely to have a marked effect upon trade, and if English farmers should be prevailed upon to abate their deliveries, a strong upward movement immediately after the close of the year would pass from the list of possible to that of probable events.

The London *Farmers' Journal*, Dec. 5, says that "the weather has been for the most part fine and favorable to the outdoor work of the farm. The land is wet on the surface. In places, but for the most part plows up and works kindly. So dry was the soil before the rains came that in many districts the drains are not yet running, and in others only very slightly. All the autumn-sown crops promise well. The wheats look very strong, and so do the winter beans, tares, trifolium, and, in many places, the 'seeds' which were given up for lost."

Recent advices from Australia report sustained favorable conditions of the wheat crop, which is expected to be the largest yet grown. It is expected that South Australia will have a surplus of some 2,000,000 qrs., and in anticipation of liberal receipts spot value is steadily declining. On the other hand, freights are rising, and several charters have been signed at rates above those which were obtainable last season, which will tend to keep prices high.

Mail advices from France report that the wheat trade has been firmer, farmers' offers not exceeding the demand from millers, who are now buying rather freely; accordingly many of the country markets have quoted some improvement, and foreign wheat is also held for more money, although it is very difficult to sell. No. 1 Californian, delivered, duty paid, at Havre, is now quoted at equal to 45s. per 500 lbs., which is the equivalent of 35s. 6d. to 36s. c. i. f. This is from 3d. to 9d. higher than quoted by cables from England on Dec. 4 or at any time up to date, which goes far to show that cable quotations as published in the papers on this coast are lower than the actual market. C. i. f. cost, insurance and freight to United Kingdom. The cost covers the price of grain on this side and all expenses of the wheat delivered on board of ships.

On this coast, Oregon advices report wheat exporters and sellers more or less at deadlock. While the former bid \$1.17 1/2 for Eastern and \$1.25 for valley, they pay an advance quietly so as to give quick dispatch to vessels on berth. Considerable valley is bought there for millers in this city and vicinity.

In this city wheat holds strong, with sellers indifferent, which compels buyers to pay an advance on bids so as to give quick dispatch to vessels on berth. The tonnage loading continues large, notwithstanding the quick loading reported. Charters rule low, with no probability of an advance, owing to the large coal fleet added to list of vessels on the way. Low freights mean better prices to farmers for wheat. The war rumors abroad have much to do with creating a stronger market with us. If there should be war abroad wheat values will make rapid jumps upward. Some of the agricultural districts report plowing about finished, but taken as a whole the season is late and not more than 75 per cent of the grain-land is prepared or can be previous to good soaking rains.

Barley has ruled strong throughout the week, with a free consumption reported. The stock is being rapidly depleted, particularly of the better grades. It is very generally conceded that after the turn of the year better values will obtain. The bulk of the stock is either off color or else light. The husk is thick and weighs more than the grain. Bright, plump barley for both feed and brewing is wanted and commands good prices. Brewers are still sampling and taking up all parcels of choice bright to be had at from \$1.05 to \$1.20, the latter for extra heavy.

Corn is in light stock, as is the supply on this coast. Choice grades are held very strong and hard to get even at outside quotations. Western advices

report the market still tending up, and that the shortage will probably be less than heretofore estimated.

Oats hold strong, with a slight advance obtainable. Receipts continue light. Last year large quantities were sent from Nebraska to this city, but owing to the short crop at the East there will not be any to spare.

Rye and also buckwheat are strong at full figures. Something extra is even placed at a slight advance.

Feedstuff.

Hay is very strong, with offerings of choice very light. Fair to good is in fair supply. The consumption is very large, with no apparent decrease for some time to come, owing to active railroad building and more teams at work.

Ground feed is strong and going quite rapidly into consumption. Bran and middlings are selling at a slight advance on last week's quotations. Feed corn is stiff, while ground barley is strengthening.

Fruits.

Grapes are slow and hard to place, even at concessions.

Apples are firm at full prices for choice Californian and Oregon. Fair to good moves only moderately fair. Eastern are coming in quite freely, and selling at a wide range, \$2 to \$5 per barrel, the price being governed by size and flavor.

Limes and lemons sell high. Oranges are in increasing supply, causing prices to recede slowly. Other tropical fruits are without essential change.

In dried fruits the market is dull and heavy. Any selling pressure is met by low bids, fully 20 per cent less than is quoted elsewhere. Holders are not disposed to sell, but store until the spring of 1888, when a better market is looked for. The stock here and at the East is light, and when the demand next year opens the stock will go into consumption quite rapidly, at good prices.

Eastern mail advices continue to note a strong and active market for choice grades of selected Californian raisins. There are considerable quantities of poor on the market, which are slow and hard to sell. While choice sell at from \$2.25 to \$2.50, and even more per box, the poor sell slowly at \$1.30 to \$1.50 per box. In this market the stock of choice London layers is very light, causing good prices to rule. The demand for all kinds is light, but as the stock is light, it is claimed that much better prices will rule before next season.

Live-Stock.

The demand the past week has run chiefly on choice bullocks for the holidays. The consumption of meats is expected to increase from now on. The market continues steady, with a fairly firm tone reported. Mutton sheep are in fair offering, with a firm market reported. Grain hogs are getting scarce. Packers are more disposed to buy accurately, particularly; so now that hog product is advancing. Cows are hard to sell, owing to high feed and poor pasture.

Matched teams, driving horses and single-footers are in good demand, with light offering of desirable animals for city use. Prices range from \$700 to \$1200 per span for matched teams, \$350 to \$700 for driving horses, and \$400 to \$600 for single-footers. To fetch these prices, good horses must be had.

The following are the wholesale rates of slaughterers to butchers:

BEEF—Extra, 7 1/2@7 3/4c; first grade, grass fed, 6 1/2@7c @ lb.; second grade, 6@6 1/2c; third grade, 5 1/2@5 3/4c.

MUTTON—Ewes, 5 1/2@6c; wethers, 6@6 1/2c.

LAMB—Spring, 7@8c.

VEAL—Large, 6@7c; small, 6@8c.

PORK—Live hogs, 4 1/2@4 3/4c for heavy and medium; hard dressed, 6 1/2@7c per lb.; acorn fed, 4@4 1/2c; dressed, 5 1/2@6 1/2c; soft hogs, live, 3 1/2@4c. On foot, one-third less for grain or stalled feed, and one-half less for stock running out.

Vegetables.

The market for potatoes is weak for reds, but fairly strong for whites. The supply to draw from is decreasing under free consumption.

Onions are strong for the more choice grades. The demand is free. Off qualities are slow, even at the low range of 50c to 75c per cental.

Cabbages hold strong at full prices, for both shipping and home. The supply of choice hard is light.

Marrowfat squash is in good supply. The demand is reported to be fair.

Root vegetables are steady, with a strong tone.

Dry, cold weather is against early gardening.

Miscellaneous.

In poultry, heavy receipts of dressed hens, roosters, ducks, geese and turkeys from the West, caused the market to ease off on last Saturday, and brought about a lower range of values since then. At the close the market is barely steady.

Game has come in more freely the past week, but moved off well at a slight concession.

Beans continue very strong at the higher quotations. Choice is in light supply, while the East still draws freely.

In hops, there is more inquiry, but holders are indifferent, except at full prices.

Wool continues to move off in small way. The stock is light and assortment poor.

Hog product is again tending up, under a strong market at the West.

There are 37 factories engaged in the manufacture of artificial butter in the United States, and 259 wholesale dealers (March 4, 1887). The quantity manufactured and removed for consumption or sale at 2c per lb., during the months of November and December, 1886, and January, 1887, was 10,029,961 lbs. The quantity exported from the port of New York during this period was 114,697 lbs. These figures are given on the authority of the Hon. J. S. Miller, Commissioner of Internal Revenue, U. S. A.

The tonnage movement compares with last year at this date as follows:

	1887.	1886.
On the way.....	314,233	223,317
In port, disengaged.....	114,826	54,767
In port, engaged.....	19,596	57,461

Totals..... 448,655 329,545

To obtain the carrying capacity, add 60 per cent to the tonnage.

San Francisco, Dec. 28, 1887.

THE more originality you have in yourself, the more you see in other people.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, Dec. 28, 1887.

BEANS AND PEAS.	PAPER SHELL.
Bayo, oil.....	2 1/2 @ 2 5/8
Butter.....	2 1/2 @ 3 00
Peas.....	3 10 @ 3 35
Red.....	2 05 @ 2 40
Pink.....	2 20 @ 2 50
Large White.....	2 45 @ 3 00
Small White.....	3 00 @ 3 31
Uima.....	2 10 @ 2 90
Old Peas, blk. ore.....	2 00 @ 2 10
do green.....	1 50 @ 1 75
do Niles.....	1 50 @ 1 75

BROOM CORN.	CHUCKY.
South'n porton.....	50 10 @ 75 00
North'n porton.....	50 00 @ 75 00
California.....	6 @ 7
German.....	7 @ 8
DAIRY PRODUCE, ETC.	BUTTER.
Cal. fresh roll, lb.....	37 1/2 @ 45
do Fancy brands.....	45 @ 47
Pickle roll.....	4 @
Pinkie roll.....	25 @ 30
Eastern.....	20 @ 27 1/2

EGGS.	POULTRY AND GAME.
Chesee, Cal., B.....	13 @ 17
Eastern style.....	12 @ 16
Cal. ranch, doz.....	37 1/2 @ 45
do, store.....	30 @ 35
Ducks.....	— @ —
Oregon.....	— @ —
Eastern.....	20 @ 30
FEED.	SEEDS.
Bran, ton.....	17 50 @ 19 00
Cornmeal.....	25 00 @ 27 00
Gr'd Barley ton.....	20 00 @ 22 00
Hay.....	11 00 @ 19 00
Middlings.....	20 00 @ 22 00
Oil Cake Meal.....	26 50 @ 28 50
Straw, bale.....	40 @ 70

FLOUR.	WHEAT.
Extra, City Mills.....	4 00 @ 4 25
do City Mills.....	3 75 @ 4 00
Superfine.....	3 25 @ 3 50
GRAIN, ETC.	WHEAT.
Barley, feed, oil.....	85 @ 95
do Brewing.....	1 00 @ 1 15
Chevalier.....	1 15 @ 1 30
do Coast.....	95 @ 1 15
Buckwheat.....	1 15 @ 1 45
Corn, White.....	1 20 @ 1 30
Yellow.....	1 15 @ 1 27 1/2
Small Round.....	1 25 @ 1 34
Nebraska.....	1 10 @ 1 20
Oats, milling.....	1 55 @ 1 60
Choice feed.....	1 42 1/2 @ 1 47
do food.....	1 37 1/2 @ 1 40
do fair.....	1 20 @ 1 30
do black.....	1 25 @ 1 40
do Oregon.....	1 25 @ 1 40
Rye.....	2 00 @ 2 55
Wheat milling.....	1 45 @ 1 47 1/2
do choice.....	1 40 @ 1 42 1/2
do fair to good.....	1 37 1/2 @ 1 40
Shipping choice.....	1 41 1/2 @ 1 43 1/2
do good.....	1 40 @ 1 41 1/2
do fair.....	1 35 @ 1 38 1/2

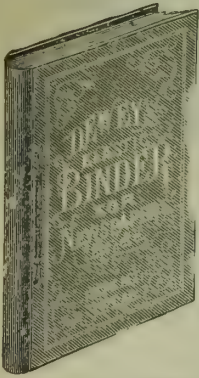
HIDES.	WHEAT.
Dry.....	12 1/2 @ 13
Wet salted.....	5 1/2 @ 6 1/2
HONEY, ETC.	TALLOW.
Beehive, lb.....	20 @ 22
Honey in comb.....	12 1/2 @ 16
Honey in comb.....	16 @ 19
Extracted, light.....	6 1/2 @ 7 1/2
do dark.....	5 1/2 @ 6 1/2
HOPS.	WHEAT.
Oregon.....	12 1/2 @ 20
California.....	8 @ 17 1/2
ONIONS.	WHEAT.
Pickling.....	— @ —
Red.....	— @ —
Silverskins.....	90 @ 1 15
NUIS. JOWS.	— @ —
Walnuts, Cal., B.....	12 @ 14
do Chila.....	8 @ 10
Almonds, adshl.....	5 @ 7
Soft shell.....	15 @ 16

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, Dec. 28, 1887.

Apples, bx com.....	75 @ 110	Figs, boxes.....	5 @ 11
do choice.....	1 35 @ 1 75	Nectarines.....	10 @ 11
Apricots, lb.....	— @ —	do evaporated.....	16 @ 11
Bananas, bunch.....	2 50 @ 5 00	Peaches.....	10 @ 14
Blackberries, ch.....	— @ —	do black.....	— @ —
Cantaloupes, ch.....	— @ —	do evaporated.....	25 @ 23
Cherries wht bx.....	— @ —	Pears, slices.....	8 @ 9 1/2
do black bx.....	— @ —	do qtd.....	8 @ 9
do Royal Ann.....	— @ —	do evaporated.....	11 @ 12 1/2
Cherry plums.....	— @ —	Plums, evapoed.....	13 @ 11
Cranberries.....	10 00 @ 12 00	do pickled.....	10 @ 11
Currants ch.....	— @ —	Prunes.....	10 @ 13
Gooseberries lb.....	— @ —	do French.....	11 @ 14
Figs, black bx.....	— @ —	Zante Currants.....	3 @ —
do white bx.....	— @ —	RAISINS	
Grapes, white.....	45 @ 75	Dehesa Clus, fcy 3 25 @ 3 50	
do black.....	45 @ 75	Imperial Galien.....	2 00 @ 2 25
do Rose Peru.....	— @ —	do fan.....	2 00 @ 2 25
do Muscat.....	50 @ 70	Crown London.....	
do Tokays.....	50 @ 70	Layers, fcy.....	1 80 @ 2 00
		do Loos.....	— @ —

Newspaper Binder.



AN EASY BINDER.—A. T. Dewey's Patent Elastic Binder, for periodicals, music and other printed sheets, is the handiest, best and cheapest of all economical and practical file binders. Newspapers are quickly placed in it and held neatly, as in a cloth-bound book. It is durable, and so simple a child can use it. Price, size of Mining and Scientific Press, Rural Press, Watchman, Fraternal Publishing Co's. journals, Harper's Weekly and Scientific American, 85 cents; postage 10 cents. Postpaid to subscribers of this paper, 50 cents. Send to this office for illustrated circular. Agents wanted.

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532 California St., corner Webb.

For the half year ending with December 31, 1887, a Dividend has been declared at the rate of four and thirty-two one-hundredths (4 32-100) per cent per annum on term deposits, and three and sixty one-hundredths (3 60-100) per cent per annum on ordinary deposits, free of taxes, payable on and after Tuesday, 31 January, 1888.

LOVELL WHITE, Cashier.

DIVIDEND NOTICE.

The German Savings and Loan Society.

For the half year ending December 31, 1887, the Board of Directors of the German Savings and Loan Society, has declared a dividend at the rate of four and one-half (4 1/2) per cent per annum on term deposits, and three and three-fourths (3 3/4) per cent per annum on ordinary deposits, and payable on and after Tuesday, the 3d day of January, 1888. By order

GEO. LETTE, Secretary.

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I CURE FITS!

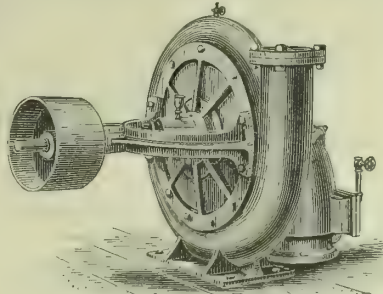
When I say cure I do not mean merely to stop them for a time and then have them return again. I mean a radical cure. I have made the disease of FITS, EPILEPSY or FALLING SICKNESS a life-long study. I warrant my remedy to cure the worst cases. Because others have failed is no reason for not now receiving a cure. Send at once for a treatise and a Free Bottle of my infallible remedy. Give Express and Post Office.
H. G. ROOT, M. C., 183 Pearl St., New York.

ONE PACK May 10th Home Cards, One Pack Secret Cards, One Pack Fiction Cards, One Pack Real-to-the-Point Cards, The Mystic Oracle, with which you can tell any person's age, and large sample book of Home Name Cards. All for only a 3-cent stamp. Because Card Co., Omaha, Neb.

PACIFIC COAST WEATHER FOR THE WEEK.
[Finished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps U. S. A.]

DATE.	Portland.	Red Bluff	Sacramento.	S. Francisco	Los Angeles.	San Diego.
	Rain.	Rain.	Rain.	Rain.	Rain.	Rain.
Dec. 22-23.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.
Thursday.....	00 36 Nw Cl.	00 52 S Cl.	00 50 S Cl.	00 52 NE Cl.	00 58 SW Cl.	00 56 W Cl.
Friday.....	00 32 SE Cy.	00 50 N Cl.	00 46 N Cl.	00 50 NE Cl.	00 58 Nw Cl.	00 56 Nw Cl.
Saturday.....	05 38 S Ry.	00 48 N Fr.	00 43 N Cl.	00 48 N Cy.	00 56 S Cl.	00 58 W Fr.
Sunday.....	1 21 48 S Ry.	00 48 S Cy.	00 50 S Cl.	00 53 E Fr.	00 58 SW Cy.	00 58 S Fr.
Monday.....	88 38 S Ry.	00 52 Nw Fr.	01 52 SW Fr.	11 53 Nw Fr.	00 56 Nw Cy.	00 69 E Cy.
Tuesday.....	66 42 S Ry.	00 38 N Cy.	00 40 Cm Cy.	05 46 SE Cy.	00 58 W Cl.	00 58 S Fr.
Wednesday.....	— — — — —	— — — — —	26 46 SE Ry.	61 55 S Cy.	00 56 SW Cy.	00 58 SE Cy.
Total.....	2.80	00	27	.77	00	00

EXPLANATION.—Cl. for clear; Cy. cloudy; Fr. fair; Fy. foggy; — indicates too small to measure. Temperature. Wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.



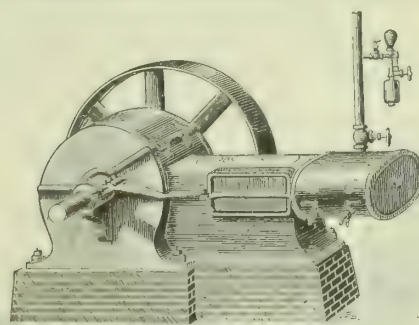
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Expansion
SELF-OILING ENGINES.

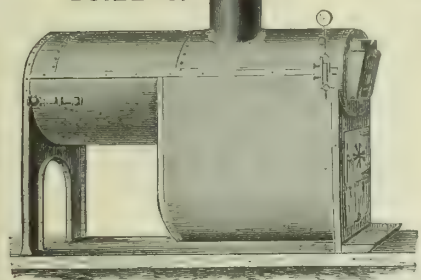
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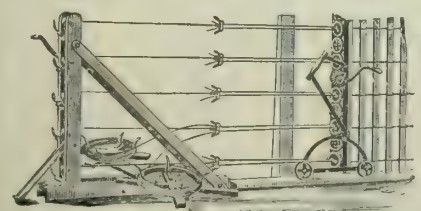
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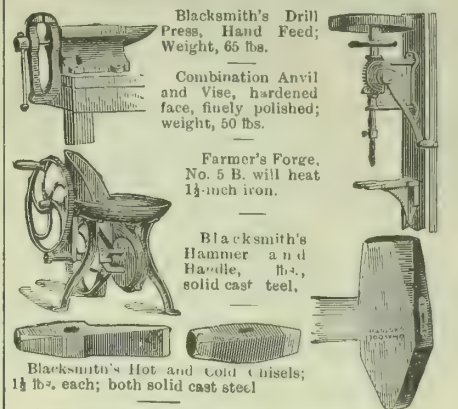
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Blacksmith's Drill Press, Hand Feed; Weight, 65 lbs.
Combination Anvil and Vise, hardened face, finely polished; weight, 50 lbs.
Farmer's Forge, No. 5 B. will heat 1 1/2-inch iron.
Blacksmith's Hammer and Handle, No. 1, solid cast steel.
Blacksmith's Hot and Cold Chisels; 1 1/2 lbs. each; both solid cast steel.



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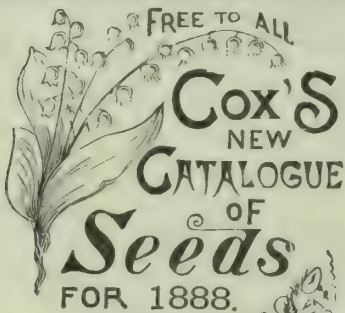
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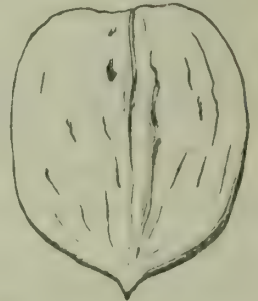
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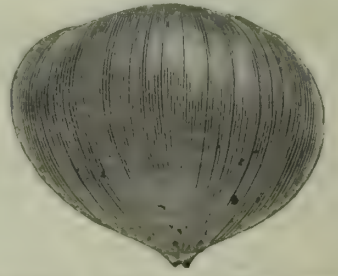
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